THE IMPACT OF COVID-19 ON NURSES' MENTAL HEALTH IN THE CITY OF JOHANNESBURG CLINICS, GAUTENG PROVINCE

by

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[redacted]

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DECLARATION

I Phumudzo Ranwedzi declare that this dissertation “the impact of COVID-19 on nurses’ mental health in the City of Johannesburg clinics, Gauteng province” hereby submitted to the University of Limpopo for the degree of Master of Nursing Science has not previously been submitted by me for a degree at this or any University.

It is my work in design and execution. All material contained has been duly acknowledged.

_____ 07 May 2023

Signature Date

DEDICATION

I dedicate this study to my mother, Eunice and my husband, Phumudzo for their continued understanding in allowing me to study and for supporting me during difficult times.

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I would like to thank God for his blessings in my life and his grace through this study.

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ABSTRACT

Background

The mental health of nurses is crucial to their ability to deliver high-quality nursing care during the pandemic since they are the backbone and front-line personnel of the healthcare system. The Covid 19 pandemic presented nurses with a variety of challenges, including abrupt deaths among patients, staff members, and families, a lack of resources, and restrictive measures. Despite the terrible circumstances brought by Covid 19, nurses were still required to care for the victims.

Purpose

The purpose of this study is to determine the impact of the COVID-19 pandemic on the mental health of nurses in the City of Johannesburg clinics in Gauteng province.

Study method

The qualitative, explorative, and descriptive design was used for the researcher to get insight into the lived experience of the participants. Non-probability, purposive homogeneous sampling was used in this study to select 14 nurses from five clinics in the City of Johannesburg municipality region A & E.

The researcher asked the participants about their experiences regarding the impact of the COVID-19 pandemic on their mental health, to explore more information. Data were collected using semi-structured one-on-one interviews with a scheduled interview guide. Qualitative data analysis using Tesch's approach was followed. Ethical principles were applied throughout the study.

Results

The following themes emerged from the study: The impact of COVID-19 on nurses' mental health regarding contributing factors, mental health symptoms, behavioral symptoms, support and measures to improve nurses' mental health.

Conclusion

Various factors contributed to the impact of COVID-19 on professional nurses' mental health; these include the sudden onset of COVID-19, losses of colleagues and family members, insufficient material and human resources, inadequate psycho-social support, COVID-19 symptoms, as well as the COVID-19 preventative and intervention measures should be considered in managing the well-being of nurses who had been serving as the front liners. Timely psychological counselling, as well as awareness and intervention, need to be implemented for nurses to alleviate their anxiety or discomfort while dealing with other pandemics in future and improve their general mental health.

Key concepts

COVID-19, nurses, mental health, pandemic, clinic and impact.

DEFINITION OF CONCEPTS

Clinic

A clinic is an organised medical service offering diagnostic, therapeutic, or preventive outpatient services (Scarborough et al., 2020). In this study, a clinic is a healthcare sector where nurses are rendering medical assistance, including managing COVID-19 patients in the City of Johannesburg clinics.

Ideal Clinic

An ‘Ideal Clinic’ is defined as a clinic with good infrastructure (i.e. physical condition and spaces, essential equipment, and information and communication tools), adequate staff, adequate medicines and supplies, good administrative processes, and adequate bulk supplies; such a clinic uses applicable clinical policies, protocols and guidelines, as well as partner and stakeholder support, to ensure the provision of quality health services to the community (NDoH., 2016). In this study, ideal clinic refers to clinic with essential equipment such as PPE, adequate staff and good infrastructure to help nurses managing Covid-19 patient in the city of Johannesburg clinics.

COVID-19

COVID-19 is an infectious disease caused by the SARS-CoV-2 virus (WHO, 2021). In this study, COVID-19 refers to the outbreak of infectious disease that positively impacts the nurse’s mental health and exposes them to the risk of transmission.

Impact

Impact refers to the action of one object coming forcibly into contact with 19 pandemic on the mental health of nurses in the City of Johannesburg clinics. by the COVID-

Mental health

Mental health, defined by the World Health Organization (WHO, 2014), is "a state of well-being in which the individual realizes his or her abilities, and can cope with the normal stresses of life. In this study, mental health refers to the mental state of nurses towards the COVID-19 pandemic in the City of Johannesburg clinics.

Nurses

A nurse is a person who is qualified, registered and competent to practice comprehensive nursing independently, and who is capable of assuming responsibility and accountability for such practice to the level prescribed by the South Africa Nursing Council (SANC, 2008). In this study, a nurse means someone who is registered at the SANC, employed by the City of Johannesburg clinics and who might be impacted mentally by the COVID-19 pandemic.

Pandemic

A pandemic refers to the rapid spread of disease to a large number of people in a given population within a short period (Oxford, 2014). In this study, a pandemic province. a COVID-19 disease that could affect the mental health of nurses in Gauteng

LIST OF ABBREVIATIONS

COVID-19	:	Coronavirus Disease 2019
DOH	:	Department of Health
EPI	:	Expanded Programme on Immunization
HCP's	:	Health Care Professionals
HCW's	:	Health Care Workers
OPM	:	Operational Manager
PPE	:	Personal Protective Equipment
SA	:	Republic of South Africa
SANC	:	South African Nursing Council
TREC	:	Turfloop Research Ethics Committee
WHO	:	World Health Organization

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CHAPTER 1
THE OVERVIEW OF THE STUDY

1.1 INTRODUCTION AND BACKGROUND

Coronavirus (COVID-19) is a contagious disease that continues to be a major global health issue and a public crisis globally. The disease is an extraordinary global pandemic extremely dynamic and changing in character. The first known case was identified in Wuhan, China in December 2019 (WHO, 2020). The disease has since spread worldwide, leading to an ongoing pandemic. The disease is caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) (WHO, 2020). Coronavirus is usually transmitted by direct contact through respiratory droplets, but other modes of transmission have been identified, such as airborne transmission. Although there are no evidence precautionary approaches are recommended. A growing body of scientific research and literature to date indicates that human-to-human transmission through direct contact is the most common transmission mode for coronavirus (WHO, 2019).

According to the World Health Organization (WHO, 2020), the physical effects of COVID-19 are felt globally. However, one issue that has not been addressed is the impact of COVID-19 on mental health (WHO, 2020). During the COVID-19 pandemic, citizens worldwide were enduring widespread lockdowns; children were out of school; and millions have lost their jobs, which has caused anxiety, depression, insomnia, and distress (WHO, 2020).

COVID-19 is the third major coronavirus outbreak over the past 20 years that has had a substantial socio-economic and mental impact (Nicole et al., 2020). It is the first in the 21st century to affect countries across all continents except Antarctica (Docea et al., 2020). Distress, uncertainty, and unpredictability due to the lack of an endpoint for the COVID-19 pandemic while treatment is still not in sight have led to the emergence of mental anxiety, and depression (Tsamakis et al., 2020).

Since March 2020, countries in Africa have implemented physical distancing measures reduce transmission of COVID-19, mainly closing educational institutions and banning mass gatherings. In addition, 22 nations adopted a lockdown, enforcing lockdown protocols in the impacted regions (WHO, 2020).

The COVID-19 outbreak and other related psychological problems not as nurses, faced significant challenges to their mental health. Evidence shows that in similar outbreaks, nurses have already presented the highest levels of occupational stress resulting in distress when compared to other groups (Sterpetti, 2020). The study done in Italy found that doctors and nurses have worked more than 100h/ per week. Many doctors and nurses were infected however, the actual prevalence of COVID-19 in these professionals is difficult to determine, because the disease does not often manifest in people younger than 35 years of age (Sterpetti, 2020).

According to the study conducted in Greece by Greenbaum (2020), during the COVID-19 outbreak, clinicians have been confronted with mounting challenges that have not been faced before. The pressure to act timely and successfully diagnose, isolate and treat has been overwhelming, especially amid intense public and media scrutiny. Hence, decisions have to be made fast, ranging from efficiently triaging and isolating patients with suspicion of infection to deciding whether to shut down departments and operating theatres when a patient or staff test positive irrespective of limited resources. This is in concordance with experience in other countries (Goldstein, Gathright & Garcia, 2019).

In South Africa, on 5 March 2020, the Minister of Health confirmed the first South African positive case of COVID-19. Since then, the virus has become an integral and unfortunate part of everyday life in South Africa (Singh, 2020). Daily bulletins reporting current incidence and mortality remind each citizen of the ongoing threat of the virus and its potential life-changing complications. These include statistics about persons who have either tested positive for the virus, died due to complications related to it, or recovered (Burns, 2011; Marais & Petersen, 2015; October; 2019; Pillay, 2017 & WHO, 2020).

The South African ministry of health 2020, revealed in a statement that more than 27,000 health workers tested positive for COVID-19 while doing their job since the start of the pandemic. This includes 6,027 health workers from the private sector, while the number of health workers who contracted the infection from the public sector was 21,333, and 240 health workers have died due to COVID-19-related complications. Thus, of which 203 (85%) belong to the public sector. Moreover, out of the total number of infected medical personnel, 1,644 were doctors, 14,143 nurses, 28 were port health workers, and 11,545 belong to other miscellaneous categories in the healthcare system (SAMH, 2020).

A study conducted on South Africans living in Gauteng province Soweto found that adults who had experienced childhood trauma and other related adversities were at higher risk of developing depressive symptoms precipitated by the perceived risk of contracting COVID-19 (Kim, Pillay & Barnes, 2020). In addition, Naidu (2020), states that due to public biological, psychological, and social predispositions in South Africa, COVID-19 may lead to mental health presentations such as post-traumatic stress disorder, mood disorders, anxiety disorders, phobias, and obsessive-compulsive disorders. The Mental Health Care Act No 17 of 2002, stated that there is a need to promote the provision of mental health care services in a manner which promotes the maximum mental well-being of the people.

A study conducted by Cui et al. (2020), revealed that nurses seem to be the healthcare workers who faced more psychological problems due to the COVID-19 outbreak. Although there is an evident initial impact on their mental health, they appear to adapt to the “new normal”. However, contrary to the general population, no longitudinal studies were found in the literature that evaluated nurses’ mental health in more than that one moment. Nevertheless, some studies have identified variables that seem to be related to the worst mental health status among healthcare workers, such as being younger, being a female, having limited access to personal protective equipment (PPE), working at a public institution, and being unsure of COVID-19 infection (Zhang et al., 2020).

1.2 PROBLEM STATEMENT

Gauteng province is one of the provinces that recorded many COVID-19 cases. A report published in January 2023 revealed that Gauteng had recorded 1,345,705 COVID-19 cases (National Institute for Communicable Disease (NICD), 2023). At the clinic where the researcher works, 2,300 confirmed positive cases, 2,295 recoveries, and 5 reported fatalities associated with COVID-19 complications were recorded. Additionally, six (6) nurses who tested positive for COVID-19 at that clinic in May and June 2020 recovered (Clinic statistics). The researcher observed that the nurses exposed to and contacted with COVID-19 were vulnerable to mental health problems because they looked nervous, fearful, and distressed, especially when treating COVID-19 patients.

Nurses working at the clinics work in the frontline to conduct testing of the virus and treatment of the people who contracted the disease. In many countries, nurses were the biggest health worker group to have contacted COVID-19 (International Council of Nurses COVID-19 update, 2021). Some health workers have contracted the virus, and most of the clinic facilities have been frequently on temporary closure for fogging to contain the spreading of the virus. According to Kang et al. (2020), healthcare workers especially nurses, were at significant risk of adverse mental health outcomes during the COVID-19 outbreak.

Yet, there are relatively few empirical studies in the mental health nursing literature on the impact of COVID 19 on the mental health of nurses at clinics in South Africa. Despite that Gauteng province recorded many cases of COVID 19 and nurses are the front liners, no study of this type has ever been undertaken in the City of Johannesburg. Thus, limited data existing on this matter indicates a need for further investigation. Thus, the researchers decided to explore the impact of the COVID-19 pandemic on mental health, the factors contributing to the impact as well as the mental health symptoms experienced

by nurses. This study is designed to address this gap and identify some key issues for improving the mental well-being of nurses at the clinic.

1.3 THEORETICAL FRAMEWORK

A conceptual framework on the impact of COVID-19 on mental health by Lu and Lin 2021 was used to guide the study (Lu & Lin, 2021). The framework addresses four main aspects related to the impact of the COVID-19 pandemic on the mental health of individuals. These include determinants, mechanisms, mental health outcomes and coping behaviours.

The framework was chosen because it addressed the impact of COVID-19 on the mental health of the individuals which is the main focus of this study. The interpretation of the results was guided by the framework. The main concepts of the framework are discussed below:

- **Determinants**

  Determinants according to Lu and Lin refer to the pandemic itself as well as the prevention and intervention measures aimed to fight the pandemic. These include the lockdown, quarantine, and self-isolation policies (Lu & Lin, 2021).

- **The mechanism**

  A mechanism was described as the impact of the preventatives and intervention measures aim to fight of COVID-19 pandemic on individuals. The framework stated that unemployment due to the lockdown, quarantine and self-isolation led to economic difficulties and mental health problems (Lu & Lin, 2021).

- **Mental health outcomes**

  The mental health outcomes are related to the mental health symptoms that individuals presented with as a result of the impact of the pandemic. These include mental distress, fear, anxiety, hopelessness, loneliness, nervousness etc., (Lu & Lin, 2021).

- **Coping behaviours**

The framework indicates that the consequences of the epidemic on mental health may lead to changes in personal behaviour and habits (Lu & Lin, 2021). The main concepts of the framework are illustrated in Figure 1.1 below.

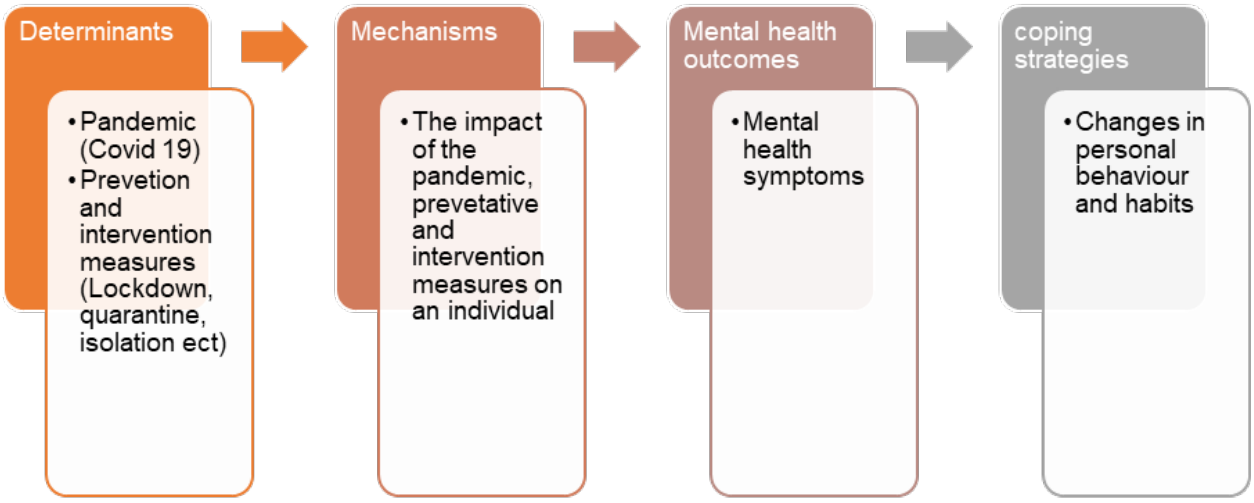

Figure 1.1: Lu & Lin (2021) Conceptual framework

1.4 AIM OF THE STUDY

This study aims to determine the impact of the COVID-19 pandemic on the mental health of nurses in the City of Johannesburg clinics in Gauteng province.

1.5 RESEARCH QUESTION

What is the impact of the COVID-19 pandemic on the mental health of nurses in the City of Johannesburg clinics, Gauteng province?

1.6 OBJECTIVE OF THE STUDY

- To explore and describe the impact of the COVID-19 pandemic on the mental health of nurses in City of Johannesburg clinics, Gauteng province?
- To determine the factors contributing to the impact of the COVID-19 pandemic on the mental health of nurses in the City of Johannesburg, Gauteng province.
- To explore the mental health symptoms related to the COVID-19 pandemic in nurses in the City of Johannesburg clinics, Gauteng province.

1.7 SUMMARY OF RESEARCH METHODOLOGY

An explorative, descriptive design was applied in this study. The qualitative research approach is a systematic, subjective approach used to describe life experiences and give them meaning (Grove, Gray, & Burns, 2015). The explorative design was used to explore the experiences of nurses regarding the impact COVID-19 pandemic on their mental health. A descriptive research design was used to describe the experience of the nurses regarding the impact COVID-19 pandemic on their mental health.

The study was conducted in the two selected regions of the City of the Johannesburg Metropolitan Centre, namely Region A (Midrand) and Region E (Sandton). Non-probability, purposive homogeneous sampling was used to select 14 nurses from region A and region E. Data were collected using a one-on-one semi-structured interview. This research followed Tesch's approach to data analysis, which comprises eight integrated steps (Creswell, 2014).

Trustworthiness was ensured by using 4 criteria of trustworthiness, which are credibility, dependability, confirmability, and transferability (Brink et al., 2014). The following ethical standard was adhered to while conducting the study, these include ethical clearance (Appendix B), permission to conduct the study (Appendix C), informed consent (Appendix D), the principle of confidentiality, the principle of privacy, the principle of anonymity, the principle of respect for a person, the principle of justice, and the principle of non-maleficence.

Bias was avoided by selecting the sample population using the purposive sampling technique which allows the researcher to carefully select the sample based on the element that was related and was able to answer the research question and provide relevant information. More details on the research methodology will be discussed in Chapter 3.

1.8 SIGNIFICANCE OF THE STUDY

It is crucial to determine how Covid 19 affected nurses' mental health to identify the mental health symptoms that individuals presented with because of the impact of the pandemic. So that the appropriate therapies can be recommended to help the nurses who are psychologically impacted by the epidemic and prevent long-term effects on their mental health. The therapies can include post-traumatic counseling, debriefing, individual therapy, group therapy, support, or any other psychosocial therapy.

The findings of this study will inform the Department of Health on how the COVID 19 pandemic has affected nurses' mental health, and they may help to create management measures that will increase access and provide psychological care.

1.9 ORGANISATION OF THE STUDY

Chapter 1: Overview of the study

Chapter 2: Literature review

Chapter 3: Research design and methods

Chapter 4: Presentations of the findings and discussion

Chapter 5: Summary, limitations, recommendations, and conclusion

1.10 CONCLUSION

This chapter discussed the overview of the study, including the introduction and background, the problem statement, research questions, study aim, objectives, theoretical framework, a summary of the research methodology and the significance of the study. The next chapter will focus on the literature review of the study.

CHAPTER 2
LITERATURE REVIEW

2.1 INTRODUCTION

Chapter 1 of this study discussed an overview of the study. Moreover, chapter two focuses on the literature review. A literature review provides the background information and an overview of the literature reviewed about COVID-19's impact on mental health. According to Machi (2015), the literature review is defined as "an organised written presentation of what has been published on a topic by other scholars. The literature review also involves finding, reading, understanding, and making conclusions about the published research and theory on a particular topic (Machi & McEvory, 2015). A broad review of relevant writings such as the latest article and journals about COVID-19 impact on mental health was conducted.

An extensive search of the literature was conducted from 2019 to 2023 using four electronic databases: EBSCOhost, Science direct, World cat, and Google Scholar with the help of the library information specialist. The search terms for the literature used were the impact of COVID-19 on mental health, effects of COVID-19 on mental health, the prevalence of COVID-19 and the impact of quarantine. The literature that was included was focusing on the background of the COVID-19 pandemic, global and local statistics about COVID-19 and studies related to the impact of COVID-19 on nurses' mental health issues.

2.2 CHARACTERISTICS OF COVID-19

The SARS-CoV-2 constitutes a zoonotic virus that can be transmitted from animals, such as bats, to humans and, once adapted to do so, between humans via airborne droplets and aerosols. Because the SARS-CoV-2 spike protein exhibits a high binding affinity for angiotensin-converting-enzyme 2 (ACE2) receptors that are highly expressed in the respiratory tract, particularly in

epithelial lung cells, COVID-19 may lead to atypical pneumonia with rapid respiratory deterioration. ACE2 receptors can also be traced in intestinal mucosal cells, endothelial cells of veins and arteries, including heart cells, epithelial renal and cerebral neuronal cells, which explains that COVID-19 extra-pulmonary symptoms, including diarrhea, nausea and vomiting, chest pain and heart failure, renal injury, headache, and confusion (Drakoulis et al., 2020). COVID-19 risk is higher among frail elderly subjects, especially males, with a history of diabetes and hypertension treated with ACE inhibitors and angiotensin II type-I receptor blockers. These drugs increase the expression of ACE2 receptors (Docea et al., 2020).

2.3 THE PREVALENCE OF COVID-19 IN SOUTH AFRICA

Figure 2.1 shows, the overall statistics of COVID-19 breakdown in South Africa in each province from Feb 2020 to 19 Jan 2023. It indicates that Gauteng province has the highest data of confirmed COVID-19 cases in South Africa as illustrated below:

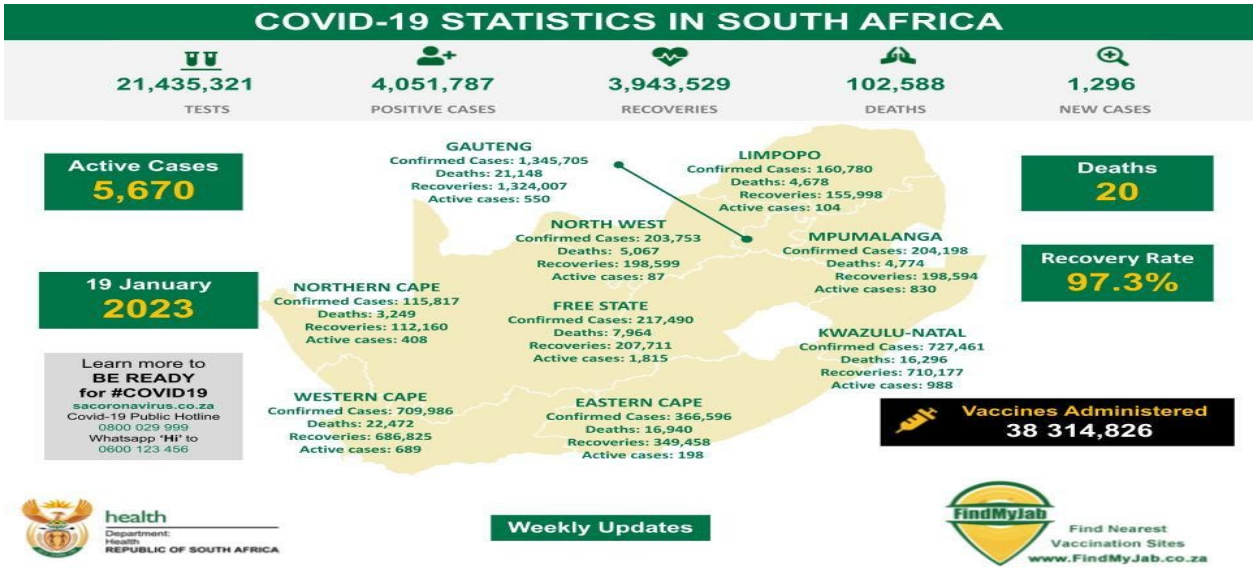

Figure 2.1: Overall Statistics of COVID-19 in South Africa in each province on 19 Jan 2023 (WHO, 2023).

2.4 COVID-19 INFECTIONS AND DEATHS AMONG NURSES AND OTHER HEALTHCARE WORKERS

Around 6,760, healthcare personnel (HCP) were hospitalised from 1 March – 31 May, 2020, for whom HCP status was determined by the COVID-19–Associated Hospitalisation Surveillance Network (COVID-19-NET), 5.9% were HCP (Centre for Disease Control and Prevention, 2020). As of 31 December 2020, the ICN data set reveals that more than 1.6 million HCP have been infected in 34 countries (International Council of Nurses COVID-19 update, 2021). Nursing-related occupations (36.3%) represented the largest proportion of HCP hospitalised with COVID-19.

In June 2020, the National Nursing Associations, official figures, and media reports from a limited number of countries indicate that more than 230,000 HCW's have contracted the disease. Thus, more than 600 nurses have now died from the virus (International Council of Nurses, 2020).

As of 31 December 2020, the cumulative number of reported COVID-19 death in nurses in 59 countries are 2,262. Brazil, the United States of America, and Mexico have the highest number of reported COVID-19 nurse deaths. Nurses were the biggest health worker group in many countries with COVID-19. In Iran, more than 60,000 nurses have been diagnosed with COVID-19, which equates to 45% of the country's nursing workforce[2]. In Mexico, another of the hardest-hit countries, 21% of the nursing workforce (67,320)[3] have been infected with the virus. (The International Council of Nurses COVID-19 update. 31 January 2021).

In South Africa, the loss of more than 1,300 health workers to COVID-19 was reported in August 2020. Which has a serious blow to SA's health system. The healthcare workers exposed include porters, nurses, doctors, surgeons, and specialists (Heywood, 2020). According to the Weekly Update on hospitalised healthcare workers in August 2020 from 668 hospitals, "Of the 9,032, Health Care Workers (HCW's) admitted 7,649, (84.7 %) were discharged alive, 1,136 (12.6%) had died and 147 (1.6%) were currently in a hospital. The majority of

deaths among HCW's admitted with COVID-19 were reported in Gauteng (362, 31.9%) and KwaZulu-Natal 274 (24.1%), followed by the Eastern Cape (195, 17.2%) the province (National Institute for Occupational Health, 2020).

2.5 IMPACT OF COVID-19 ON MENTAL HEALTH AND THE GENERAL POPULATION

Most publications, including commentaries, addressed the potential mental health impact of COVID-19 on the general population based on literature from previous disease outbreaks or specified theoretical models. This group of publications had greater geographical diversity, with papers originating from China, Canada, Iran, Japan, Singapore, and Brazil.

Two of these papers examined the likely impact of the COVID-19 pandemic in specific countries. One of these, from Iran (Zandifar & Badrfam, 2020), highlighted the role of unpredictability, uncertainty, the seriousness of the disease, misinformation, and social isolation in contributing to stress and mental morbidity.

The authors highlighted the need for both mental health services. Most, particularly for vulnerable populations, and the strengthening of social capital to reduce the adverse psychological impact of the outbreak. Another study from Japan (Shigemura et al., 2020) emphasised the economic impact of COVID-19 and its effects on well-being and the likely high levels of fear and panic behaviour, such as hoarding stockpiling of resources, in the general population.

This paper also identified populations at higher risk of adverse mental health outcomes, including patients with COVID-19 and their families, individuals with existing physical or psychiatric morbidity, and healthcare workers.

2.6 IMPACT OF COVID-19 ON MENTAL HEALTH DUE TO QUARANTINE

Physical isolation from family members or loved ones during quarantine or hospital stays can produce psychological instability among people infected with SARS-CoV-2 (Moreno, Correll & Byrne, 2020). Moreover, high rates of Post-Traumatic Stress Syndrome (PTSS) are evident among patients that have recovered from COVID-19 and were discharged from the hospital (Bo, Li, Wu & Xiang, 2020). Apart from that, those admitted to ICUs often experience post-intensive-care syndrome that manifests with cognitive, psychological, and neurological symptoms or dysexecutive syndrome after ICU discharge (Helms, Kremer & Merdji et al., 2020).

Furthermore, in a recently published study, the risk of depression was higher among COVID-19 patients (Zhang et al., 2020). This could be due to the coronavirus affecting the brain directly or indirectly by inducing a massive cytokine response harming the brain (Rogers, Chesney & Oliver, 2020). Finally, based on prior experience with SARS-CoV-1 infection where rates of depression were higher one month and one year after recovery, a huge after-wave of patients suffering from depression is expected in the case of COVID-19 (Vindegaard & Benros, 2020).

2.7 IMPACT OF COVID-19 ON THE MENTAL HEALTH OF NURSES

Healthcare workers, especially nurses, are at significant risk of adverse mental health outcomes during the COVID-19 outbreak. Reasons for this include long working hours, the risk of infection, shortages of protective equipment, loneliness, physical fatigue, and separation from families (Kang et al., 2020).

Therefore, healthcare professionals dealing with COVID-19 are under increased psychological pressure and experience high rates of psychiatric morbidity, resembling the situation during the SARS and H1N1 epidemics (Goulia, Mantas, Dimitroula, Mantis & Hyphantis, 2020). A recent study among healthcare professionals in a tertiary infectious disease hospital for COVID-19

in China revealed a high incidence of anxiety and stress disorders among frontline medical staff (Huang, Han, Luo, Ren & Zhou, 2020), with nurses having a higher incidence of anxiety than doctors.

Experience in our hospitals in the past few weeks, although anecdotal, is concordant with these reports. The disruption of routine clinical practice, the sense of loss of control and the subsequent fear of potential destabilisation of the health services have provoked 'overflowing' anxiety and depression among healthcare professionals, a feature which is not uncommon in epidemics (Aoyagi, Beck, Dingwall & Nguyen-Van-Tam, 2020).

Depression is associated with poor medication adherence (Goldstein, Gathright & Garcia, 2017), which may increase morbidity among older healthcare professionals with coexisting medical conditions.

A study conducted in China and the United States (the US) reported that Health Care Workers (HCW's), first responders and other frontline workers experience significant clinical depression, anxiety, post-traumatic stress, and suicidal ideation (Liu, Yang & Zhang, 2020). In one of the studies conducted in China, depression among healthcare workers was 51%, anxiety 45%, insomnia 36% and 74% for post-traumatic stress symptoms (Liu et al., 2020).

Again, in China, there was no significant difference in mental health disorders between front-line health workers caring for COVID-19 patients and other patients (Liang et al., 2020). In other situations, single doctors, nurses, and HCW's working in the emergency rooms have been found to have a greater predisposition to mental health problems (Lai, Ma & Wang, 2020). In Wuhan specifically, factors associated with mental health disorders among nurses included increased workload, lack of sleep, fear, and discrimination (Chen et al., 2020).

Li et al., (2020) reported that the prevalence of depression and anxiety was 21.3% and 19.0%, respectively, among public healthcare workers (HCW's) who were on the frontline during the COVID-19 epidemic. A higher risk of depression, anxiety, insomnia, and distress was associated with direct

diagnosis, treatment, and care of COVID-19 patients among frontline healthcare workers. There were reports that the nurses were anxious about their safety and the psychological effects of mortality reports related to COVID-19 infection (Lie, Zhou & Wang, 2020).

2.8 NURSES' MENTAL HEALTH RELATED TO PANDEMIC NURSING CARE

The evidence from the COVID-19 pandemic reveals the negative psychological impacts on nurses' crisis care. A nationwide survey in April 2020 revealed that nearly half of HCW's reported anxiety, depression, and PTSD (Young et al., 2020). A May-June 2020 survey found subthreshold insomnia, moderate-to-high chronic fatigue, high acute fatigue, low-to-moderate intershift recovery, increased emotional exhaustion and depersonalisation, moderate psychological distress, and high post-traumatic stress among 400 nurses (Sagherian et al., 2020).

These findings were worse among nurses who cared for COVID-19 patients (Sagherian et al., 2020). Notably, in our knowledge, literature on the mental health of HCW's usually, and nurses specifically, has not addressed nurses' moral distress. Despite the unique circumstances that were expected to exacerbate it.

Despite the moral distress, in real-time, distressing to experience, but also it has many negative consequences, including anger, frustration, depression, helplessness, sadness, anxiety, emotional withdrawal, decreased job satisfaction, intention to leave and job attrition (Huffman & Rittenmeyer, 2012; Oh & Gastmans, 2015). It is likely, therefore, that the moral distress experienced by nurses during the pandemic contributed to subsequent poor mental health.

The knowledge gaps, therefore, include the types and degree of moral distress experienced by nurses during the pandemic, factors associated with moral distress during the pandemic, and its relation to longer-term mental health. Empirical evidence about how access to PPE and communication by hospital

leadership relates to nursing moral distress and longer-term mental health has not been available.

2.9 THE SHORTAGE OF PERSONAL PROTECTIVE EQUIPMENT (PPE) IS A CONTRIBUTORY FACTOR TO NURSES' MORAL DISTRESS

Due to the widespread lack of personal protective equipment (PPE) during the pandemic, PPE was used and reused in unprecedented ways (Webster & Wocial, 2020). PPE shortages were noted by more than half of the 32,000, nurses surveyed in March–April 2020. (ANA, 2020c). The Centers for Disease Control and Prevention issued rules on the reuse of personal protective equipment (PPE) and the usage of bandanas or scarves, which are riskier than standard guidelines (CDC, 2020).

In the United States, the realities of PPE shortages, reusing PPE, and wearing bandanas or scarves were extraordinary. The PPE scarcity imposed psychological strains and mental health impacts on healthcare providers, including distress and anxiety (Arnetz et al., 2020; Young et al., 2020).

2.10 THE PREVALENCE OF BURNOUT AMONG HEALTHCARE WORKERS DURING PANDEMIC

According to Hu et al (2020), burnout is a serious problem in the healthcare industry, and many employees are in danger. The majority of the day is spent providing high-demand patient care. Burnout is quite widespread among all healthcare workers, and it has a severe impact on all aspects of health. The COVID-19 pandemic has put a lot of strain on HCW’s who have been working as frontliners, and they had to deal with a lot of patient while fighting the disease (Hu et al., 2020).

The origin of COVID-19 was tracked back to Wuhan, China, where tens of thousands of healthcare workers were dispatched across the country to help

local medical teams care for sick patients. Burnout was shown to be more common in regions where the pandemic was spreading quickly. The date on which the data was gathered.

According to the study conducted in two hospitals in Wuhan, China by Hu, et al. (2020) stated that 835 (41.5%) frontline nurses reported significant levels of emotional weariness when caring for COVID-19 patients, while 556 (27.6%) nurses reported high levels of depersonalisation (Hu et al., 2020). When it came to administering care, the majority of the nurses said they were experiencing moderate (28%) and high (36.2%) levels of anxiety as well as burnout.

An Ethiopian study of 334 HCWs, mainly nurses, found that the overall prevalence incidence of burnout was highest among nurses (82.8%), while it was lowest in laboratory technicians (2.8%) (biksegn et al., 2016). The predictors of burnout were lack of interest in the job, insecurity, history of physical illness, poor relationship with superiors, worry about getting infected or falling ill. These findings suggest that in pre-COVID era, nurses had minimum client-related burnout. The burnout on nurses was probably due to long working hours, job insecurity, being undervalued as work force, poor remuneration, and lack of support from superiors.

The dynamics have drastically been changed in the COVID-19 era. We found prevalence of client-related burnout (pandemic-related) to be highest in all categories of HCWs. An early study from Hubei province in China compared the mental health disturbances in physicians and nurses working at frontline and the second-line workers (Lai et al., 2019).Those who were directly involved in diagnosis and treatment of COVID-19 patients showed a higher incidence and more severe symptoms of depression, anxiety, insomnia, and mental distress. The chances of having severe symptoms increased if the respondents were females, intermediate seniority, and working at the frontline (Wang et al., 2020).

2.12 GLOBAL MENTAL HEALTH IMPACT OF COVID-19

COVID-19 pandemic triggers 25% increase in prevalence of anxiety and depression worldwide (WHO, 2020). One major explanation for the increase is the unprecedented stress caused by the social isolation resulting from the pandemic. Linked to this were constraints on people's ability to work, seek support from loved ones and engage in their communities.

Loneliness, fear of infection, suffering and death for oneself and for loved ones, grief after bereavement and financial worries have also all been cited as stressors leading to anxiety and depression in countries such as China, Taiwan, South Africa, Netherlands, USA, Kenya, Australia, India, and Canada. Among health workers, exhaustion has been a major trigger for suicidal thinking (Who 2020).

Dong and Bouey (2020) reported on China's response, which included the establishment of nationwide mental health response measures and services, though the authors raised concerns about the lack of detailed communication from the government. This strategy by the Chinese government and the National Health Commission of China, despite the shortfalls described by the authors, recognises the mental health impact of the pandemic. In addition, Marazziti (2020) and Marazziti and Stahl (2020), writing from an Italian context, call for mental health components in coronavirus interventions.

Their recommendations include support for frontline healthcare workers and other professionals and the implementation of nationwide mental healthcare services to assist in dealing with the coronavirus-related mental health complications for individuals and communities. Heale and Wray (2020) call for support, care, awareness, and investment of resources towards mental health care workers and users in response to COVID-19.

2.12 **CONCLUSION**

Chapter 2 discussed the literature review which involves the introduction, characteristics of COVID-19, prevalence of COVID-19, COVID-19 infections and deaths among nurses and other healthcare workers, the impact of COVID-19 on the mental health of the general population, impact of COVID-19 on mental health due to quarantine, mental health risks of COVID-19 in a vulnerable population, the impact of COVID-19 on the mental health of nurses, nurses' mental health related to pandemic nursing care, the shortage of personal protective equipment (PPE) contributed to nurses' moral distress, the prevalence of burnout of health care workers during a pandemic and the global mental health impact of COVID-19.

Chapter 3 will discuss the research methodology, validity and reliability ethical considerations and bias.

CHAPTER 3
RESEARCH METHODOLOGY

3.1 INTRODUCTION

Chapter 3 presents the materials and methods employed in the study. The research approach, the study site, the research design, the population to be studied, the sampling method and sample size, data collection and data analyses. Therefore, the measures taken to ensure trustworthiness and ethical consideration are discussed.

3.2 RESEARCH APPROACH

According to Burns and Grove (2017), research methodology is defined as the process or plan for conducting the specific steps of the study. The qualitative research approach is a systematic, subjective approach used to describe life experiences and give them meaning (Burns & Grove, 2017). In this study, a qualitative approach was used to explore and describe the impact of the COVID-19 pandemic on the mental health of nurses based on their day to day experiences. The participants, who came from various geographic locations, were questioned by the researcher on how the COVID-19 pandemic affected their mental health. The results were subsequently explained by the researcher.

3.3 RESEARCH DESIGN

Polit and Beck (2018) define the research design as the overall plan for addressing a research question, including strategies for enhancing the study's integrity. In this study, an explorative, descriptive design was used to determine the impact of the COVID-19 pandemic on the mental health of nurses in the City of Johannesburg clinics, Gauteng province.

3.3.1 **Explorative design**

Explorative research design is when the researcher illuminates how a phenomenon is manifested and is useful in uncovering the full nature of a little-understood phenomenon (Hunter, Howes & Mccallum, 2018). The explorative design was achieved by allowing the nurses to describe their day-to-day experiences and mental well-being during the COVID-19 pandemic to gain a full view of the phenomenon.

3.3.2 **Descriptive design**

A descriptive research design provides an accurate portrayal or account of the characteristics of a particular individual situation or group (Brink et al., 2014). The researcher considered this design suitable for the study to answer research questions by determining and describing the impact of the COVID-19 pandemic on the mental health of nurses in Gauteng province, the City of Johannesburg clinics. The researcher used this design to describe the experiences of the participants in the form of themes and sub-themes.

3.4 **RESEARCH SITES**

A research site is defined as the physical location and conditions in which data collections occur (Brink et al., 2012). Gauteng province is divided into three metropolitan municipalities, namely: The City of Johannesburg, the City of Ekurhuleni, and the City of Tshwane. The City of Johannesburg Metropolitan Municipality is the largest metropolitan area in South Africa, with a population of about 5.5 million, making it the biggest metro by population size. It is a vibrant and culturally rich city located at the centre of South Africa's economic heartland: Gauteng province.

The study was conducted in the two regions of the City of Johannesburg Metropolitan Centre, namely Region A (Midrand) and Region E (Sandton). Region A and Region E clinics were selected because access is feasible and the intended population is probably present. Services rendered in those clinics

are curative, non-communicable disease, chronic diseases, mental healthcare, and mother-to-child services. Which include immunisation, antenatal care, postnatal care, and family planning. The researcher selected five different clinics in the City of Johannesburg municipality region A and E.

Figure 3.1 below illustrates the map showing all seven regions of the City of Johannesburg metropolitan municipality. However, the study was conducted in two regions, namely: regions A and region E.

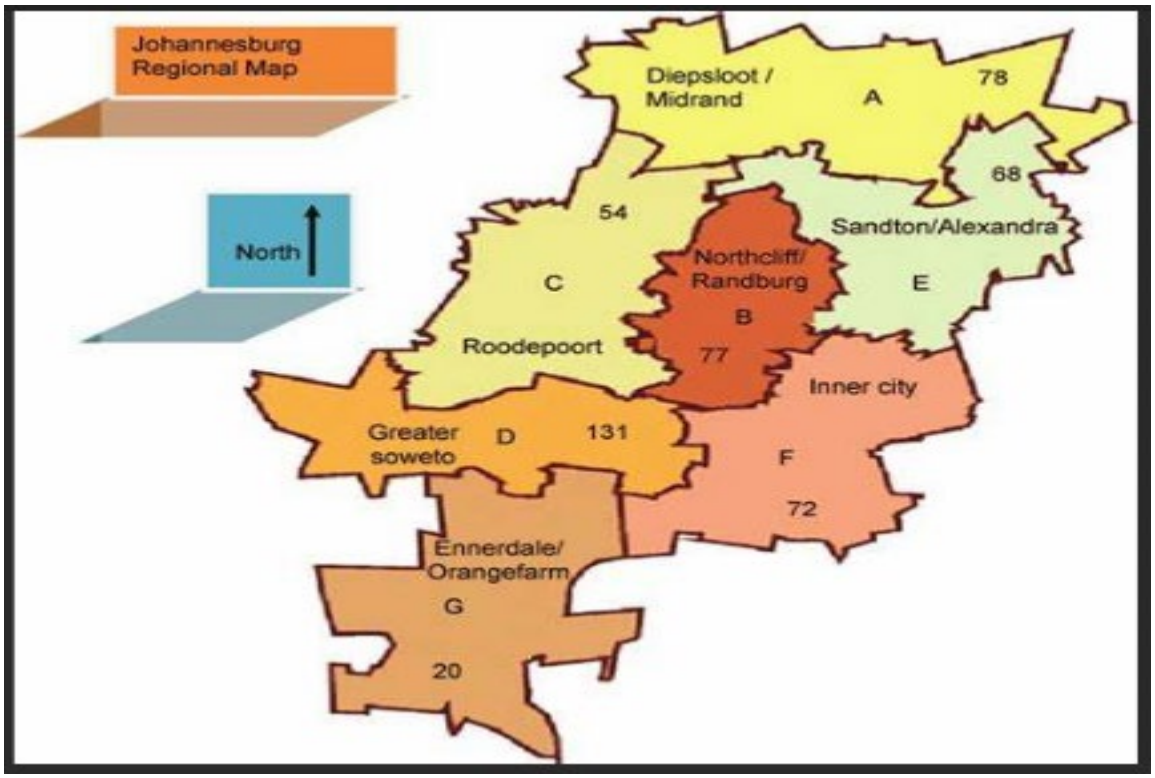

Figure 3.1: The city of Johannesburg municipality and its seven Regions (www.joburg.org).

3.5 POPULATION

According to Thacker (2020), a population is a complete set of people with specified characteristics. The target population of the study was all nurses working at the City of Johannesburg (COJ) clinics, region A which consist of eight (8) clinics and region E has eleven (11) clinics. The estimated number of nurses from the two selected regions was 305. The accessible population was

all professional nurses who were willing and consented to participate in the study and who met the inclusion criteria.

3.6 SAMPLING

Sampling is the selection of a subset of the population of interest in a research study (Turner, 2020). Non-probability, purposive homogeneous sampling was used in this study to select 14 nurses from five clinics in the City of Johannesburg municipality region A and E (Godinho, 2019). According to Etikan, Musa and Alkassim (2016), purposive sampling is the deliberate choice of a participant due to the qualities the participant possesses. The selected participants were only professional nurses and all professional nurses who participated in this study were working during the COVID-19 pandemic. Table 3.2. below illustrate the characteristics of the participants.

Sampling of the clinics

A total of five clinics were convenient sampled from region A and E based on their geographical characteristics of being easily accessible to the researcher. Out of these five, three were from region A and two from region E as illustrated on Table 3.2 below.

Table 3.2: The table of the characteristics of the participants

Participants Pseudonyms	Gender	Age	Role	Service rendering	Clinics codes
Adam	Male	37	Acting operational manager	Admin, oversight supervision	Clinic A, Region A
Betty	Female	38	Professional nurse	Acute services	Clinic A, Region A
Cathy	Female	29	Professional nurse	Expanded Programme on Immunisation (EPI)	Clinic B, Region A

Dolly	Female	40	Professional nurse	COVID-19 vaccination site	Clinic B, Region A
Eve	Female	37	Professional nurses	Mental health care	Clinic B, Region A
Flora	Female	44	Professional nurse	NAS CCMD – programme	Clinic C, Region A
Grace	Female	27	Professional nurse	Antenatal care	Clinic C, Region A
Happy	Female	29	Professional nurse	Antenatal care	Clinic D, Region E
Ivy	Female	30	Professional nurse	Acute, chronic, women and child	Clinic D, Region E
Jane	Female	52	Professional nurse	Tb, Curative	Clinic D, Region E
Kathy	Female	32	Professional nurse	EPI	Clinic E, Region E
Lina	Female	30	Professional nurse	Antenatal care	Clinic E, Region E
Mary	Female	37	Professional nurse	EPI	Clinic E, Region E
Nelly	Female	34	Professional nurse	Maternal health, services related to COVID-19	Clinic E, Region E

3.7 INCLUSION AND EXCLUSION CRITERIA

3.7.1 The inclusion criteria of the study were:

The study included professional nurses who worked at the selected clinics during the COVID-19 pandemic because all professional nurses experienced the phenomenon. Only those who gave consent were included in the study to allow voluntary participation.

3.7.2 The exclusion criteria of the study were:

Nurses who were unwilling or unable to participate because participation was voluntary.

3.8 DATA COLLECTION

Data collection is a systematic gathering of observations or measurements (Pritha, 2020). The purpose of data collection is to obtain information, keep it on record, make decisions about important issues, and pass that information on to others. Data were collected from June to July 2022 when the COVID-19 restrictions were reduced to determine the impact of the COVID-19 pandemic on the mental health of nurses. However, the Health Minister was still encouraging people to wear a mask as there were new COVID-19 variants reported in other countries.

3.8.1 Recruitment of participants

Grove, Burns and Gray (2013) describe the recruitment of participants as a process of identifying, approaching, and obtaining participants who are willing to participate in the research. After approval to conduct the study was received from the university (Appendix B), the researcher requested and was granted permission to conduct the study by the Johannesburg Health Research Committee (JHRC) in Gauteng province (Appendix C), South Africa.

After obtaining the permission letter from the JHRC, the researcher contacted the nursing director (gatekeeper) for permission to sample prospective participants for the study. The researcher then contacted the nursing manager at the clinic and explained the aim and objectives of the study, the type of participants to be interviewed and how the interviews were to be conducted was explained to the nursing manager.

The nursing manager then introduced the researcher to all professional nurses in that particular clinic. The researcher was allowed to inform the professional nurses about the research on a set date in the morning before they can start

with their normal routine. The researcher highlighted the purpose, and overview of the study and recruited them to participate in the study.

A well-ventilated room free from noise or other disturbances was identified as suitable to conduct the interview sessions with the help of the operational manager. The researcher and those who volunteered to participate agreed on a suitable date, time, and venue for the interview. Pseudonyms were used to identify the participants to maintain anonymity and confidentiality.

3.8.2 Data collection instrument

Dejonckheere and Vaughn (2019) defined a semi-structured interview as a data collection method that involves asking participants a set of open-ended questions and following them up with probe questions to explore further their responses and the topic of interest.

The researcher used a semi-structured interview in this study because it has open-ended questions that allow the researcher and the participants to discuss the topic in more detail. The semi-structured interviews were guided by the interviewer guide (Appendix A). The interview guide is described as logically sequenced self-prepared questions to be covered with each participant during the interview process. Semi-structured interviews give the researcher rich, detailed data due to their open-ended nature and flexibility to ask probing questions. One-on-one interviews using semi-structured interviews encourage participants to give a full picture of their questions (Dejonckheere & Vaughn, 2019).

The central question asked was “kindly describe in detail your experience regarding the impact of the COVID-19 pandemic on your mental health?” This main question was followed by subsequent probing questions.

3.8.3 Data collection process

The interviews were conducted after participants had agreed to take part in the study using written informed consent (Appendix D). During data collection, the

nurses were asked to set up the room for the interview following COVID-19 regulations as part of the researcher's adherence to those rules. Thus, to adhere to COVID-19 requirements, the researcher and the participants put on a face mask and kept a social distance of 1.5 meters during the interviews. The researcher also made sure that the nurses' hands were cleaned with hand sanitiser which was placed in the clinic room that the nurses had prepared. The interviews lasted between 20 and 35 minutes each.

The researcher conducted all the interviews. None other than the researcher and the participants were present in the room during the interviews. After obtaining permission, the interviews were voice recorded using a digital voice recorder. Data collection was done using English (Appendix A) interview guides, as those languages were spoken and understood by the participants.

Field note was written to capture nonverbal communication such as mannerism displayed by the participants. Field notes refer to a written account of the things the researcher sees and observes during the course of interviewing participants (de Vos, Strydom, Fouche & Delport, 2011). Field notes were analysed with verbatim transcriptions to develop themes and sub-themes during data analysis.

A total of fourteen interviews were conducted. There was no prior determination of the sample size. Interviews were conducted until the point of data saturation, which was obtained after conducting the tenth interview. Another four interviews were conducted to confirm the saturation.

3.8.4 **Communication skills used in data collection**

When gathering empirical data from participants during the semi-structured interviews, the following communication skills were used: paraphrasing, probing, reflecting, and summarising.

- *Paraphrasing*

Burns and Grove (2011) define paraphrasing as a method of briefly restating participants' basic message. Paraphrasing involves clearly and concisely expressing the ideas of an author in one's own words (Grove, Burns & Gray, 2013). The researcher kept rephrasing what the participant had said, for example: "You are saying that during COVID-19 you suffered from anxiety and depression." This helped to create understanding between the researcher and the participants.

- *Probing*

Grove, Burns and Gray (2013) define probing as a technique used by the interviewer to obtain more information in a specific area of the interview. Probing refers to the interviewer's ability to help participants identify and explore their lived experiences, behaviours, and feelings, thus facilitating their constructive engagement in all steps of the communication (Murphy & Dillon, 2011). The researcher asked the participants questions like "Can you elaborate on…?" to get more information on what was said by the participants.

- *Reflection*

Hughes and Quinn (2013) define reflection as a means of exploring new ideas, sharing own experiences and being willing to be thought-provoking. The researcher encouraged participants to share more information on their experiences by asking questions such as "How did you feel after testing COVID-19 positive?"

- *Summarising*

Summarising refers to summarising the participant's verbalised ideas, thoughts, and feelings to verify the researcher's understanding of what was said (De Vos et al., 2011). Murphy and Dillon (2011) define summarising as combining different views and feelings at the end of the interview by compiling them into one meaningful single statement. At the end of each interview

session, the researcher summarised what participants had said and verified what they meant.

3.8.5 Pilot study

A pilot study is a small, scaled study conducted before the main study on a limited number of participants from a population at hand. The purpose of a pilot study is to investigate the feasibility of the proposed study and to detect possible flaws in the methodology of the proposed study (Creswell, 2013). A pilot study was conducted at clinic A, region A to determine the feasibility of the study. It also created an opportunity for the researcher to refine and improve the interview guide and her interviewing technique.

Three professional nurses who met inclusion criteria were approached to conduct the pilot study. The nurses who participated in the pilot study were excluded from the main study to avoid bias as they would already know the questions to be asked. The results of the pilot study indicated the need for the researcher to avoid asking leading questions, as well as the need for more probing to explore the impact of the COVID-19 pandemic on the mental health of nurses.

3.9 DATA ANALYSIS

The purpose of data analysis is to organise, provide structure to and elicit meaning from the research data (Polit & Beck, 2012). This research followed Tesch's approach to data analysis, which comprises eight integrated steps (Creswell, 2014):

- The researcher got a sense of the research as a whole by reading through the transcriptions of each interview carefully and jotting down ideas as they came to her;
- The researcher analysed the transcriptions of the interview and the field notes that were taken during the interview and selected those that were the most

interesting. According to Creswell it is important to start with the most interesting once because it will give the researcher the overview of the data. While going through the data, the researcher continuously asked: “What is this about?” in an attempt to find the underlying meaning. All thoughts that came to mind were written in the margin;

- The researcher compiled a list of all topics. Similar topics were clustered together and formed into columns, which were arranged into major topics, unique topics and irrelevant issues;
- The researcher abbreviated topics as codes and wrote them next to the appropriate segments of text. This was done to establish whether new categories and codes emerged.
- The researcher reduced the total list of categories by grouping the topics that related to each other. Thereafter, she drew lines between the categories to show the relationship between them.
- The researcher finally decided on the abbreviations for each code and arranged these alphabetically. Data belonging to each category were assembled in one place and a preliminary data analysis was performed;
- Existing data were inspected according to the themes and sub-themes;
- The supervisor and co-supervisor listened to the recorded interviews. The report findings were discussed with the supervisors and the audio recordings were available to validate the data.
- The voice-recorded data, copies of the transcribed data, and field notes were sent to an independent coder who was an experienced qualitative researcher; and
- The researcher had a meeting with the independent coder, where final themes and sub-themes developed by the researcher, as well as the independent coder were identified and summarised.

3.10 MEASURES TO ENSURE TRUSTWORTHINESS

Trustworthiness means the degree of confidence that the researcher has in the data collected (Polit & Beck, 2012). Trustworthiness in this study was ensured

by using four criteria of trustworthiness, which were credibility, dependability, confirmability, and transferability (Brink et al., 2014).

3.10.1 **Credibility**

Credibility refers to confidence in the truth and interpretation of data (Beck & Polit, 2014). In this study, credibility was ensured by the use of prolonged engagement and triangulation. Korstjens and Moser (2018) define prolonged engagement as when the researcher invests sufficient time to become familiar with the setting and context to test for misinformation, to build trust and to get to know the data to get rich data. The researcher had a prolonged engagement with the participants in the field where each interview lasted 30-45 minutes per participant.

Triangulation is when the researcher is asking a different question, seeking different sources, and using different methods. In this study, triangulation was ensured by using different data sources that included field notes and interviews with the tape recorder. Houser (2015) defines field notes as the 27 observations made by the researcher of the environment and body language of the participants, as well as any other information that may enrich the data. Field notes were written to capture non-verbal communication such as actions and signs displayed by the participants. Field notes were analysed verbatim to develop themes and subthemes.

3.10.2 **Transferability**

Transferability refers to the ability to apply the findings in other contexts or to other participants (Brink et al., 2014). Findings were comprehensively described to ensure the transferability of research findings. Furthermore, transferability was ensured by the dense description of gathered data to enable replication to other settings by other researchers.

3.10.3 **Dependability**

Dependability is the stability of data over time and across conditions (Polit & Beck, 2012). The supervisor evaluated the transcribed interviews and data analysis process. Dependability was further ensured by following the scientific process of conducting research. All interview materials, documents, transcriptions, findings, interpretations, and recommendations have been kept and will be made available as part of an audit trail. Furthermore, dependability was ensured through consultation with the study supervisors as experts in nursing research from the beginning to the end of the study.

3.10.4 **Confirmability**

In this study, confirmability refers to objectivity, that is, the potential for congruence between two or more independent people about the accuracy, relevancy or meaning of data (Korstjens & Moser, 2018). To support the provision of thick descriptions, in-depth coverage of the topic was done. Member checking was conducted to confirm with participants that the data recorded was a true reflection of the interview session. At the end of each interview, the researcher summarised the data collected, and the data was then confirmed by the participant. Confirmability was also ensured through verbatim transcription of audio recordings and data analysis.

3.11 **ETHICAL CONSIDERATION**

Ethical consideration is the need to protect the rights of human subjects participating in nursing research and the procedures for doing so (Katefian, 2015).

The steps include:

3.11.1 **Ethical clearance**

The researcher first obtained ethical clearance (Appendix B) from the Turfloop Research Ethics Committee (TREC) of the University of Limpopo. TREC/54/2022: PG.

3.11.2 **Permission of the study**

Permission to conduct the study was obtained from the Department of Health Gauteng province (Appendix C), Municipality management, and the selected clinics' operational managers. NHRD REF. NO.: GP_202204_042.

3.11.3 **Ethical principles**

Ethical principles that were adhered to in this study are the following:

- *Informed consent*

Research participants are entitled to full information regarding the reasons, aims and purpose of an investigation (Christensen, Jonson & Turner, 2014). Written informed consent (Appendix D) was obtained from participants before participation in the study. Participants were not coerced to take part in the study; they all gave informed consent to take part in the study after reading the information leaflet about the study.

- *Confidentiality and Privacy*

Confidentiality is the researcher's safe management of the research information or data shared by the participants to ensure that the data is kept private from others 40 (Grove et al., 2015). The participants were allowed to use preferred names that were not their real names to maintain confidentiality. In this study, confidentiality was ensured by keeping all the collected data in a secure place only accessible to the researcher, supervisor, and independent coder.

Privacy is the freedom people have to determine the time, extent, and general circumstances under which their private information will be shared with or withheld from others (Grove, Gray & Burns, 2015). Data was collected in a

quiet, private room at the clinic, with no disturbance. A do not disturb sign was put on the door to avoid disturbance. The researcher's cell phone was on silent to avoid disruption of the conversation between the researcher and participants. The information was kept under lock and only authorised people will have access to the information. The researcher maintained the participants' right to privacy by not attaching the participants' names to the data obtained. An alphabet letter was allocated to each participant that took part in the study.

- *Anonymity*

  Anonymity is when the identity of the research participants is unknown, even to the study investigator (Brink, Van de wall & Van Rensburg, 2013). In this study, anonymity was ensured by protecting the identity of the participants and participants' specific responses and information was not linked in any way with the participants. The researcher used preferred names that were not their real names to maintain confidentiality.

- *Respect for human dignity*

  Participants were informed that they have a right to decide whether to participate or not. They will also be informed that they can withdraw from the study without the risk of a penalty (Christensen, Johnson & Turner, 2014). In this study respect for a person was ensured by not forcing the participants to participate in the study, this was achieved by telling the participants that participation was voluntary.

- *The right to self-determination and full disclosure*

  The principle of self-determination means that prospective participants have the right to decide voluntarily whether to participate in a study, without risking prejudicial treatment. It also means that people have the right to ask questions, refuse to answer questions and drop out of the study (Polit & Beck, 2018). Written informed consent was obtained from participants before participation in the study. The purpose and the outline of the study was discussed with all participants during recruitment. Participants were told that they had the right to

withdraw from the study if they so wished without having to give reasons for their withdrawal.

- *Protection from harm and discomfort*

The right to protection from discomfort and harm in a study is based on the ethical principle of beneficence, which states that one should do good and, above all, not harm (Grove, Gray & Burns, 2015). Researchers should prevent or minimise harm in studies with humans. Participants must not be subjected to unnecessary risks of harm or discomfort, and their participation in research must be necessary for achieving societally important aims. In research with humans, harm and discomfort can be physical (e.g., injury), emotional (e.g., stress), social (e.g., loss of social support) or financial (e.g., loss of wages) (Polit & Beck, 2018). The data was gathered from the participants in a safe and unthreatening environment. All questions posed to participants were fair and relevant to ensure that the questions did not cause social, psychological, or emotional harm to participants. Data gathering was also conducted at the time and date agreed upon between the researcher and participants to avoid inconveniencing participants.

- *Justice*

Justice means participants' right to fair and equal treatment (Owonikoko, 2013). In this study principle of justice was ensured by not abusing the participants or exploiting the grounds of sex, race, religion, age, and class. Participants' rights were not violated, and they were all treated with dignity and fairness (Moule & Goodman, 2014*).*

3.12 **BIAS**

According to Babbie and Mouton (2014) bias refers to the quality of data collection instrument that may result in the misinterpretation of what is being measured. In this study, bias was avoided by selecting the sample population using the purposive sampling technique which allows the researcher to carefully select the sample based on the element that was related and was able to

answer the research question and provide relevant information (Brink et al., 2013).

Open-ended questions were asked and the participants were allowed to talk freely without interruption by the researcher. Tufford and Neuman (2010) describe bracketing as a scientific process in which the researcher suspends or holds in abeyance his or her presuppositions, biases, assumptions, theories, or previous experiences regarding the phenomenon studied. To ensure bracketing and prevent bias the researcher wrote down all the preconceived ideas before beginning with data collection. Data were collected as if nothing was known about the phenomenon. Bias was avoided by interviewing the participants using Zulu and English as those languages were spoken and understood by the participants.

3.12 CONCLUSION

This chapter described and discussed the research methodology, approach, study site and the design used in the study: population, sampling, and sample size: inclusion and exclusion criteria, data collection method, data analysis, and measures to ensure trustworthiness that include credibility, transferability, dependability, and conformability.

Bias and ethical considerations include aspects such as ethical clearance, permission to conduct the study, informed consent, the principle of confidentiality, the principle of privacy, the principle of anonymity, principle of respect for a person, the principle of justice and the principle of non-maleficence. The next chapter will discuss the presentation of the findings of the study.

CHAPTER 4
RESULTS AND DISCUSSION OF THE FINDINGS

4.1 INTRODUCTION

The previous chapter discussed the research methodology, which encompassed the research design, research setting, study population, sampling, data collection, data analysis, measures to ensure trustworthiness and ethical considerations.

This chapter presents and discusses the study findings surrounding the impact of the COVID-19 pandemic on the mental health of nurses in the City of Johannesburg clinics in Gauteng province.

The recorded interviews were transcribed verbatim through an open-coding method of data analysis and produced themes and sub-themes, which are discussed along with the literature control that supports the findings of the study.

4.2 DATA MANAGEMENT AND ANALYSIS

The data gathered during semi-structured, individual interviews were analysed using Tesch's open coding method of qualitative data analysis, as outlined by Creswell (2014), and as outlined in Chapter 3 of the research methodology.

Additionally, data were given to an independent coder for coding. The final themes and sub-themes, depending on those that arose during independent analysis, were discussed, and decided upon during a consensus meeting between the independent coder and the researcher.

4.3 PARTICIPANTS DEMOGRAPHIC DATA

The research included fourteen professional nurses from five clinics in Region A and E of the City of Johannesburg. Three of them were in their late twenties,

eight in their thirties, two in their forties, and one in her fifties. Thirteen were females and one male. Thus, all participants were professional nurses and one acting operational manager. Moreover, about eight of the participants reported having tested positive for COVID-19 in 2020 and 2021.

Six participants reported to have tested positive more than once. From eight participants, three participants reported to have been admitted the in hospital, because of the severity of the symptoms.

Five professional nurses reported to have lost a colleague due to COVID-19. Seven of them reported that they have lost close family members due to COVID-19.

4.4 FINDINGS FROM SEMI-STRUCTURED INTERVIEWS

This section explores the impact of the COVID-19 pandemic on the mental health of nurses in the City of Johannesburg clinics, Gauteng province. The findings from the semi-structured interviews resulted in five themes. Thus, about 23 sub-themes are supported by a review of literature that support both the study findings and participant verbatim quotes.

The participants' statements are directly quoted, and the interpretations are supported by contemporary literature.

The following table shows the themes and sub-themes which were agreed upon by the independent coder and the researcher.

Table 4.1: Themes and sub-themes depicting the impact of COVID-19 pandemic on the mental health of nurses providing care in the City of Johannesburg clinics in Gauteng province

Themes	Sub-themes
1. Factors contributing to the impact of the COVID-19 pandemic on the mental health of nurses.	1.1 The COVID-19 pandemic onset
	1.2 The COVID-19-related losses
	1.3 The COVID-19 infection and symptoms.
	1.4 Social isolation and lifestyle changes.
	1.5 Social factors (crime and violence).
	1.6 Social factors (unemployment).
	1.7 Occupational factors (inadequate psycho-social support).
	1.8 Occupational factors (inadequate resources).
	1.9 Occupational factors (staff shortages and work pressure).
2. Mental health symptoms related to the COVID-19 pandemic.	2.1 Fear of COVID-19 infection.
	2.2 Fear of the unknown and uncertainty.
	2.3 Fear of death or fatal consequences.
	2.4 Fear of infecting family members with COVID-19
	2.5 Feeling depressed, sad, and hopeless.
	2.6 Feeling overwhelmed.
	2.7 Mental exhaustion related to burnout.

3.	Behavioral symptoms related to the COVID-19 pandemic.	3.1	Hypervigilance.
		3.2	Avoidant behaviour.
4.	Support related to the COVID-19 pandemic.	4.1	Support from the government stakeholders
		4.2	Support from management and colleagues.
		4.3	Resource related support.
5.	Measures to improve nurses' mental health related to the COVID-19 pandemic.	5.1	psycho-social support.
		5.2	Clinics managerial support.

4.4.1 **Theme 1: Factors contributing to the impact of COVID-19 pandemic on the mental health of nurses**

This theme is based on the factors contributing to the impact of COVID-19 pandemic on the nurses' mental health. This study found that the mental health of the nurses was impacted by various factors which contributed to nine sub-themes. These include:

COVID-19 pandemic onset (sudden, shocking, and extraordinary); COVID-19 related losses (colleagues and family members); COVID-19 infection and symptoms, social isolation and lifestyle changes, social factors (crime and violence), social factors (unemployment), occupational factors (inadequate psycho-social support), occupational factors (inadequate resources), occupational factors (staff shortages and work pressure).

4.4.1.1Sub-theme 1.1: COVID-19 pandemic onset (sudden, shocking, and extraordinary)

The study found that the sudden onset of the COVID-19 pandemic had an impact on the nurse's mental health. Participants expressed that when the COVID-19 pandemic started, it came as a shock and it was a new thing to everyone. In this study, the participants reported that the experience was shocking and extraordinary, it was not a pleasant experience. An Acting Operational Manager in one of the selected clinics expressed how he experienced the sudden onset of the COVID-19 pandemic as one factors that affected their mental health *"All this experience was extraordinary for some of us; these are events, and we have never seen such events ever since we were born, and I don't think that anybody anticipated this" (Adam).*

A 40-year-old professional nurse expressed how she experienced the onset of COVID-19 *"The first time when I heard about COVID-19, I was not scared until I was working in at Hospital that time. The Hospital managers told us that we are going to receive the COVID-19 patients then that's when we were scared" (Dolly).*

A 44-year-old professional nurse expressed that when she heard of COVID-19 she thought this is far from her and her province as evidenced by: **"***COVID-19, the experience was not a pleasant one, so number one I can say you know when they said there was COVID-19 you think no it's far away from you and then the sooner you hear that there's a case in South Africa you just think no it's in another province not anywhere next to me, and then within a month, someone next to you is having COVID-19 now the fear comes closer to you" (Flora).*

A 27-year-old professional nurse working in the antenatal care section emphasises that the onset of COVID-19 came as a shock. ***"****All I can say is that it all came as a shock, the first time I had of it was a shock by then it started stressing us, especially remembering that we have to go to work every day and*

deal with something that you don't know how to deal with, so I was so stressed. I was so in shock, if I can say that so it came as a shock to me" (Grace).

4.4.1.2 Sub-theme 1.2: COVID-19 related losses (colleagues and family members)

The participants expressed that the sudden loss of colleagues and family members due to the COVID-19 pandemic had a serious impact on their mental health. Despite such loss, they had to watch life go on, no matter what was happening, since they were constantly exposed to COVID-19-related patient and colleagues' deaths as well as never-ending patient rescue efforts.

Their responses were captured as follows:

A 27-year-old participant who works in prenatal care spoke about losing a close family member and her co-workers while still carrying out her nursing responsibilities. As evidenced by: **"***At first people were dying so I've never seen so many bodies in my entire nursing career that I had to certify as deceased so also being a person and seeing that in my profession it altered with my mental well-being because every day you have to try to encourage yourself. Most of the people that were dying we knew them, they were colleagues, our friends, and families but we had to keep the faith and soldier on. So, it was a very difficult area in my life"* (Grace).

The acting operational manager outlined how COVID-19 affected Johannesburg as a result of the loss of their coworkers. His response was captured as follows: **"***Since the pandemic started there has been a lot that happened in the city of Johannesburg, we have lost colleagues and we have lost families and loved ones" (Adam).*

A 44-year-old professional nurse who works in region A *expressed* how she lost her close colleague due to COVID-19. Her response was captured as follows: ***"****I only lost one colleague due to COVID-19, I was just close to her, we used to work together and share a lot of things" (Flora).*

27-years-old female participants again expressed how unpredictable COVID-19 was as evidenced by: ***"****Yes, I have lost colleagues, I was working in a COVID-19 ward, I have lost colleagues as I have previously mentioned that I had to sit by myself at home, I have lost family members , I've lost an uncle during this time people whom you thought that was perfectly healthy and all of the sudden they die, that was what baffled me with this COVID-19 thing because you'd notice that a person Is perfectly fine the next second you go to the room and they are gone, so there was never really a predictable process" (Grace).*

4.4.1.3 Sub-theme 1.3: COVID-19 infection and symptoms

This sub-theme emerged when participants started to mention COVID-19-related symptoms that they experienced. In terms of infection, nurses are among the COVID-19 outbreak's most vulnerable populations, because the risk of exposure was high. Therefore, when infected they might show signs and symptoms like others. Common symptoms reported by the participants were fever, amnesia, headache, cough, shortness of breath, body pains, diarrhoea and anosmia.

The quotes below support the findings:

A 37-year-old acting professional manager reported having COVID-19 symptoms so severe they made him feel like he was about to pass away. Captured as follows: *"The symptoms that I had were severe fever which led to me sweating and I remember blankets getting wet because of the sweat and I would take Panado to minimise the fever and I also lost my sense of taste. I would eat food but the taste would be gone, I also had headaches and a cough. One of the scariest symptoms I had was the shortness of breath. Where you feel like you are dying and you feel like there is something sitting on your chest that you can get rid of and yet, you can't" (Adam).*

A 38-years old professional nurse working in acute service reported that she tested positive for COVID-19 and had new symptoms from the variants of COVID-19. As stated below: "*No, it was just a heavy headache and the second*

time around when I had COVID-19 I was symptomatic I was coughing it was that new one COVID-19 that had the sneezing and the nasal draining I was having tight chest for the very first time and body pains" (Betty).

Flora (pseudo name) also expressed her COVID-19 symptoms which are as follows: *"I did at the time, I had mostly a headache, and then it was coughs here and there, and I had those last six symptoms where you can't smell anything. The taste of things you don't even feel the chili on your tongue regardless of what you are eating, you can just eat anything you won't smell or taste" (Flora).*

4.4.1.4 Sub-theme 1.4: Social isolation and lifestyle changes

The nurses who were working during COVID-19 shared their experiences regarding self-isolation, social distancing and adapting to the new lifestyle, wearing masks, and always sanitising.

A 40-years-old female professional nurse who works at COVID-19 ward during the pandemic explained how they were directed to work for 7 days or 14 days without going home to their families to prevent the spread of the COVID-19. As evident from the following quotation: *"They told us that we are going to stay at the hospital for seven or fourteen days and not be allowed to go out to our houses. We had to bring our clothes and sleeping clothes, we were told that we would be offered towels and food. Remember I was staying with my child, He was 2 years and I was also staying with my mother. I had to leave them at home without seeing them for 14 days since I was required to stay at the hospital" (Dolly).*

She continues by explaining how life has changed as a result of the requirement to follow all COVID-19 regulations. As stated below: *"Whenever you nurse the patients before you go out for lunch you have to take a shower and change clothes. When you came back you had to change the clothes again, we were not allowed to go in and out without taking a shower. The lifestyle had changed, we were required to wear masks and we were using N95 masks and then we are using PPE (Personal Protective Equipment) and wore three gloves however the third glove we use to remove it when we had to attend to patient and then*

the remaining two gloves we use to always wear them while sitting on a nursing station. We were not allowed to drink water in the nursing station, you had to go to the kitchen alone and in June winter time, it was very cold and it was not nice, it was disturbing." (Dolly).

A 29-years-old professional nurse working in EPI mentioned how affected she was due to COVID-19 regulations. It was evident as follows: *"and then we had to change our lifestyles wearing masks all the time inside the house and I'm using public transport and we were supposed to do social distancing, and led to us being late at work because maybe they would put five people inside the taxi to maintain social distancing, even going to shopping there were things that we were only allowed to buy even going to the bank there were days so everything was just affected*" (Cathy).

A participant who is 37-years-old mentioned how stressful it was to continue assisting others while no one was taking care of her family. As evidenced below: "It *was so scary and stressful because I was supposed to be at work and there was no one to look after my family, so for me it was so stressful because I was helping people and on the other hand my family was left alone" (Eva).*

4.4.1.5 Sub-theme 1.5: Social factors (crime and violence)

Since 2020, South Africa has reported a high number of crime rates and unemployment due to COVID-19 pandemic. Participants indicated how much they were affected by violence and crime during COVID-19.

The following responses were mentioned by participants:

The acting professional manager claimed that his relationship with his family was affected by abuse as a result of COVID-19's lockdown regulations. As evidenced below: *"because the COVID-19 has impacted us in many ways including our relationships personally at home where this issue of abuse begins to emerge because when you are on lockdown there is nothing else to do so*

they begin to show their true colour now we are bombarded with this experience" (Adam).

He further explained to say: "*we were forced to be on lockdown with people that were always on work and then the true colours emerged" (Adam).*

Adam (pseudonym) goes on to describe how COVID-19 has caused gender-based violence, increased crime, and alcohol abuse. It is as evidence below: *"but all these things are exhibited by the COVID-19 and issues around lockdown and also we have begun to see people abuse alcohol and so on and those are the additional I can add you on and killing of women and children and it is also affecting our mental health but again this issues were contributed by the lockdown and losing of jobs and closing off and all that. When people were put on lockdown it also increased crime and we have since seen the high rise of theft" (Adam).*

A 38-years-old female professional nurse further explained the rise of crime rate specifically due to hunger. it is captured as follows: "*because there is high rate of crime, hijacks, people are dying now because hunger remember the luting it was all because of hunger and this is falling under the same umbrella COVID-19 had that no be COVID-19 the wasn't going to be much of crime that has rising in the past year or two" (Betty).*

4.4.1.6 Sub-theme 1.6: Social factors (unemployment)

Participants explained the impact of unemployment and financial burden towards their family due to COVID-19 pandemic.

Their responses were as follows:

A male acting operational manager indicated that the closure of companies is one of the reasons for unemployment. As stated as follows: *"And despite some of us losing families there were some companies that had to shut down and many people had to lose their jobs" (Adam).*

Betty (pseudonym) discussed the challenges of working alone while providing for everyone in the family due to unemployment caused by COVID-19. Her response is as follows: *"or our partners don't even have proper jobs and just because us we are those essential workers, we still having a little bit of something that we can at least buy bread but from a point whereby you used to be having someone coming halfway, meeting you halfway on certain things now it's a problem and it's all goes back to COVID-19 and the disadvantages of COVID-19 that it came with" (Betty).*

Mary (pseudonym) further expressed how challenging it was to support everyone in the family alone. Her response is as follows *"Yes financially it hurt us who are working also on those that are not working, because a lot of our family members have lost their jobs and there was no compensation from that because it depends on the type of job you have, so as a nurse and my contract was never terminated because I had to be there for the patient and also be there for my family as well and it was so stressful financially because some were not working and I had to provide and at the same time" (Mary).*

4.4.1.7 *Sub-theme 1.7: Occupational factors (inadequate psycho-social support)*

The finding of the study revealed that nurses were not fully supported while working in COVID-19 settings; they indicated that they never received psycho-social support and emotional support like counselling during the pandemic while they were the front liners. It was revealed that the institutions lacked a method for assisting or monitoring how the nursing professionals, who treated COVID-19 patients, were faring.

The excerpts below demonstrate this:

An acting operational manager indicated that there was no available psycho-social support to the staff from the department of health because they used their own money to seek medical assistance during COVID-19. It is evidenced as follows: *"I think the department has done a lot but this one issue I don't think has ever went full force about it, the issue of the support for employees in terms*

of the mental health absolutely they avail more information on the staff especially the issue of employees their employees that issue was not touched, for example you know the availability of psycho-social assistance to the staff , I don't think that it was ever available for anyone you know we were caught in the middle of us going and seek this assistance privately using our money to seek this assistance, you know there was never a specific department which was established to assist the employees in this regard" (Adam).

A 38 years old professional nurse expressed how they needed nothing more but counseling during COVID-19. It is evidenced as follows: *"I think we just needed counseling, we needed counseling because this thing hit us and we have never even received the counseling. It was just when you are having this thing you get calls from wherever but then we were never counseled on this thing" (Betty).*

A 40-year-old female professional nurse claimed that although she had received encouragement, it was insufficient since she preferred to be referred to a psychologist. Captured as follows: *"Yes but it was not enough. I thought maybe they sent us to see the psychologist or counseling would be enough. Sometimes they would just give us the money or food, they tried to encourage us but it was not enough as we used to see patients dying so if we were referred to the psychologist it was going to be the best" (Dolly).*

A 44-year-old female professional nurse wished to have a supportive and caring employer who would call to inquire on your well-being during lockdown. As captured below: *"You know the support system at the clinic was not much, you know sometimes when people are working they need to know that their employer cares especially when you are on quarantine you expect someone to call and ask you how you are doing but not much of that was done, so the support system from the employer was not much" (Flora).*

4.4.1.8 Sub-theme 1.8: Occupational factors (inadequate resources)

Nurses in City of Johannesburg municipality Gauteng province have encountered working during COVID-19 with shortage of personal protective equipment (PPE).

Three participants explained about working without PPE at their workplace, their responses are as follows:

A 38-year-old Betty mentioned that they have encountered not much shortage of PPE in their facility. Her response is as follows: *"so yeah but other than that within the facility it was PPE and sometimes will be in short of PPE so to be honest it wasn't always at the best support that we had, but at the end of the day we are here because of that little bit of something that we were helped with by the PPE" (Betty).*

A 34 years old female professional nurse working in maternal health and COVID-19 service expressed how unsafe and unfair to work without enough PPE. Response captures as follows: *"and short of PPEs so we would test COVID-19 5 patients with one gown and we felt so unsafe and it was unfair" (Nelly).*

Nelly (pseudonym) continues by saying: *"At first when COVID-19 landed in Gauteng province, we thought we were supported but as time went on when we found out how this COVID-19 spread, we felt unsafe because we were not given enough PPEs, we were only given masks just to cover our month and nose. Sometimes we would go short of sanitizers in the clinic, and they would give us the cloth mask and told us to wash it and repeat it so I felt that it was unfair especially for a disease that was not much researched and nobody is showing off. Sometimes they would tell us it's an airborne disease, you need to wash your hands and sanitize your hands and the next thing you do not have the sanitizer in the clinic so it was so frustrating and we were not supported enough" (Nelly).*

4.4.1.9 Sub-theme 1.9: Occupational factors (staff shortages and work pressure)

Participants explained that they suffered a lot from shortage of staff and work overload due to others being on quarantine. Their responses captured as follows:

A female professional nurse revealed that patients expected them to be with them constantly because they were afraid of COVID-19 which was impossible due to shortage of staff. Response captured as follows: *"it was difficult because we had a shortage of staff at the time and remember patients at the time needed more time with you because they were scared, they thought maybe if you sit next to them they will survive and remember we are not a lot at that time and patients would ring the bell because they need us that time due to anxiety. It was very difficult" (Nelly).*

A 27 years old female participant explained that shortage of staff caused them to work even beyond their scope of practice. it is evidenced as follows: *"so it resulted to staff shortage, when it came to staff shortage we had to come to work and do what we thought was best , whatever works and see what happens throughout the day , staff shortage and being the only nurse you don't have support so you have to do multifunctional things , so you'll be the nurse you'll be the cleaner as they don't get into wards and you also had to do kitchen work and change the linens and everything concerning COVID-19 ward, you understand so the work load was too much, short staff" (Grace).*

A 52 years old female professional nurse who works in TB and curative services described how shortage of staff and work overload affected her. Response as follows: *"Yeah we were working, and others were working while I was in quarantine because I had just one episode of COVID-19, yes we were working but there was that shortage since it was affecting us in different ways some you'd find that they were severely affected and they had to be hospitalized, I remember there was also a time that I was not working at my current clinic but there was a sister here who was admitted for about a month with COVID-19 you can just imagine what was happening with her role in the clinic so it was*

affecting us differently truly speaking. It was just fortunate to those that recovered after 10 days and they needed to come back to work" (Jane).

4.4.2 Theme 2: Mental health symptoms related to the COVID-19 pandemic

This section covers the COVID-19 pandemic mental health related that nurses encountered while providing care. This theme gave rise to seven sub-themes.

These symptoms are described in depth below.

4.4.2.1 Sub-theme 2.1: Fear of COVID-19 infection

Most participants indicated that COVID-19 instilled fear in their workplaces especially in working contact with the patient. They indicated that they were scared and not comfortable to even interact with other colleagues due to fear. Their responses are as follows:

Betty, a female professional nurse, claimed that she had fake COVID-19 symptoms because she was afraid she might have the disease. Her response is as follows: *"but then at the end of the day even when the first person that was very close to me it was a colleague when she was diagnosed with COVID-19 it was on Sunday where results came out I was at the friend house and I was called by the management to rush back home and quarantine I just felt I was dying to an extent that even mentally in your head just feel you can't breathe because these are the thing we were told would happen I had tightness of chest I couldn't breathe I couldn't take anything I was just so sick and it was just mentally because when I did the test it was negative and I was never positive for a longer time after this pandemic" (Betty).*

A 44-year-old female professional nurse named Flora described how quickly COVID-19 transmission spread, which instilled fear of contacting the virus. Her response as follows: *"You know, when there was some few COVID-19 cases in the institution that I was working then, and then people reported that there's one nurse that tested positive for COVID-19 and then we start thinking who was close to this person and then you find out within two to three days there's more*

than five people that are positive, and then you become scared and then now they close the whole clinic, and say everyone must test, and to find out that almost 90% of the staff were testing positive" (Flora).

A 29-year-old female professional nurse named Happy was anxious to work in-contact with COVID-19 patients because she was worried about catching the virus. it is evidenced as follows: *"The most stressful thing is that we came into contact with COVID-19 patient almost every day which we didn't know if they were infected or not, so every time when dealing with a patient it was stressful, most of the patients we'd see them today and the next day they test positive also with our colleagues so you start stressing about your health".*

She continues by saying: *"and the consequences was that you would not be mentally active the whole day as you tend to lose concentration because the main focus would be, what if I get infected" (Happy).*

Ivy, a 30-year-old female professional nurse, mentioned how nervous she was to work with a sick coworker because she was concerned she would catch the virus from them. As evidenced below: *"In terms of workload and also when you see that someone has COVID-19 you become fearful and remember at clinics we use each other's rooms, so mentally when someone is sick you think you'll also get infected, so if sanitation people haven't come to clean you won't want to go there because you are afraid of getting infected" (Ivy).*

4.4.2.2 Sub-theme 2.2: Fear of the unknown and uncertainty

Participants indicated that they suffered from fear of the unknown and uncertainty due to COVID-19. It is evident as follows:

A 38-year-old female professional nurse described how she was unsure of whether or not COVID-19 was still available in the country. it is evident as follows: *"because still now we still having those after effect of COVID-19 and we still as careful as we use to because of the uncertainty of as to whether it's gone or its still here , the numbers are still rising sometimes it drops and now there new variant of COVID-19 so we are still not sure what is happening and*

with the presidency lifting other rules of lockdown it left us with a lot of uncertainty because of out there is no mask but when you coming in here you still have to mask and you still have to maintain social distancing" (Betty).

A 37-year-old man who participated in the study also spoke about how COVID-19 affected his mental health and left him feeling uncertain and anxious. As evidenced below: *"And the uncertainty that comes with contacting the virus as to what happens to you, whether you are going to die and working as a nurse we had to watch so many people die. I contracted the disease once I had serious symptoms and I had no idea if I was going to make it alive or not and this has impacted me so much mentally and also led to me having anxiety" (Adam).*

4.4.2.3 Sub-theme 2.3: Fear of death or fatal consequences

Participants indicated that they also feared death as some of them contacted the COVID-19 virus and had symptoms of COVID-19.

Their responses were captured as follows:

A 44-year-old Flora who works in region A, clinic C described how COVID-19 instilled a lot of fear in her because she was afraid of losing her life. it is evident as follows: *"actually it instilled a lot of fear in me as a nurse so my experience it was totally, you know I was going crazy, I was out of my mind, you know I was just afraid I had so much fear because I didn't know how it was going to affect me now you hear things like it's killing a lot of people you see it on the news everywhere you are just thinking that if I have it I might just lose my life" (Flora).*

A female professional nurse who is 29 years old said she was always terrified because many individuals died when COVID-19 first appeared. it is evident as follows: *"No we were just scared because at the peak like everyone who was infected most of the died because of COVID-19, so you always are afraid that if you contact it you might die, you might not survive it because obviously if your immune is not strong then you might be infected and not survive" (Cathy).*

A 29 years old female professional nurse stated that while caring for COVID-19 patient, she lost her loved ones and began to worry constantly.it is evident as follows: *"After losing my loved ones I started being worried about myself since I was so exposed more than them because some of them were not even working , they were at home most of the time but they contracted it then had complications and died , so that is when I started worrying because the most important thing was isolation but I became worried since those who were not working got infected then had complications then died , but with colleagues I consoled myself that maybe they got it at work, or they had other commodities so they couldn't make it" (Happy).*

Nelly added that following the death of her cousin, she experienced grief and developed a fear of passing away because of COVID-19. It is evident as follows: *"When my cousin passed on, I was scared and sad because I just lost a family member and colleague so it was shocking and I was afraid that what if now I am going to be the next victim of this COVID-19" (Nelly).*

4.4.2.4 Sub-theme 2.4: Fear of infecting family members with COVID-19

Participants indicated that they became afraid of going home to their family members as they were afraid of exposing them or infecting them with COVID-19. Their responses captured as follows:

A 38-year-old professional nurse indicated that since she was worried about spreading COVID-1919 to her family members, she would first get tested before visiting them at home. Response as follows: *"Yeah with the first encounter with my first positive test I was not symptomatic I just tested because I wanted to take leave I was going to see my parents and I was coming from this area where by I am exposed to COVID-19 so I didn't want to infect /transmit it to the kids at home so I just took the test for that" (Betty).*

Cathy, who is a 29-year-old female professional nurse also indicated that she was worried of affecting her family as they might not survive. Captured as follows: *"and even yourself you get infected and then you go and infect*

someone at home and they might not even survive, so that's what got me worried" (Cathy).

A 37 years old professional nurse who works in curative services expressed how anxious she was dealing with COVID-19 patients since she could become infected and infect her family. it is evident as follows: *"I was so scared because I was thinking of my family and we as nurses we work with people every day and some of them have COVID-19, so sometimes we felt stressed because we contacted the virus and we would infect our families at home because as nurses we didn't have a choice we had to come to work every day" (Eva).*

A 30-year-old female professional nurse who cares for expectant mothers in clinic E, region E, reported that she stopped visiting her elderly mother because she didn't want to infect her with the COVID-19 virus. It was captured as follows: *"and you want to keep away from family especially my mom because she is an elderly person she's over 60 and I couldn't even go home and my biggest fear was infecting her with the virus, so I would rather keep my distance and avoid going home because I just didn't want to infect them" (Lina).*

4.4.2.5 Sub-theme 2.5: Feeling depressed, sad, and hopeless

The participants were asked how it felt to work during COVID-19 while people were dying every day.

Their responses were captured as follows:

A female professional nurse expressed her feelings of being depressed, insomnia, loss of appetite during COVID-19. Stated as follows: *"I felt like I had depression and I used to eat a lot. Sometimes I would lose my appetite and also be unable to sleep because when you sleep you tend to remember all those patients you left in the ward if they are ok or you will think they are dying" (Dolly).*

A 37 years old professional nurse described the trauma she had while dealing with COVID-19 patient. it is captured as follows: *"Okay, to me it was so difficult to wake up in the morning and come to work knowing that I'm going to face a patient with COVID-19, it was so traumatising because we used to see people dying in front of us, families grieving their loved ones due to COVID-19" (Eva).*

A participant who is 29 years old said that she was unhappy and always moody, because she was worried about what other people were going through. It is evident as follows: *"Uhm, it was sad, every day I had mood changes, you can never be happy the whole day, the moment you start thinking about what other people were going through you tend to be stressed again" (Happy).*

A 34-years-old female professional nurse also explained how devastating it was to continue working in a workplace where a colleague died due to COVID-19. Response as follows: *"It was shocking and frustrating, like how can you go back to work where your same colleague contracted the disease and passed on due to the same disease and you have to have the strength to carry on and do the work, it was very devastating" (Nelly).*

4.4.2.6 Sub-theme 2.6: Feeling overwhelmed

Participants shared their feeling of being overwhelmed due to taking care of patients and themselves psychologically.

Their responses were captured as follows:

A male participant shared his feeling of being overwhelmed especially after hearing the COVID-19 information. it is evident as follows: *"Some of the things I mentioned about these events are more or less becoming overwhelming when you experience them directly" (Adam).*

A 37-year-old professional nurse who participated in the study, said it was too demanding because she was supposed to provide emotional support for other patients who had lost their jobs. Response as follows: *"Another thing that happened is that a lot of our patients lost their jobs and they were struggling*

psychologically. So, I had to be there for them. Whereas I needed counseling as well so that was too heavy for me. I don't want to lie it was too heavy" (Mary).

A 34-years-old female participant indicated that it was painful to be expected to nurse COVID-19 patients after suffering from the same virus. Respond as follows: *"As a health care worker, I was in so much pain and I suffered from COVID-19 diseases and I had to take care of COVID-19 patients again. In 2020, we had a lot of people who suffered from COVID-19 and lost their loved ones" (Nelly).*

4.4.2.7 Sub-theme 2.7: Mental exhaustion and burnout

Participants indicated that working every day during COVID-19 caused mental exhaustion and burnout due to shortage of staff.

It is evident as follows:

Flora, a 44 years old female participant, described quarantine as one of the causes of burnout and exhaustion during COVID-19. *"You find that you are overwhelmed with patients and then it was also affecting us you know it affect you emotionally and mentally that you have to be exhausted, you have to work twice as much as you used to, because now other people are on quarantine, and so it was putting a lot of strain on the staff" (Flora).*

A 27-year-old Grace explained that because no one was allowed to take time off or their leave days during COVID-19 at their facility, she was left exhausted. it is evident as follows: *"So, remember that at time they eliminated any leave, if you've applied for leave as a health care worker they erased any leave nobody was allowed to get any leave at that time. So, I was due for leave at during time because I had not taken my leave in a year and months. So, because of that period I could not take my leave, remember I was exhausted, that's the reason I put my leave for that specific time. I was exhausted and burnt out then the COVID-19 wave came in so now as a health care professional I had to be in the front line my leave was cleared so I was back to burn out, back to exhaustion it was very bad" (Grace).*

Nelly stated that the lack of staff counseling made it impossible for them to perform at a high level, which resulted in burnout. It is captured as follows: *"There was no counseling, so the biggest thing was shortage because it caused burnout, as a health care worker it we couldn't function properly and we had to function as we had no choice" (Nelly).*

A 37-years-old Mary described the impact of exhaustion as being forgetful due to COVID-19. It is captured as follows: *"I would say that we ended up being forgetful, like you'd be busy with a patient and you'd not remember were you started and what you did, you'd forget so many things, you become so forgetful because of the COVID-19 then the other signs and symptoms I'd say is fatigue and stress" (Mary).*

4.4.3 **Theme 3: Behavioural symptoms related to the COVID-19 pandemic**

The findings of this study indicated that nurses suffered from behavioural symptoms linked to COVID-19. This was supported by two categories that emerged from this theme, namely: hypervigilance and avoidance behaviour.

4.4.3.1 Sub-theme 3.1: Hypervigilance

Participant indicated that COVID-19 pandemic instilled fear and anxiety which led them to become very sensitive and alert with regard to COVID-19 in the workplace and outside work, and their responses were captured as follows:

Two professional nurses named Flora and Katty mentioned that COVID-19 made her to be extremely careful and unable to relax. Her response are as follows: *"Its instilled fear on me to say you can't let your guard down or you can't relax. It made you think that we are over this pandemic or we can move on and relax or as you see the lockdown levels going down you think now you are fine you can actually mingle or go out or on a trip. You know you always have to be cautious regardless even if you see that there isn't a lot of cases that are being reported but you still can't let your guard down totally" (Flora).*

A 30-years-old female professional nurse from region D described how COVID-19 made her fearful to the point that she could no longer feel safe among other people. Her response is as follows: *“mentally It started affecting me. I remember going out with my husband wearing gloves like we would fear touching or hugging even coming in contact with someone” (Ivy).*

Two professional nurses named Flora and Katty mentioned that COVID-19 caused them to be extremely careful and unable to relax. it is evident as follows: *“For us, especially for us the healthcare workers, since we were called the front runners as they were saying, it was really scary because we didn’t know and with any patient that came across we were COVID-19 cautious. And even if the screening was done before you as a nurse, the minute you get in contact with a patient you need to screen and check the symptoms of COVID-19 and make sure that you take precautions” (Kathy).*

4.4.3.2 Sub-theme 3.2: Avoidant behaviour

Avoidant behaviour is any behaviour people use to escape or distract themselves from difficult thoughts, feelings and situations. The finding of the study showed that nurses suffered from avoidant behaviour when they wanted to leave their jobs to stay home due to COVID-19.

It is evident from the following quotation:

A participant who is 38 years old revealed that she wanted to stop her job and be at home because she worked with COVID-19 in their facility. it is evident as follows: *“and to an extent whereby I wanted to take out from at work because I just felt this COVID-19 was more concentrated in the health care settings or facilities so that’s how scared I was to an extent that I just wanted to quit and stay at home but then life challenges are those that made me to just stay there and continue with the struggle” (Betty).*

A 44-year-old professional nurse claimed that out of caution and out of fear of contracting the virus, she isolated herself from her colleague. Response captured as follows: *“now you are afraid to even talk to your colleagues.*

Interacting with patients you are cautious about everything you don't even allow people to be next to you people that you used to sit down with share meals with, or chat with during lunch during tea breaks, now its every men for themselves you know we are afraid even go outside the clinic or sit in your car for lunch you know" (Flora).

A 34-year-old nurse noted that it was difficult for a single mother to protect her child at home because she worried that she would also expose them to the COVID-19 virus. She even considered quitting her job to stay at home with her child. Response captured as follows: *"I had so many mixed emotions because firstly I'm a single mother and I tested positive were I had to quarantine at home and my son too were shocked, he had fear and there was a point where he suggested me to leave work because he was feeling unsafe and scared to contract the diseases from me" (Nelly).*

4.4.4 **Theme 4: Support related to the COVID-19 pandemic**

This theme discusses the presence or lack of a support structure for nurses both before the start of healthcare provision at the COVID-19 facilities and throughout the course of their duties. Three sub-themes emerged in this theme, namely, support from government and department of health, support from management and colleagues and resource related support.

4.4.4.1 Sub-theme 4.1: Support from government and department of health

Participants indicated that they had a little bit of support from the department of health and the government.

Their responses were captured as follows:

A 38-years-old Betty indicated that she has received support from the government in the form of a call wanting to know how she is coping. It is evident as follows: *"Like even from the provincial or from national institute for communicable diseases (NICD). They would want to know and take number of people or the names and contact to NICD and then we would receive calls from those people wanting to know how we are which at the end of the day you can*

see that it's a little bit of support system and you would feel okay, you can see someone cares for you" (Betty).

Happy mentioned that she has received support from district people by coming to their facility to comfort them. Is evident as follows: "*Yes, even from the department of health they used to come, people from our head offices used to come and comfort us, even from the district offices" (Happy).*

Ivy also indicated that she has received support from the department of health. it is evident as follows: *"and also what the DOH did, they'd call you to find out how the symptoms were and if you were getting better and if you have been vaccinated, so that was the support and also asked who you have been in contact with" (Ivy).*

4.4.4.2 Sub-theme 4.2: Support from management and colleagues

Participants indicated that they supported each other as colleagues by doing early meetings and morning prayer together with their managers as moral and emotional support.

Their responses were captured as follows:

Betty stated that she has received support, especially emotional support because they could call to check up on her wellbeing. It is evident as follows: *"and also we would get emotional support from our management once you are having COVID-19 you would get calls they would want to know, how are you doing, how are the symptoms and you would get those questions" (Betty).*

A 34-year-old registered nurse from region E, clinic E, revealed that when their facility was short on staff, the manager would request that nurses from neighboring facilities come and help out. It is evident as follows: *"Yes our managers really tried their best like when we were short staffed they'd ask nurses from other clinics to come and help even though it was not enough but they really tried their best, and we had the PPEs and they were giving us masks and they are protective so I think the support was there" (Nelly).*

Grace, a 27-years-old female professional nurse mentioned that she has received support by having staff regular meetings. Her response is as follows: *"We also had staff support and meetings and regular meetings with managers so yeah that was the support that we had" (Grace).*

Happy, a 29-years-old female professional nurse stated that personally she received enough support from colleagues and her managers. Her responses captured as follows: *"I can say that it was enough, more especially the ones that I was getting from colleagues at work, those were the ones that I was seeing every day, so I can say that it was enough because I never came to a situation where I needed to see a psychologist or psychiatrist for more support, so I think the one I got from colleagues and our supervisors and managers from head office, I think that was enough" (Happy).*

4.4.4.3 Sub-theme 4.3: Resource related support

All three professional nurses indicated that they have received resources related support because they had enough resources like PPE, gloves, sanitizers, and musk during COVID-19.

Their response was captured as follows: *"yes also we had the PPE that you can dawn when you are dealing with a patient especially those that had COVID-19 we had PPE also the issue of sanitizers was also available for us to do on our hands and the patient" (Adam).*

"Like the management or the stores were supporting us with the gloves (PPE) basically it was PPE" (Betty).

"We used to be given vitamin C to boost our immune system and also menthol to steam and also we were given PPE, we never ran out of PPE" (Dolly).

4.4.5 **Theme 5: Measures to improve nurses' mental health related to the COVID-19 pandemic**

The finding of this study showed measures to improve nurses' mental health to COVID-19 pandemic. In this theme, two categories emerged, namely, psycho-social support and governmental and managerial support.

4.4.5.1 Sub-theme 5.1: Psycho-social support

Participants indicated that they should have given psycho-social support by being referred to the clinical psychologist or arranged wellness programme for their mental problems that was triggered by COVID-19.

The participant's views were expressed as follows:

A 30-year-old female participant spoke about the need of having an occupational psychologist so that their company may refer them for counseling without having to pay for it out of pocket. her response captured as follows: *"I just think that everyone should have been asked if they needed any reference to the psychologist, we are the members of health and I think we should be able to access that without the one having medical aid but just having our own occupational psychologist to know what is happening and how it is affecting us" (Ivy).*

A 32 years old professional nurse mentioned psycho-social support was not enough as they never sent for counseling. It is evident as follows: *"I think not only me but most of us if there was counselling, at least for everyone to talk their feelings because it was affecting us differently as I said, even if it was not enough but that would show that people cared about the caregivers but to me we were not really supported" (Kathy).*

A 30-year-old female professional nurse who provides antenatal care said that managers should have organised employees' wellness programs for the sake of their mental health. Her response captured as follows: *"and the managers they could've arranged for employees wellness programmes to ensure that our mental health is taken care of and even at the facility I think that they could've*

come up with a plan, maybe have like a nice activity that we do, something to distress you know, not that when you think of work you think of COVID-19 I think something like that would have helped" (Lina).

4.4.5.2 Sub-theme 5.2: Governmental and managerial support

Participants explained what they think the government and management should have done to people who lost their jobs due to COVID-19 and to all nurses who were front liners to be given incentives as appreciation.

The participants expressed this as follows:

A 38-year-old professional nurse suggested that the government should provide more jobs, bursaries, and internships as a reward to all who lost their employment. it is evident as follows: *"I don't know what the government should do. I mean if the government cannot create jobs, I don't know how by then let even the people that can have their own companies helped by government to subsidies so that they can take more of people that are supposed to be taken by government in terms of jobs so if more people can be absorbed and if they can be more of bursaries or internships just so that skills development needs to be done so that so that people can recuperate from what the COVID-19 has through them to" (Betty).*

A 27-year-old female professional nurse emphasizes on having more literature about the pandemic in order to be more knowledgeable. Her response was captured as follows: *"because we needed more knowledge, we needed literature as we had more questions we needed their physical presence, we needed people to be more practical you know not just release policies and protocols meanwhile you don't know what's happening in the wards so it was very irrelevant" (Grace).*

Professional nurse Lina, 30, expressed that it would have been preferable if they had received financial compensation from their employment as encouragement and appreciation. it is evident as follows: *"Sorry to take you back, on the last question that says what support was needed, I mean health*

care workers were the most overworked people throughout the pandemic, the least that the employer could've done was to give us money you know some form of incentive as motivation you know not just a lousy thank you, I feel like we deserve more than that so they should give us money and it's not too late they can give us even now" (Lina).

Adam, an acting operational manager stated that he would recommend enough support structure within the health team. His response was captured as follows: *"Yes regarding mental health I would recommend support structure on the health team as health care workers there are supposed to give enough support by showing appreciation" (Adam).*

4.5 DISCUSSION OF THE RESULTS

The discussion of the research findings regarding the impact of COVID-19 pandemic on the mental health of nurses in the City of Johannesburg clinics in Gauteng province are presented below. The presentation of the research results focuses on factors contributing to the impact of the COVID-19 pandemic on the mental health of nurses, mental health symptoms related to the COVID-19 pandemic, behavioural symptoms related to the COVID-19 pandemic, Support related to the COVID-19 pandemic, measures to improve nurses' mental health related to the COVID-19 pandemic.

4.5.1 Theme 1: Factor contributing to the impact of COVID-19 pandemic on the mental health of nurses

4.5.1.1 Sub-theme 1.1: COVID-19 pandemic onset (sudden, shocking, and extraordinary)

The sudden onset of COVID-19 pandemic had an impact on nurse's mental health as nurses expressed that the pandemic came as a shock and the experience was extraordinary. Some indicated that they were very scared when they were informed that they are going to receive and nurse patients with

COVID-19 in their units for the first time. Furthermore, some nurses thought that the onset of COVID-19 will only affect certain people in the certain area not in their area.

Plenty of people reported to be more anxious due to the sudden onset of COVID-19. However, for some COVID-19 has sparked or amplified much more serious mental health problems. A great number of people have reported psychological distress and symptoms of depression, anxiety, or post-traumatic stress (Bennett, Noble, Johnston, Jones & Hunter, 2020).

During the onset of COVID-19 Aksoya and Koçak (2020) discovered that nurses and midwives who cared for the patient who had COVID-19 had strong feelings like fear, anxiety, and unease as a result of COVID-19. The COVID-19 pandemic made it clear that nurses' psychological conditions need to be considered and this element is supported by Cabarkapa, Nadjidai, Murgier, and Ng (2020), who contend that organizational leaders must comprehend the demands of their employees.

4.5.1.2 Sub-theme 1.2: COVID-19 related losses (colleagues and family members)

The study found that the sudden loss of healthy family members and colleagues due to COVID-19 had a serious impact on a nurse's mental health. Participants added that their mental health was affected by the experience of continuing to carry out the nursing responsibilities despite losing colleagues and family members. Some also indicated that they are now isolated and lonely after the loss of their colleagues. Another participant expressed the pain of losing someone who was healthy.

The above findings are congruent with a study by Selman, Chao, Sowden, Marshall, Chamberlain, and Koffman's (2020) which found that deaths of healthcare workers due to COVID-19 causes post-traumatic stress, protracted mourning disorder, and other negative bereavement consequences among colleagues and family members. Erdem and Lucey (2021) corroborates with

Selman et al., (2020) findings that COVID-19 infections and subsequent deaths of healthcare workers are a significant source of grief and other psychological issues for colleagues and families, as well as for both local and national healthcare systems. In addition to losing their own patients in their professional lives, the medical personnel, especially those working in the ICU, also lost loved ones in their personal lives, much like the rest of society (Nohesara, Saeidi, Mosavari, Ghalichi & Alebouyeh, 2022).

According to Ho, Kwong-Lo, Mak, and Wong (2005), deaths of colleagues from previous pandemics such as Severe Acute Respiratory Syndrome (SARS) has caused anxiety and uncertainty among healthcare workers and Ehrlich, McKenney, and Elkbuli, (2020) indicates that the increase in number of global COVID-19 related deaths among healthcare workers are likely to increase worries among healthcare workers. McCallum, Walthall, Aveyard, and Jackson (2021) asserted the above finding by indicating that many nurses have cared for their own co-workers and friends who have had COVID-19, and they have discovered that doing so is challenging and emotionally taxing as they experience feelings of fear and utter despair when such coworkers and friends pass away.

4.5.1.3 Sub-theme 1.3: COVID-19 infection and symptoms

The majority of nurses in this research reported being positive for COVID-19 and describing their symptoms. Even those who tested negative reported experiencing some symptoms. All participants stated that the symptoms they experienced during the COVID-19 pandemic triggered their emotions because they were unsure whether the situation would worsen.

Nurses have been at the center of providing medical attention throughout the COVID-19 pandemic, and as a result, they are among the most vulnerable groups to infection due to the high risk of exposure. As a result of exposure, nurses reported experiencing a variety of signs and symptoms such as loss of sense of taste, loss of sense of smell, headache, cough, shortness of breath, bodily aches, and fever. The study found that the reported COVID-19 related

signs and symptoms had a significant negative impact on nurses' mental health because they made nurses anxious and stressed.

The aforementioned results are consistent with a study by Magnavita, Tripepi, and Di Prinzio (2020), which discovered that nurses and young individuals whose tests were positive reported symptoms likely linked to COVID-19. According to Magnavita et al., (2020) the most prevalent signs and symptoms seen in infected nurses included fatigue, muscle soreness, loss of smell, loss of taste, fever, and diarrhoea. The findings are also backed by Shaukat, Ali, and Razzak (2020), who asserted that the most prevalent symptoms presented by healthcare workers with COVID-19 infections were fever and cough, which were identical to those experienced by members of the general public.

In addition, according to a study by Lechner, Liu, Counsell, Ta, Rocke, Anmolsingh, Eynon-Lewis, Paun, Hopkins, Khwaja et al., (2021), there is a very high prevalence of loss of taste and/or smell among healthcare workers, and this is strongly correlated with COVID-19 positive. Additionally, these symptoms could manifest alone or in combination with other COVID-19-related symptoms.

Similar to other viruses, COVID-19 causes a variety of symptoms, from a sore throat to mild flu-like symptoms, fever and dry cough to more serious ones like difficulty in breathing, pneumonia and even death in extreme circumstances (Cirrincione, Plescia, Ledda, Rapisarda, Martorana, Moldovan, Theodoridou & Cannizzaro, 2020). Chen, Zhou, Dong, Qu, Gong, Han, Qiu, Wang, Liu, Wei, et al., (2020) shared similar views by asserting that acute distress respiratory syndrome and multi-organ failure can occur in positive patients in addition to a wide range of other signs and symptoms including fever, headache, sore throat, dry cough, nausea and vomiting.

4.5.1.4 Sub-theme 1.4: Social isolation and lifestyle changes

The following factors were found to have an impact on nurses' mental health: working for 7 days straight without returning home; showering and changing into different clothes before and after going to lunch; social isolation of public

transport, continuous wearing of several gloves and musk. Nurses expressed that working for 7 days without going home had an impact on their children because they were left at home without anyone to look after them. Additionally, public transportation only carried a small number of passengers to adhere to the social distance standard. As a result, the nurses get frustrated when they are late for work.

The aforementioned findings are consistent with a study by Nohesara et al., (2022) which discovered that due to the hospital's overflow of patients, staff members were unable to take time off from work, which reduced their ability to spend quality time with their families and left them feeling guilty about their lack of involvement in caring for their loved ones. Nohesara et al., (2022) added that nurses had to adapt to lifestyle changes due to the fear of losing loved ones during the COVID-19 pandemic by not going to ceremonies and memorials, changing their workplaces, and moving to areas where no COVID-19 patients are admitted. On the other hand, many healthcare workers were compelled to isolate themselves from their families for months because they were afraid they would spread COVID-19 infection (Mehta, Machado, Kwizera, Papazian, Moss, Azoulay & Herridge, 2021). Mehta et al., (2021) also noted that in order for healthcare professionals to carry out their patient care and educational duties, including the provision of telemedicine, they had to adopt new technologies; however, working remotely and being ostracised by the community added to this feeling of loneliness.

According to Huang, Lin, Tang, Yu, & Zhou (2020), nurses had to adjust to change in working schedules, work in isolation areas and frequently go through the complicated procedures of donning and doffing of personal protective equipment (PPE) which augmented their mental burden. Chersich, Gray, Fairlie, Eichbaum, Mayhew, Allwood, English, Scorgie, Luchters, Simpson et al., (2020) corroborates with the above statement by noting that a crucial defense to reduce the risk of COVID-19 infection is the correct donning and doffing of PPE, but this needs extensive training and supervision.

In African countries like Tanzania and Senegal, it has proven more difficult to enforce social and physical distancing (World Economic Forum, 2020). In addition, adherence to advised social distance was found to be an issue in various settings, including public marketplaces, refugee camps and banks (Rutayisire, Nkundimana, Mitonga, Boye & Nikwigize, 2020). To stay healthy throughout the pandemic, the majority of individuals in low- and middle-income countries have resorted to modifying their diets and adopting nutritional supplements with documented immune-boosting properties or medicinal plant products (Afriyie, Asare, Amponsah & Godman, 2020).

4.5.1.5 Sub-theme 1.5: Social factors (crime and violence)

The study found that nurses' mental health deteriorated during the COVID-19 lockdown as a result of the rise in domestic violence and crime. Violence events within households and criminal incidents have been connected to interruption in daily, ordinary activities of life brought on by the COVID-19 lockdown, and all these vary depending on the sort of violence and crime. The lack of activities during lockdown, according to nurses, led to alcohol abuse and food thievery.

Disruptions in regular daily activities brought on by COVID-19 lockdowns have been associated with changes in opportunity for crime, particularly violent crime and domestic violence (Lersch & Hart, 2022). On the contrary, according to research on the effect of COVID-19 on a variety of other crime categories in Canada, Hodgkinson and Andresen (2020) found no discernible development in the amount of violent crime in the first few months of the COVID-19 lockdown.

4.5.1.6 Sub-theme 1.6: Social factors (unemployment)

According to this study findings, caring for their families while also helping other family members who lost their employment as a result of COVID-19 had a significant negative impact on nurses' mental health. During COVID-19 nationwide lockdown, few people who were providing essential services like nurses were able to work. Many others were unable to work which led to them losing their employment or having to shut down their enterprises. The high rate

of unemployment among the nurses' families led to a financial strain, which in turn had a detrimental effect on their mental health.

The findings are parallel to a study by Buerhaus, Staiger, Auerbach, Yates, and Donelan (2022) which found that after the COVID-19 pandemic broke out and the economy abruptly stopped in March 2020, unemployment rates among registered nurses, nursing assistants and in non-hospital settings remained higher. Buerhaus et al., (2022) further indicates that even after the pandemic carried it on, nurses' employment levels remained low. Compared to other industries and the non-hospital healthcare sector, working in the healthcare industry and hospital-based healthcare was related to a lower increase in reported unemployment rates from the pre-pandemic to pandemic periods (Matta & Nicholas, 2022).

The reduced economic activity has resulted in decreased revenue for the majority of African countries; therefore, the number of people who have lost jobs as a result of the COVID-19 outbreak has significantly increased due to their companies' inability to continue paying them without additional income (Rutayisire et al., 2020). Posel, Oyenubi, and Kollamparambil (2021) assessed how job furlough and job loss during the COVID-19 pandemic in South Africa affected people's mental health and discovered that the economic effects of the pandemic caused extraordinary employment losses that had a significant detrimental effect on mental health.

4.5.1.7 Sub-theme 1.7: Occupational factors (inadequate psycho-social support)

The study discovered that professional nurses at the clinics, who were at the forefront of delivering medical care throughout the COVID-19 pandemic, had insufficient psychological support. Some nurses decided to pay for psychological help privately because they believed that making a referral to a psychologist would be beneficial. Other nurses claimed that while the employer and the healthcare team showed support and acknowledgement, it was insufficient.

The findings are congruent with a study by Tayyib and Alsolami (2020) which stated that most nurses were not personally prepared to care for COVID-19-infected patients and this can be attributed to a lack of managerial and institutional support, which includes information sharing and oversight of nurse training. Nohesara et al., (2022) asserted that during the COVID-19 epidemic, healthcare workers suffered varying levels of stress and discomfort depending on their personalities, subcultures, defence mechanisms, family situations, careers, and workplaces and if neglected, they will continue to suffer in silence which will have a detrimental impact on their quality of life and general welfare. In the same vein, Moyo, Mavhandu-Mudzusi, and Haruzivishe's study (2022) showed that there were insufficient or no support structures for healthcare professionals who were unable to deal with their concerns and anxieties, especially after losing several patients.

The findings are equivalent to a study by Kang, Son, Chae, and Corte (2018) during the outbreak of Middle East Respiratory Syndrome (MERS), which discovered that nurses received unfavourable feedback and no support from their colleagues and families. Correspondingly, as a result of the SARS outbreak's lack of social support, there was prejudice in the community and distant behaviour from the households of healthcare personnel (Khee, Lee, Chai, Loong, Ming & Kheng, 2004). On the contrary, the findings by Alnazly, Khraisat, Al-Bashaireh, and Bryant (2021) demonstrated that healthcare workers received support when giving care to patients during the COVID-19 pandemic.

Nevertheless, to support healthcare professionals during COVID-19, Billings, Abou Seif, Hegarty, Ondruskova, Soulios, Bloomfield, & Greene (2021) an urge for a customised strategy. The authors further asserted that in order for institutional support to be successful, it must be coherent, consistently communicated, and easily accessible; however, institutional support was not offered in the context of this study. According to Khattak, Saeed, Rehman, and Fayaz (2020), who investigated the moderating role of leadership support, there

is a moderated association between nurses' psychological distress and their fear of COVID-19 when leadership support is strong.

In addition, Greenberg, and Tracy (2020) corroborates with Billings et al., (2021) by indicating to raise awareness of mental health concerns and improve their mental well-being, hospital management should also be taught how to have "psychologically sophisticated dialogues," according to Greenberg and Tracy (2020).

4.5.1.8 Sub-theme 1.8: Occupational factors (inadequate resources)

The study found that clinics in the city of Johannesburg municipality have been gripped by resource shortages, including shortages of personal protective equipment (PPE) such as hand sanitisers, masks, and gowns during the COVID-19 pandemic. This shortage of PPE’s and consumables made nurses feel unsafe.

The findings are in line with a scoping review by Tessema, Kinfu, Dachew, Tesema, Assefa, Alene, Aregay, Ayalew, Bezabhe, Bali, et al., (2021) which reported that publicly managed facilities experienced a shortage of resources such as personal protective equipment (PPE), disinfectants, medical masks, alcohol-based hand rubs for healthcare workers during the COVID-19 pandemic. Travel restrictions that limited foreign trade, specifically the ability to buy new equipment or transport donated components, worsened the shortage (Guan, Wang, Hallegatte, Davis, Huo, Li, Bai, Lei, Xue, Coffman et al., 2020). Cawcutt, Starlin, & Rupp, (2020) asserted that healthcare resources that were found to be limited include severe acute respiratory coronavirus virus 2 (SARS-CoV-2) tests kits, PPEs, and medical equipment (e.g., ventilators). Resource constraints are not unique to this study; a study in Bulawayo, Zimbabwe by Moyo et al., (2022) had similar findings.

In addressing the shortage of resources in Ghana, Ghana's Food and Drugs Authority contributed to the reduction of shortages by expediting the certification of hand sanitisers and local production of standardised personal protective

equipment. Additionally, prototypes of locally manufactured mechanical ventilators have been developed to meet local demand at intensive care units (Afriyie et al., 2020). On the contrary, a study by Barrett, Khan, Mac, Ximenes, Naimark, and Sander (2020) found hospital resources in Ontario to be sufficient to care patients with COVID-19 and this was due to the implementation of public health measures and an expansion of the health system's capacity.

4.5.1.9 Sub-theme 1.9: Occupational factors (staff shortages and work pressure)

This study's findings indicate that nurses' workloads have grown dramatically and the danger of burnout has increased as a result of nurses testing positive for COVID-19 and being placed in quarantine. This has caused a shortage of employees, an increased workload at the clinics.

According to a scoping review by Tessema et al., (2021), COVID-19 caused a shortage of healthcare workers because some experienced staff members were not carrying out their duties due to self-isolation after coming into contact with confirmed COVID-19 patients. Hu, Kong, Li, Han, Zhang, Zhu, Wan, Liu, Shen, Yang, He, and Zhu (2020) corroborate with Tessema et al., (2021) on the issue of shortage of staff and work pressure by asserting that COVID-19 outbreak has caused a substantial rise in hospital admissions which consequently had an impact on the workload of nurses and increases the risk of burnout. Additionally, there is an expanding list of healthcare professionals from around the world who have died as a result of COVID-19, and as the number of these individuals infected and dying rises, this significantly adds to the burnout among healthcare professionals, which in turn increases work pressure (Ehrlich et al., 2020).

Studies have shown that during pandemics like COVID-19, front-line healthcare workers experience heavy workloads, long working hours, lack of preparation, and psychological stress (Shanafelt, Ripp & Trockel, 2020; Nohesara et al., 2022; Moyo et al., 2022). Correspondingly, previous studies on viral infections (Kang et al., 2018; Brooks, Dunn, Amlôt, Rubin & Greenberg, 2018), has shown that outbreaks of diseases like the Ebola virus, SARS, and MERS can

negatively affect healthcare workers. These studies found that healthcare workers had higher infection risks, heavier workloads, and psychological discomfort.

4.5.2 **Theme 2: Mental health symptoms related to the COVID-19 pandemic**

4.5.2.1 Fear of COVID-19 infection

According to the findings of the study, the mental health of nurses was impacted by the rise in the number of staff members who tested positive for COVID-19. Nurses expressed that there was fear of infection within their workplaces as staff members were testing positive for COVID-19. As a result, there were fewer interactions amongst them as well as distractions brought on by fear of contracting the virus.

Among healthcare professionals, nurses have been at the forefront of providing medical care during the COVID-19 pandemic and the greatest stressor experienced by this group of healthcare workers is fear of infection (Tercan, Bozkurt, Patmano, Saraçoğlu & Gür, 2020), which causes psychological distress, sleep disruptions, lower job satisfaction, and an intention to quit (Labrague & De Los Santos, 2020; Khattak, Saeed, Rehman & Fayaz, 2020). The findings of this study are in agreement with several studies done during the COVID-19 pandemic, which validates the prevalence of fear of COVID-19 infection among healthcare workers and its detrimental effects on their psychological health (Vanhaecht, Seys, Bruyneel, Cox, Kaesemans, Cloet, et al., 2021; Cawcutt et al., 2020; Cabarkapa, Nadjidai, Murgier & Ng, 2020).

Due to the high possibility of exposure to infected individuals, healthcare workers, notably hospital nurses, are thought to have a strong fear of infection (The Lancet, 2020). The level of the fear, however, varies by section, and Cawcutt et al., (2020) remark that healthcare workers caring for COVID-19 patients are reported to have less fear of contracting the infection compared to those working in other units. The healthcare workers' fear during pandemics

appears to be a persistent problem as significant fear was also reported during SARS (Ho et al., 2005).

Contrary to the above findings, Koiwa, Wakashima, Ikuta, Asai, and Takagi (2022) hypothesised that hospital nurses' low fear of infection might be due to their knowledge and skills of COVID-19 prevention and methods for dealing with COVID-19. On the other hand, Labrague and De Los Santos (2020) highlighted that participation in COVID-19 training was found to be a significant determinant of fear of COVID-19 and nurses who reported having participated in this training showed lower levels of fear compared to those who did not.

4.5.2.2 Sub-theme 2.2: Fear of the unknown and uncertainty

The findings of the study indicate that COVID-19 instilled a lot of fear in nurses. Another nurse added that the increase in number of infections coupled with an increase in mortality due to COVID-19 had a negative impact on her mental health. Nurses voiced concern about the pandemic because, after the president reduced some COVID-19 standards, they were unsure whether the pandemic was over or if it would resurface. More special because there were some new variants reported.

A systematic review by Cabarkapa et al., (2020) indicates that fear of the unknown or contracting an infection was the most common mental challenge faced by nurses and doctors during pandemics such as COVID-19, Ebola, SARS, & MERS. According to a study by Aksoya and Koçak (2020), the majority of healthcare professionals had trouble managing the outbreak's uncertainty, and the intolerance of uncertainty, prospective anxiety subscale score, gender, and the presence of chronic conditions all showed statistically significant correlations. Similarly, Huang and Zhao's study (2020) revealed that the uncertainty surrounding the epidemic's course is what led to the psychological impact in one out of every five individuals, and that this circumstance will lead to even greater psychological impact.

4.5.2.3 Sub-theme 2.3: Fear of death or fatal consequences

The following factors were found to have an impact on nurses' mental health: loss of family members and colleagues due to COVID-19, witnessing people dying, a high level of exposure, types of COVID-19 related symptoms they experienced and the number of infections and fatalities. All this brought shock, anxiety, and fear amongst nurses.

Healthcare workers observe the pain and death of COVID-19 patients (Pappa, Athanasiou, Sakkas, Patrinos, Sakka, Barmparessou, Tsikrika, Adraktas, Pataka, Migdalis et al., 2021). Increased exposure to such traumatic occurrences can make health workers more fearful and anxious (Labrague & De Los Santos, 2020). Based on the information above, it is anticipated that death anxiety will rank among the top concerns for nurses during the pandemic (Aydn & Fidan, 2022). The term "death anxiety" refers to anxiety and fear brought on by thoughts of death (Cheong, Ha, Tan & Low, 2020). According to Cheong et al., (2020), nurses who have death anxiety may react negatively when caring for patients who are dying.

The above findings are in line with a study on death anxiety during the COVID-19 pandemic by Şahin, Aker, Şahin, and Karabekiroğlu (2020) which found that nurses are more fearful of dying than other healthcare workers. According to reports, fear of dying is linked to bad health outcomes such as being exposed to life-threatening situations, losing physical abilities, experiencing stress, and feeling unsatisfied with one's life (Rababa, Hayajneh & Bani-Iss, 2021). On the other hand, Aydn and Fidan (2022) highlight that nurses must carry on with their regular lives outside of work hours despite their worries about contracting the pandemic and dying.

4.5.2.4 Sub-theme 2.4: Fear of infecting family members with COVID-19

According to the study's findings, nurses were worried about spreading COVID-19 to their families. The concern of exposing or infecting a family member with COVID-19 caused nurses to voice their fear of returning home. Because of this,

nurses resorted to staying away by not going home, which had a detrimental effect on their mental health. Participants indicated that they became afraid of going home to their family members as they were afraid of exposing them or infecting them with COVID-19.

The results are consistent with a study by Hu et al., (2020), which discovered that nurses were afraid of COVID-19 infection and also suffered from fears of nosocomial spreading to their family members. Cawcutt et al., (2020) also concur with a study by Hu et al., (2020) by asserting that the legitimate causes of concern during the COVID-19 pandemic are fears of contracting the illness and bringing the virus home and infecting friends and family. In their study on the impact of fear of COVID-19 pandemic on Pakistani nurses' mental health, Khattak et al., (2021) concluded that the chance of contracting the disease as well as unintentionally infecting family members is the main factor driving nurses' fear. Koiwa et al., (2022) also asserted that hospital nurses' fear of contracting an infection is lower than their fear of spreading infection to family members.

The results are also comparable to those of a study by Koiwa, Wakashima, Asai, Takagi, and Yoshii (2021), which examined how family members, psychological habits, information sources, and social behaviours relate to the fear of COVID-19 infection and discovered that nurses who live with older people had a very high fear of infecting their family members. The study findings agree with those conducted among Jordanian healthcare workers by Alnazly, Khraisat, Al-Bashaireh, and Bryant (2021) who suggested that older healthcare workers may have higher levels of psychological distress and may also reside with young children or older members of their extended family, which may make them fearful of spreading the virus to their loved ones.

4.5.2.5 Sub-theme 2.5: Feeling depressed, sad and hopeless

The study discovered that during the COVID-19 pandemic, nurses underwent behavioural Problems. Some of the behavioural problems that nurses noticed included irregular sleeping habits, difficulties falling asleep, and decreased

appetite. When they witnessed patients dying in front of them and families grieving for their loved ones as a result of COVID-19, some nurses reported feeling extremely frightened and traumatised. The study also found that several nurses had sad thoughts while working during the COVID-19 pandemic. Another nurse added that every day she was sad and had mood changes and this had a serious impact on her mental health.

The findings are parallel to a study conducted among the nurses working at a COVID-19 pandemic hospital in Turkey by Tercan et al., (2020) who found that nurses who provided COVID-19 care had greater levels of depression than those not providing COVID-19 care. A higher risk of displaying depressive symptoms was strongly associated with higher degrees of fear and perceived stress, frequent nightmare and flashbacks, lack of personal protective equipment and social support (Pappa et al., 2021).

The aforementioned findings are also asserted in Cabarkapa et al., (2020), who report that during the COVID-19 pandemic, lengthy working hours increased nurses' stress levels. Similar to the SARS outbreak in 2003, nurses in Taiwan faced substantial risks of depression and anxiety (Su, Lien, Yang, Su, Wang, Tsai & Yin, 2007). On the other hand, Labrague and de Los Santos (2020) found that nurses who are more fearful of COVID-19 express lower job satisfaction and more intention to leave the field.

4.5.2.6 Sub-theme 2.6: Feeling overwhelmed

The study found that nurses' mental health deteriorated significantly as a result of being overwhelmed by caring for patients and themselves psychologically as a result of COVID-19. According to the study's findings, nurses were exposed to COVID-19 pandemic-related circumstances that endanger their health, and ability to work. In addition to providing medical care to COVID-19 patients, nurses also had to serve as psychologists, because many of these patients had lost their employment and were experiencing psychological difficulties. Therefore, they required support, however, nurses were also not mentally prepared to deal with such as they also needed psychological assistance.

The findings are parallel to a study conducted by Apisarnthanarak, Apisarnthanarak, Siripraparat, Saengaram, Leeprechanon and Weber (2020) which found that the majority of nurses and other healthcare workers were overwhelmed with anxiety and fear during the COVID-19 pandemic and were unwilling to see newly admitted patients or accept new patients and this could put patients' safety at risk. A study which assessed the psychological effect of the COVID-19 outbreak on nurses by Tayyib and Alsolami (2020) found that despite their willingness, 60% of registered nurses were not prepared to care for COVID-19-infected patients.

The findings of a study by Moyo et al., (2022) show that the COVID-19 pandemic had a severe effect on the healthcare system, which led to frontline healthcare professionals becoming overwhelmed as a result of the tremendous physiological and psychological constraints.

4.5.2.7 Sub-theme 2.7: Mental exhaustion related to burnout

The following factors were found to have an impact on nurses' mental health: being exhausted, but not being allowed to take time off. Lack of counselling or psychological support, and the shortage of staff. Nurses expressed that they were emotionally and mentally affected because their colleagues were testing positive, which consequently resulted in a shortage of staff which then made them work twice as much as they used to. All these eventually caused burnout, fatigue, and stress among nurses.

Burnout is linked to psychological and physical long-term negative effects for nurses and physicians resulting in absenteeism, increased sick leave, medical errors, various mental health issues and suicide ideation (West, Dyrbye, Shanafelt, 2018). The results are consistent with a study by Hu et al., (2020), which reported a significant prevalence of burnout and mental weariness among nurses during the outbreak of COVID-19 in China. Similarly, a study conducted by Pappa et al., (2021) found that drivers of emotional exhaustion were being a professional nurse, female gender, working within the hospital and

interaction with infected COVID-19 patients while predictors of burnout were psychological comorbidities, long working hours, fear of COVID-19 infection.

According to Giusti, Pedroli, D'Aniello, Manna, Riva, Castelnuovo, Molinari, Stramba Badiale, and Pietrabissa (2020), burnout has been demonstrated to be predicted by fear of infection. These findings also corroborate those of Barello, Palamenghi, and Graffign (2020), who noted emotional burnout, somatic symptoms, and work-related psycho-social stress among Italian healthcare professionals. A systematic review by Gualano, Sinigaglia, Lo Moro, Rousset, Cremona, Bert, and Siliquini (2021) suggests that nurses working in emergency departments and intensive care units may be more susceptible to burnout than those in other settings and further indicates that socio-demographic variables such as female gender and age are linked with such burnout.

The findings are congruent to a study conducted during the MERS' outbreak by Kang, Son, Chae, and Corte (2018), who found that nurses experienced burnout after being exposed to the deteriorating situation for an extended period of time.

4.5.3 **Theme 3: Behavioural symptoms related to the COVID-19 pandemic**

4.5.3.1 Sub-theme 3.1: Hypervigilance

The study found that nurses suffered behavioural symptoms associated with COVID-19 and this had a negative effect on their mental health. Some nurses reported that the COVID-19 pandemic drove them to feel petrified, which pushed them to become extremely sensitive and vigilant both at work and outside of the workplace.

The above findings are in line with a study by Jiang, Ren, Yu, Tan, and Shi (2020) which revealed significant relationships between hypervigilance and exaggerated alarm response, between avoidance of reminders and avoidance of thoughts, between nightmares and intrusive thoughts, between flashbacks and hyper responsiveness to emotional signals, and between limited affection

and detachment in the system of COVID-19 outbreak-related PTSD symptoms (Jiang, Ren, Yu, Tan & Shi, 2020). According to Sanchez-Gomez, Giorgi, Finstad, Urbini, Foti, Mucci, Zaffina, and León-Perez (2002), this finding is consistent with the concept that the COVID-19 is a prevalent and particular traumatic incident that people inherently perceive by adopting a posture of hypervigilance instead of avoidance. In addition, numerous research has repeatedly discovered robust associations between hypervigilance, a heightened startle reaction, flashbacks, and nightmares (Armour, Fried, Deserno, Tsai & Pietrzak, 2017; Birkeland & Heir, 2017).

In a study conducted by Paterlini, Neri, Nicoli, Genova, Villani, Santi, and Agostini, 2022), hypervigilance and irritability/fearfulness, persistent avoidance of thoughts and memories, intrusive thoughts, and fatigue/low energy were the possible symptoms with higher mean scores. Paterlini et al., (2022) further indicates that during the second wave healthcare workers reported significantly higher symptoms of hypervigilance, irritability/fearfulness, intrusive thoughts, and detachment/obnubilation as compared to the first wave.

4.5.3.2 Sub-theme 3.2: Avoidant behaviour

The finding of the study showed that nurses suffered from avoidant behaviour when they desired to leave their jobs to stay home due to COVID-19 because healthcare facilities are thought to be high risk areas. Nurses expressed that they were scared and wanted to quit and stay at home, however, their financial constraints prevented them from quitting their jobs and staying at home. Thus, some admitted to experiencing so many conflicting feelings that they were even hesitant to contact patients or speak with their own co-workers.

An analysis of South African nurses' PTSD and coping methods during COVID-19 revealed a link between avoidant coping methods and PTSD (Engelbrecht, Heunis & Kigozi, 2021). According to Engelbrecht et al., (2021), further examples of avoidant coping mechanisms include self-blame, self-distraction, venting, denial, substance abuse, and behavioural disengagement. On the same line, Maunder, Lancee, Balderson, Bennett, Borgundvaag, Evans,

Fernandes, Goldbloom, Gupta et al., (2016) note that maladaptive coping strategies like self-blame, avoidance, and confrontation with hostility contributed to anxiety, burnout, and PTSD in healthcare personnel who were treating SARS patients. Greenberg, Docherty, Gnanapragasam, and Wessely (2020) note that avoidance is a key symptom of trauma and team leaders should get in touch with employees to tackle such symptoms.

The research shows that when confronted with an unpredictable event like COVID-19, people choose dysfunctional coping mechanisms, and when this happens. The focus is on solving the problem rather than managing emotions (Engelbrecht et al., 2021). Similar studies by McFadden, Ross, Moriarty, Mallett, Schroder, Ravalier, Manthorpe, Currie, Harron, and Gillen (2021) show a correlation between avoidant coping strategies and decreased wellbeing among social care employees and UK health and greater levels of stress among Italian healthcare workers. These findings are also in line with a systematic review by D'Ettorre, Ceccarelli, Santinelli, Vassalini, Innocenti, Alexia, Koukopoulos, Russo, d'Ettorre, and Tarsitani, (2021) which discovered that COVID-19's passive coping style was a risk factor for developing post-traumatic stress. This is consistent with the findings of Engelbrecht et al. (2021) who found that many nurses need their managers to offer them words of encouragement, understanding, and empathy in order to deal with their feelings and not flee the situation.

4.5.4 **Theme 4: Support related to the COVID-19 pandemic**

4.5.4.1 Sub-theme 4.1: Support from government stakeholders

The findings of the study show that nurses were receiving support after testing positive for the COVID-19 from the department, provincial and national. Nurses expressed that they would receive calls from different sectors during their isolation period asking them how the symptoms are, which indicates that the level of support was sufficient.

The findings of this study are in line with a study by Liang, Wu, and Wu (2021) which found that the public's perspective changed for the better after the government and media strongly promoted the work of healthcare professionals in the pandemic. According to Williams et al. (2020), the majority of nations have implemented special measures to support the mental health of healthcare professionals, frequently through helplines and remote counselling.

4.5.4.2 Sub-theme 4.2: Support from management and colleagues

The findings of the study show that nurses were receiving moral and emotional support from colleagues, supervisors, and managers. Nurses described that they would receive calls from colleagues during their isolation period. Another nurse added that they also had staff support and regular meetings with managers which assisted them emotionally and mentally.

Therefore, based on social support theory, management support is essential for minimising the stress, ambiguity, and uncertainty that employees experience in the workplace (Amason, Allen & Holmes, 1999). A number of crucial elements, including support from management, co-workers, family, and friends, sufficient rest periods, sharing work experiences, and on-the-job training, may reduce nurses' fear, foster a sense of safety, raise their morale, and inspire them to carry out their assigned duties and responsibilities more effectively (Khattak et al., 2021). According to a systematic review by Naushad et al., (2019), the lack of social and professional support from co-workers has consistently been found to be a risk factor for all adverse outcomes following outbreaks.

4.5.4.3 Sub-theme 4.3: Resource related support

In this study, there was no resource-related support for frontline healthcare workers who worked in the City of Johannesburg clinics in Gauteng province. Participants indicated that they did not have enough resources like PPE and sanitisers during the COVID-19 pandemic.

According to a study by Williams, Scarpetti, Bezzina, Vincenti, Grech, Kowalska-Bobko, Sowada, Furman, Gazka-Sobotka, and Maier (2020), various governments provided various forms of help to raise the morale of health professionals. For instance, Malta, Romania, Poland, and a few Turkish regions have provided free housing for healthcare personnel who had to live apart from their families during the COVID-19 outbreak.

In addition, Hungary and some regions of the UK have provided free access to public transportation, whilst employees in London were able to rent bikes for free through a citywide bicycle program (Williams et al., 2020).

In addition, to suitable specialised training and clear communication, the provision of adequate personal protective equipment and vaccination may boost confidence and reduce fear of infection to oneself and others (Pappa et al., 2021).

4.5.5 Theme 5: Measures to improve nurses' mental health related to the COVID-19 pandemic

4.5.5.1 Sub-theme 5.1: psycho-social support

The study's findings indicate that COVID-19 had a detrimental impact on nurses' mental health, and as a result, nurses believed they should have received psycho-social support by being sent to a clinical psychologist or a wellness program set up to address their mental health issues. Another nurse echoed, saying that everyone was impacted by COVID-19 differently. Therefore, it would have been better if, there were counselling sessions where people could express their emotions.

A systematic review by Naushad et al., (2019) indicated that one of the major risk factors for the emergence of adverse psychological effects in healthcare workers across all types of catastrophes was a lack of social support. The provision of psychological interventions, such as the establishment of social support, helpline, and medical teams, was found to be beneficial and helpful for the mental health of frontline nurses (Zhu, Xu, Wang, Liu, Wu, Li, Miao, Zhang,

Yang, Sun, Zhu, Fan, Hu, Liu, Wang, 2020). Pappa et al., (2021) corroborates with Zhu et al., (2020) by suggesting that a timely and adequately personalised approach to mental health care is required, and examples include chat lines, online psychoeducation, remotely delivered psychological therapy and small group peer support.

Mikkola, Suutala, and Parviainen (2018) claim that social support from friends, relatives, neighbours, and other important people lessens occupational stress and protects against the symptoms of psychological distress and depression that are frequently experienced by healthcare workers. On the same note, Alnazly et al., (2021) discovered that healthcare workers relied primarily on support from their families and friends as a strategy to cope with depression, anxiety, and distress due to COVID-19. Correspondingly, social isolation and lack of support from family had a detrimental psychological effect on professional nurses who opted to isolate themselves from their families (Cabarkapa et al., (2020).

Healthcare professionals' emotional and behavioural reactions differ under extremely challenging clinical conditions, such as the COVID-19 pandemic. Hence, it is important to recognise these differences and give them the tools they need through education and training to get over their fears and empathetic distress (Wong, Pacella-LaBarbara, Ray, Ranney & Chang, 2020). Que, Shi, Deng, Liu, Zhang, Wu, Gong, Huang, Yuan et al., (2020) emphasised that healthcare personnel who are at risk of psychosomatic distress should get psycho-social therapies in the early phases of pandemics.

4.5.5.2 Sub-theme 5.2: Clinics managerial support

According to the study's findings, nurses were not satisfied with the managerial and governmental support they received in terms of rewards for the front liners. Therefore, some nurses indicated they believed the employer should have provided rewards (in the form of money) as a motivation to the healthcare workers who had been the most overworked team throughout the COVID-19 pandemic.

Alnazly et al., (2021) suggests that health care leaders should swiftly implement policy changes at the institutional and local levels in order to facilitate a cultural shift toward better well-being and working conditions in order to support and protect healthcare workers during COVID-19.

Additionally, Khattak et al., (2021) suggests that during a crisis of this nature, government and healthcare management should disseminate up-to-date, correct information about how to manage COVID-19-related stress, prevent burnout, and boost nursing staff resilience.

Thus, to improve nurses' mental health in relation to COVID-19 pandemic. Apisarnthanarak et al., (2020) suggest ways such as improving the hospital's PPE policy, workshops to share knowledge and experience, continuing education on disease transmission and prevention. As well as increasing the incentive for being at risk.

Naushad et al., (2019) corroborates with Apisarnthanarak et al., (2020) by suggesting that management create and maintain a climate of cohesion for healthcare workers through training and workshops in Trauma Risk Management which could make it easier for peers to keep an eye on and support colleagues.

4.6 INTEGRATION OF THEORY AND FINDINGS

The findings of the study in relation to the theory are presented. Li and Lun (2021) conceptual framework focus on the impact of a pandemic on individuals.

The framework main concepts are integrated with the findings in Table 4.2.

Table 4.2: Integration of the conceptual framework and the findings

Main concepts of the conceptual framework	Description	Findings
Determinants COVID-19 pandemic	Determination according to Lu and Lin refers to the pandemic itself as well as the prevention and intervention measures aimed to fight the pandemic.	The determinants were COVID-19 pandemic and the Prevention and intervention measures aim to fight the COVID-19 pandemic were: ● Lockdown ● Quarantine ● Self-isolation ● Personal protective equipment ● COVID-19 vaccine
The mechanism	The mechanism is described as the impact of the preventatives and intervention measures aimed to fight of COVID-19 pandemic on individuals.	The mechanism are related to the factors contributing to the impact of the COVID-19 pandemic on mental health of nurses which include the following: ● COVID-19 pandemic onset which includes sudden, shocking, and extraordinary. ● COVID-19 related losses which includes colleagues and family members. ● COVID-19 infection and symptoms. ● Social isolation and lifestyle changes. ● Social factors which include crime and violence. ● Social factors which include unemployment

		● Occupational factors, which include inadequate psycho-social support. ● Occupational factors which include inadequate resources. ● Occupational factors, which include staff shortages and work pressure.
Mental health outcomes	The mental health outcomes are related to the mental health symptoms that individuals presented with as a result of the impact of the pandemic	In this study mental health symptoms which nurses presented with due to the COVID-19 pandemic include the following: ● Fear of COVID-19 infection, unknown and uncertainty, death or fatal consequences, and fear of infecting family members with COVID-19. ● Feeling depressed, sad, and hopeless, feeling overwhelmed. ● Mental exhaustion and burnout.
Coping behaviours	The framework indicates that the consequences of the epidemic on mental health may lead to changes in personal behaviour and habits	In this study the coping behavioural symptoms of nurses were: ● Hypervigilance ● Avoidant behaviour The participants also suggest some coping mechanism which includes: ● Availability of resource related support ● Psycho-social support ● Governmental and managerial support.

4.7 CONCLUSION

This chapter presented the results with literature control and integrated the results with the conceptual framework. The next chapter presents the summary of the findings, recommendations, limitations, and conclusion.

CHAPTER 5
SUMMARY, RECOMMENDATIONS, LIMITATIONS AND CONCLUSION

5.1 INTRODUCTION

In Chapter 4, the research findings were presented. In this chapter, the justification, limitations, recommendations, and conclusion of the study are discussed. Also included in this chapter is a summary of the research findings.

5.2 RESTATEMENT OF THE OBJECTIVES

The study contains three objectives and below is a description of how they were achieved:

- To explore and describe the impact of the COVID-19 pandemic on the mental health of nurses in City of Johannesburg clinics, Gauteng province?
- To determine the factors contributing to the impact of the COVID-19 pandemic on the mental health of nurses in the City of Johannesburg, Gauteng province.
- To explore the mental health symptoms related to the COVID-19 pandemic in nurses in the City of Johannesburg clinics, Gauteng province.

The aim and objectives of the study were achieved through conducting a literature review in Chapter 2 which gave the background of the study. As well as conducting the in depth semi-structured interviews with 14 purposively sampled participants to explore and gain new knowledge and understanding of the impact of COVID-19 pandemic on the mental health of nurses in selected in the City of Johannesburg Region A clinics in Gauteng province.

Through recorded an in-depth semi-structured interviews and documented field notes, the impact of COVID-19 pandemic on the mental health of nurses at City of Johannesburg clinics in Gauteng province, were described in detail. Both the aim and the objectives of the study were achieved as shown above.

5.3 SUMMARY OF RESEARCH FINDINGS

Theme 1: Factors contributing to the impact of the COVID-19 pandemic on the mental health of nurses

The various factors contributing to the impact of the COVID-19 pandemic on the mental health of nurses were expressed by the participants. These include the loss of their colleagues and family members. Despite such loss, they had to watch life go on no matter what was happening since they were constantly exposed to COVID-19-related patient and colleagues' deaths as well as never-ending patient rescue efforts.

Some nurses reported that they also experience signs and symptoms of COVID-19 such as fever, shortness of breath and insomnia. Other factors contributing to the impact of the COVID-19 pandemic on the mental health of nurses was their experiences regarding self-isolation, social distancing and adapting to the new lifestyle of wearing masks and always sanitizing.

The study's findings showed that nurses were not adequately supported while working in COVID-19 situations; they said that because they were psychologically unwell, they never received psycho-social care or emotional support like counselling. It was discovered that the facilities lacked a system for supporting or keeping track of how the nurses who cared for COVID-19 patients were doing. There was a lack of personal protective equipment for nurses to use while working during COVID-19 in the City of Johannesburg municipality clinics in Gauteng province, which was mentioned by three nurses who spoke about their experiences working without protective equipment.

Theme 2: Mental health symptoms related to the COVID-19 pandemic

Participants were found to experience mental health symptoms related to the COVID-19 pandemic. These include being anxious at work, especially when they were interacting with patients. They claimed that they suffered from dread of unknown and uncertainty as a result of COVID-19, and that they lacked the courage to even engage with other coworkers. Participants admitted to feeling

anxious about visiting their family members because they feared they would expose them to or infect them with COVID-19. Due to staff shortages, participants reported that working every day during COVID-19 led to mental tiredness and burnout.

Theme 3: Behavioural symptoms related to the COVID-19 pandemic

Some participants found to be experiencing some behavioural symptoms related to the COVID-19 pandemic such as hypervigilance and avoidant behaviour. Nurses indicated that they become cautious and sensitive in their workplace towards their colleagues and outside workplace to their family including while shopping in the malls. They could do house chores or go shopping wearing gloves.

Theme 4: Support related to the COVID-19 pandemic

A weak support system for nurses was found in the study, both before the COVID-19 facilities began providing healthcare and while the nurses were performing their jobs. However, other nurses verbally stated that they received support from each other and their clinic manager by praying for and supporting one another. The majority of nurses stated that the department of health tried to give them support by calling to check on them during quarantine and they could also visit their clinics to check on them during COVID-19.

Theme 5: Measures to improve nurses' mental health related to the COVID-19 pandemic

The results of this study suggested policies and administrative support in addition to psycho-social support as ways to improve professional nurse mental health in the face of the COVID-19 epidemic. The participants discussed what they believed the government and management should have done for those who lost their jobs as a result of COVID-19 and for all nurses who served as frontline staff to be given incentives as appreciation, which they never receive. They also stated that they should have provided psycho-social support by

arranging a wellness program for their mental problems that were brought on by COVID-19 or by referring them to a clinical psychologist.

5.4 LIMITATIONS OF THE STUDY

The nurses at the City of Johannesburg region A & E clinics were screening, testing, vaccinating, consultation and caring for emergency COVID-19 patients, but not spending more time with them as the clinic closes at 4pm. As a result, their experiences may differ from those of the nurses who worked at the hospital because they were responsible for the care of COVID-19 patients 24 hours a day, seven days a week. Therefore, this study's results cannot be generalised to all nurses.

5.5 RECOMMENDATION

The following recommendations are based on the five themes that emerged during a one-on-one interview regarding COVID-19 pandemic on the mental health of nurses providing care in the City of Johannesburg clinics in Gauteng province. The recommendations focus on the promotion of nurses' support, research, education, and training as mentioned below.

5.5.1 Recommendations to promote nurses mental health support

- The Employee Wellness Programme should conduct screening for all nurses working at the clinics, to assess those with mental health challenges due to COVID-19 pandemic. Those who will be found to have mental health challenges should be provided with a continuous post COVID-19 counselling. The Operational Nurse Managers (OPM) as the immediate supervisor should also provide the necessary psycho-social support in the clinic.
- The Department of Health should provide enough material and human resources to manage the pandemic to prevent burnout of the employees, such as hiring enough part time employees, and rewards employees in the form of remuneration.

- District managers should constantly visit health care facilities to identify gaps and challenges faced by nurses more especially during the pandemics.

5.5.2 **Recommendation for educational and training**

- The communicable and non-communicable disease coordinators should provide nurses with the in-service training regarding the impact of COVID-19 on mental health and effective management. These should include awareness, symposium, and workshops.

5.5.3 **Recommendation for research**

- The research confirms that nurses at the chosen clinics had mental health issues. As a result, another research focusing on the experiences of nurses working on COVID-19 wards in hospitals will be critical, to evaluate their mental health because they were in charge of COVID-19 patients 24 hours a day, seven days a week.

5.6 **CONCLUSION**

The study focused on the impact of COVID-19 pandemic on the mental health of professional nurses working at the clinics in the city of Johannesburg. The mental health of the professional nurses found to be impacted by the COVID-19 pandemic.

Various factors contributed to the impact of COVID-19 on professional nurses' mental health. These include the sudden onset of COVID-19, losses of colleagues and family members, insufficient material and human resources, inadequate psycho-social support, COVID-19 symptoms, as well as the COVID-19 preventative and intervention measures.

Fear found to be the main mental health problem experienced by the professional nurses. The fear was related to COVID-19 infections, death,

infecting family members with the COVID-19, sometimes fear of the unknown and uncertainty. Participants also experienced feelings of mental exhaustion, burnout and also presented with the symptoms of depression. Hypervigilance and avoidance behaviours were used to deal with the impact of the pandemic by the participants.

Even though the number of COVID-19 cases has decreased, the researcher believes that it is still necessary to evaluate and provide psycho-social support to nurses who have been severely affected by the COVID-19 pandemic to improve their mental well-being.

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APPENDICES

APPENDIX A: Interview guide

English interview guide

Central question

Kindly describe in detail your experience regarding the impact of COVID-19 pandemic on your mental health?

Probing questions

Kindly describe the mental health symptoms that you have experienced in relation to the COVID-19 pandemic

What are the available support systems for nurses at the clinics during COVID-19 pandemic?

Kindly describe the support that is needed to deal with the COVID-19 pandemic's impact on mental health

APPENDIX B: Ethical clearance certificate from TREC

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TURFLOOP RESEARCH ETHICS COMMITTEE

ETHICS CLEARANCE CERTIFICATE

MEETING: **29 March 2022**

PROJECT NUMBER: **TREC/54/2022: PG**

PROJECT:

Title:	The Impact of Covid-19 on Nurses' Mental Health in the City Of Johannesburg Clinics, Gauteng Province.
Researcher:	P Ranwedzi
Supervisor:	Dr GO Sumbane
Co-Supervisor/s:	N/A
School:	Health Care Sciences
Degree:	Master of Nursing Science

PROF P MASOKO
CHAIRPERSON: TURFLOOP RESEARCH ETHICS COMMITTEE

The Turfloop Research Ethics Committee (TREC) is registered with the National Health Research Ethics Council, Registration Number: **REC-0310111-031**

Note:

i) **This Ethics Clearance Certificate will be valid for one (1) year, as from the abovementioned date. Application for annual renewal (or annual review) need to be received by TREC one month before lapse of this period.**

ii) **Should any departure be contemplated from the research procedure as approved, the researcher(s) must re-submit the protocol to the committee, together with the Application for Amendment form.**

iii) **PLEASE QUOTE THE PROTOCOL NUMBER IN ALL ENQUIRIES.**

Finding solutions for Africa

APPENDIX C: Permission to collect data from Johannesburg Health District

GAUTENG PROVINCE
HEALTH
REPUBLIC OF SOUTH AFRICA

Joburg
a world class African city

Research Committee of Johannesburg Health District

Enquiries: Prof S. Moosa | 0824466825 (WhatsApp) | shabir@profmoosa.com

DATE: 24th May 2022

ATT: Ms Phumudzo Ranwedzi

EMAIL: angelranwedzi@gmail.com

Dear Sir/Madam

STUDY TITLE: The Impact of Covid-19 on Nurses' Mental Health in the City Of Johannesburg Clinics, Gauteng Province.

NHRD REF. NO.: GP_202204_042

OFFICIAL APPROVAL

The District Research Committee has reviewed your application. This letter serves as a final approval letter for this study.

The following conditions must be observed:

- The facilities in which the research will be conducted are listed below
- These facilities will be visited from: **2022/05/24 to 2023/03/28**
- Participants' rights and confidentiality will be maintained all the time.
- Neither the District nor the facility will incur any additional cost for this study.
- No resources (Financial, material and human resources) from the above facilities will be used for the study.
- The study will comply with Publicly Financed Research and Development Act, 2008 (Act 51 of 2008) and its related Regulations.
- You will submit a copy (electronic and hard copy) of your final report. In addition, you will submit an annual progress report to the District Research Committee.
- If this is academic research then your supervisor and the University will ensure that these reports are being submitted timeously to the District Research Committee.
- The District must be acknowledged in all the reports/publications generated from the research and a copy of these reports/publications must be submitted to the District Research Committee.
- You will liaise with the manager/s listed below as relevant before initiating the study.

We reserve our right to withdraw our approval, if you breach any of the conditions mentioned above. Please feel free to contact us, if you have any further queries.

On behalf of the District Research Committee, we would like to thank you for choosing our District to conduct such an important study.

Regards,

Prof S. Moosa
Chairperson: District Research Committee
Johannesburg Health District
As delegated by Mrs M.L. Morewane, Chief Director, Johannesburg Health District, and Mr. Frans Moseane, Acting ED Health, City of Johannesburg
Date: 24th May 2022

List of Facilities Approved

- 4th Avenue Clinic
- Alexandra 8th Avenue Clinic
- Bezvalley Clinic
- Bophelong (Region 2) Clinic
- Halfway House Clinic
- Hikhensile Clinic
- Mayibuye Clinic
- Midrand West Clinic
- Mpumelelo Clinic
- Petervale Clinic
- Rabie Ridge Clinic
- Randburg Clinic

APPENDIX D: Consent form

DEPARTMENT OF NURSING SCIENCE ENGLISH CONSENT FORM

Statement concerning participation in a Clinical Research Project.

Name of Project / Study**: THE IMPACT OF COVID-19 ON NURSES' MENTAL HEALTH IN THE CITY OF JOHANNESBURG CLINICS, GAUTENG province**.

I have read the information and heard the aims and objectives of the proposed study and was provided with the opportunity to ask questions and given adequate time to rethink the issue. The aim and objectives of the study are sufficiently clear to me. I have not been pressurised to participate in any way.

I understand that participation in this Study / Project is completely voluntary and that I may withdraw from it at any time and without supplying reasons.

I know that this Study / Project has been approved by the Turfloop Research Ethics Committee (TREC). I am fully aware that the results of this Study / Project will be used for scientific purposes and may be published.

Any questions that I may have regarding the research, or related matters, will be answered by the researcher/s.

I hereby give consent to participate in this Study / Project.

Signature of researched person: .....

Signature of researcher: ……

Signed at……..this……day of……..20.....

Contact No: .....

APPENDIX E: Coding certificate

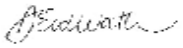
Dr Annatjie van der Wath (M Cur, PhD) annavdw@mweb.co.za

CODING CERTIFICATE
Qualitative Data Analysis

This serves to confirm that Annatjie van der Wath has co-coded the following qualitative data: 14 interviews for the study:

THE IMPACT OF COVID-19 ON NURSES' MENTAL HEALTH IN THE CITY OF JOHANNESBURG CLINICS, GAUTENG PROVINCE

I declare that the candidate, Phumudzo Ranwedzi, and I have reached consensus on the major themes and categories as reflected in the findings during a consensus discussion.



Annatjie van der Wath (M Cur, Ph D) annavdw@mweb.co.za

APPENDIX F: Certificate from the editor

University of Limpopo
Sovenga
O727

420 Unit C Mankweng 0727
081 5666 755
rightmovemultimedia@gmail.com
karabokonyani@gmail.com

4 April 2023

TO WHOM IT MAY CONCERN

This editing certificate verifies that this dissertation was professionally edited for Phumudzo Ranwedzi (201114429).

Thus, it is meant to acknowledge that I, Mrs K.L Malatji and Dr E.J Malatji professional Editors under a registered company RightMove Multimedia, have meticulously edited the proposal from the University of Limpopo. Title: "THE IMPACT OF COVID-19 ON NURSES' MENTAL HEALTH IN THE CITY OF JOHANNESBURG CLINIC, GAUTENG PROVINCE".

Sincerely,
Mrs K. L Malatji

APPENDIX G: Interview transcripts with one of the participants

R: = **Researcher**

P: = Participant

INTERVIEW 3 (NURSE 3 Thuthukani clinic) Participants 03

R: Good Morning sister

P: Morning sister

R: How are you?

P: I'm good

R: You are speaking to Phumudzo Ranwedzi I'm a student nurse at the University of Limpopo and I am currently doing master's in nursing under the topic that says the impact of COVID-19 on the mental health of nurses in the city of Johannesburg Gauteng province and today I would like to interview with you, I have prepared four questions the first one is the is a question so I would like you to answer as much as you can on the first question and it will be followed by three probing questions, so in this study, your privacy is ensured and remember no name or name of the institution will be mentioned and there is no time frame and it can take 20 minutes or more than that or less it depends on how you respond to the questions

P: Okay

R: So are you permitting me to record this interview?

P: Yes I do

R: Thank you so much how old are you?

P: I am 29

R: Are you male or female?

P: I'm a female

R: What role do you have in this clinic?

P: I'm a professional nurse

R: Which services do you render?

P: EPI

R: Oh okay, so I'm going to start with my interview with my first central question, kindly describe in detail your experience regarding the impact of the COVID-19 pandemic on your mental health?

P: okay I will say that at the start of the peak of COVID-19, it was scary even coming to work and interacting with people, I was always at the edge and worrying that I might contact COVID-19 at work and then come back to my family and infect them, so like we were always on the edge and the was no peace at all and then we had to change our lifestyles wearing masks all the time inside the house and I'm using public transport and we were supposed to do social distancing, and led to us being late at work because maybe they would put five people inside the taxi to maintain social distancing, even going to shopping there were things that we were only allowed to buy even going to the bank there were days so everything was just affected

R: So I heard you say you were scared, can you tell me more about how you felt especially when you were in contact with a patient

P: No we were just scared because at the peak like everyone who was infected most of the died because of COVID-19, so you always are afraid that if you contact with it you might die, you might not survive it because obviously if your immune is not strong then you might be infected and not survive and even yourself you get infected and then you go and infect someone at home and they might not even survive, so that's what got me worried

R: Okay, have you tested positive yourself?

P: I've never tested COVID-19 because I've never shown any symptoms

R: Okay, so have you ever lost your loved ones during COVID-19?

P: No, like no one in my family got infected and thank God

R: Okay. Have you ever been working while others were quarantined?

P: Can you come again?

R: Have you ever been working while others were quarantined and you are at work?

P: Yeah I remember last year I think two or three nurses

R: How was it?

P: No it was very hard because there was a shortage and there is extra work and extra pressure

R: Hhmm,

P: Yeah

R: Okay, all right kindly describe the mental health symptoms that you have experienced in relation to the COVID-19 pandemic.

P: I had just fear I was just worried and having that only

R: So, there was not much?

P: There wasn't much, I mean now at the beginning I had anxiety I was worried, I was worried throughout and to have contact with people you know because that thing was new to all of us and we were just all afraid and worried

R: Okay, so what were the available systems or what are the available support systems for nurses at the clinic during the COVID-19 pandemic, available support system I mean it can be from your managers or the Department of Health, do you think there were available support systems?

P: Yeah, I think there was support, yes I mean if you were in quarantine they would check up on you and all those stuffs so yeah

R: Oh Okay, so that's the support that you needed?

P: Yeah but myself because I never like getting infected with COVID-19 so I never went for quarantine

R: Okay so would you please kindly describe the support that is needed to deal with the COVID-19 pandemic on the impact on mental health, do you think there was more support that you needed or it was enough for you to get the support from just receiving the calls during the pandemic as you have mentioned?

P: You know there was not much that happened if you are in quarantine no one was going to physically visit because you were supposed to quarantine until you are well, so it was only receiving calls and checking up on you but if you having things like anxiety and stuff you'd be referred to the right channels like counselling and stuff

R: Were you referred

P: No I was never referred

R: I mean if you know of others, do you think there was that support of referring in the department of health

P: No I don't think so, I never heard anyone saying they went to counselling

R: Okay thank you so, Sister, so what more do you think should be added to this study regarding the COVID-19 pandemic?

P: I think you covered everything, I think you asked the most important questions

R: Thank you so much

P: Pleasure

R: Bye.