

UNIVERSITY OF KWAZULU-NATAL

**Impact of the Coronavirus pandemic on wellbeing of healthcare
workers in a haemodialysis facility, KwaZulu-Natal**

By

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degree of Master of Business Administration**

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DECLARATION

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DEDICATION

This dissertation is dedicated to:

My parents. You are an inspiration for this work, and I sincerely thank you for your encouragement, positivity and love. Thank you for always being there for the family without question and the sacrifices that you have made for us have not gone unnoticed. All my achievements are only because of your support. This research is a tribute to my late sister, Rehnu Ramnarain, who is always remembered, and who is dearly missed.

GLOSSARY OF ACRONYMS

COVID-19	Coronavirus Disease 2019
ERG	Existence Relatedness and Growth theory
SARS-CoV-2	Severe Acute Respiratory Syndrome Coronavirus 2
WHO	World Health Organization

ABSTRACT

The concept of a healthy workplace primarily focused on the physical wellbeing of a person previously but has since evolved with a now more holistic approach that includes mental and psychological health. The purpose of the study was to determine the impact of the Coronavirus (COVID-19) on the wellbeing of the clinical haemodialysis healthcare workers of an organisation specialising in renal care and dialysis, that being the Renal Care Team Dialysis, which is a private organisation. This study spanned four of the outpatient locations in KwaZulu-Natal, South Africa. The COVID-19 pandemic has brought to the forefront the need to prioritise the wellbeing of healthcare workers who were at the frontline of the pandemic and working under challenging circumstances for long hours, with a minimal workforce, high influx of patients and shortage of personal protective equipment in trying to save lives under much uncertainty. Additionally, patients that tested positive for COVID-19 had to still receive their life sustaining dialysis treatment safely. This exposed staff to the COVID-19 virus and hence impacted their overall wellbeing. This qualitative study made use of purposive sampling. Online semi-structured and in-depth interviews of nine clinical haemodialysis healthcare workers from Renal Care Team Dialysis were used. The key objectives were to determine the impact of COVID-19 on the clinical haemodialysis healthcare workers' wellbeing, the coping mechanisms that they used and the support that was needed. Findings from the thematic analysis revealed that wellbeing was negatively impacted during the pandemic due to the fear of infecting others with the virus, which affected all aspects of their lives from the workplace to personal life, to their community and religious/spiritual beliefs. Social distancing and the nature of their job deprived participants of social and emotional support. Some of the stress factors to wellbeing were stigmatisation, isolation, lack of recognition and inadequate availability of resources (safe transportation, training, shortage of staff). Coping mechanisms were protective factors and included adequate PPE, reliable social media platforms, family time, exercising, new skills, knowledge, a positive mind-set and receiving a salary. Psychological wellbeing support was therefore essential to navigate these challenges, which was lacking from all decision-makers, inclusive of the workplace, Government, and medical aid funders. Direction for future research can include a similar study across multiple dialysis units and/or a study across various provinces within the country.

Keywords: wellbeing, impact of COVID-19, Coronavirus, haemodialysis, dialysis, healthcare workers

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CHAPTER 1: OVERVIEW OF THE STUDY

1.1 Introduction

Fear and panic spread as the Coronavirus, identified as Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2), rapidly spread globally. Also known as the Coronavirus Disease 2019 (COVID-19), it originated in Wuhan, China in December 2019 and became a Global pandemic causing havoc worldwide (World Health Organization, 2021). Never has a pandemic of such a magnitude been experienced where, globally, the economy came to a complete halt as saving lives took priority. No country or race was spared from its volatility as many lives were lost and healthcare systems were put under severe strain, even the most financed and developed healthcare systems like in Switzerland and the United States of America were challenged (Sebola-Samanyanga, 2021). As of 2nd September 2022, 6 475 346 confirmed COVID-19 deaths and 601 189 435 confirmed positive cases were reported worldwide (World Health Organization, 2022). In South Africa, 102 108 confirmed deaths and 4 012 239 confirmed positive cases as of 2nd September 2022 were reported (World Health Organization, 2022). More than two years later, the virus continues to mutate and living with COVID-19 is the “new normal”.

Humans are social beings by nature, and the preventative measures of physical distancing and the use of masks would have affected individuals’ mental health and wellbeing. This was especially true for healthcare workers who had to work under challenging circumstances, namely long hours, less workforce, and an overcrowded influx of patients, to a scarcity of medical goods such as personal protective equipment (PPE) and COVID-19 kits for testing, whilst still trying to save lives under much uncertainty (Billings *et al.*, 2021; Shaukat *et al.*, 2020). These work challenges, together with having to manage changes in their home environment like online schooling from home for children added to the stress faced by healthcare workers (World Health Organization, 2022). Healthcare workers on the frontline were impacted significantly by the pandemic and in 2020, China reported 3387 infected healthcare workers, 0.6% of which died, while deaths in Italy were at 20%, Spain 14%: and more than 50 deaths in France (Shaukat *et al.*, 2020). As of 20th February 2021, in just the public sector of KwaZulu-Natal in South Africa, 15 829 healthcare workers had been infected with the virus, with 335 deaths (Dawood *et al.*, 2022). The healthcare system includes a variety of healthcare professionals and each one is unique to the type of service and care that they provide.

Globally, more than two million kidney failure patients receive life sustaining treatment, haemodialysis at outpatient facilities (Verma *et al.*, 2020). In the United States, there are about 500 000 patients receiving dialysis and 200 000 healthcare workers treating dialysis patients in 2020, making these patients and healthcare workers vulnerable to being infected since they are unable to maintain social

distancing (Weiner & Watnick, 2020). In 2020, the United States reported that 200 000 healthcare workers were directly involved in the treatment of hemodialysis. These 700 000 individuals (dialysis patients and healthcare workers) were unable to practice social distancing as they had to continue with life-saving treatment and dialysis care. Dialysis patients were considered at increased risk of becoming infected with the COVID-19 virus owing to their pre-existing medical conditions of diabetes, hypertension and cardiovascular disease, which are the main causes of kidney failure (Keaveney *et al.*, 2021). This ongoing dialysis treatment that was required and given the increase demand of acute (temporary) dialysis treatments due to temporary loss of kidney function from COVID-19, it is surprising that dialysis healthcare workers wellbeing is so under-researched (Keaveney *et al.*, 2021).

The wellbeing of workers affects their professionalism, thus impacting on the delivery of quality care, absenteeism, medical errors, and individuals' quality of life. It is therefore important that during these recovery times of the pandemic, healthcare workers' wellbeing must not be overlooked, and decision-makers must mitigate these work-related risks. While the introduction of the vaccinations has brought with it some ray of hope as seen by the easing of the lockdowns and a decline in COVID-19 cases, the long-term impact of the pandemic on healthcare workers' wellbeing is not known.

This was a qualitative study conducted in a private haemodialysis facility in KwaZulu-Natal. It investigated the impact of COVID-19 on the wellbeing of clinical dialysis healthcare workers, both in their work and family environments. One-on-one interviews were conducted with nine healthcare workers in a dialysis facility in KwaZulu-Natal. The study also explored what resources in South Africa were available and how prepared the country was for a pandemic through the perceptions of clinical dialysis healthcare workers. A brief introduction to the study has been completed and will be followed by a brief background to the study, problem statement, purpose of the study, significance of the study, aims and objectives, research questions, limitations of the study, structure of the study and summary.

1.2 Background

COVID-19 is believed to be caused by a member of the Coronavirus family that has never been encountered before (World Health Organization, 2021). The wellbeing of a person includes good living condition such as employment and meeting basic needs like food and shelter, which is easier to measure, but other indicators such as feelings and emotions are much more difficult (Centre of Disease Control and Prevention, 2018). COVID-19 exposed the inequity in the South African healthcare system where private medical funds were for the elite and not accessible to everyone. South Africa have been exposed to past pandemics, but for many healthcare workers, this would have been their first experience. One of the world's most stringent lockdowns reported was imposed by South Africa's Government during COVID-19, where its leadership was questioned (Sebola-Samanyanga, 2021).

The pandemic has placed excessive physical and psychological stress on healthcare workers, particularly in low- and middle-income countries (Dawood *et al.*, 2022). Further challenges that South Africans face are the energy crisis resulting in scheduled and unscheduled power interruptions (Winkler, 2022) and the poor delivery of water and sanitation services (South African Government, 2022), which also exposed the inequity that still exists. Water and electricity are considered basic needs for humans but is also needed for patients to receive their haemodialysis treatment. On 13th April 2022, a provisional state of disaster was declared in KwaZulu-Natal by President Cyril Ramaphosa due to the province having experienced its biggest natural disaster where lives and homes were lost and infrastructure damaged, which impacted adversely on service delivery and adding to an already strained healthcare system (South African Government, 2022).

There are two types of dialysis for end-stage kidney failure, namely peritoneal dialysis, and haemodialysis (Tannor *et al.*, 2017). Peritoneal dialysis makes use of the abdomen (the peritoneum) that acts like the filter to cleanse the blood, so occurs inside the body and is more home-based, whereas haemodialysis makes use of an extracorporeal circuit outside the body using a machine and requires patients to physically go to a dialysis facility. The most suitable treatment option is determined by the treating doctor, but this study is based only on haemodialysis patients. Haemodialysis patients were considered amongst the most vulnerable population of those at higher risk of contracting COVID-19 due to the majority being elderly, having several co-morbidities and a weak immune system (Ibernun, Bueno & Rodrigues Farre, 2021). Chronic dialysis patients had to continue to receive their life sustaining treatment in the outpatient facility, and even those that tested positive for COVID-19 had to be dialyzed safely away from other patients, putting the healthcare workers and other patients in the dialysis facility at added risk of being infected. Patients also face a stigma and are not always forthcoming about being exposed to COVID-19, thus creating an unsafe work environment (Kumar & Dongre, 2022).

This study was conducted in a private haemodialysis organization in KwaZulu-Natal, where the nine participants enrolled in the study were from four of its locations. Each location facility has between a five to eight bedded unit, implying that at any given time up to five or eight patients can be treated simultaneously in a shared space. The organization/practice is about eight years in existence and is owned by two Clinical Technologists specializing in Nephrology, who individually have more than fifteen years' experience in the field. The study's dialysis organization is an outpatient (out of hospital) facility that performs life sustaining treatment for end-stage kidney/renal failure patients and acute dialysis treatment in hospital. However, for the purpose of this study, only the chronic dialysis/outpatient facility will be included. Traditionally, patients attend their scheduled haemodialysis treatment thrice weekly, with each treatment being four hours long and performed by specialized healthcare workers (Clinical Technologists specializing in Nephrology and Registered nurses with dialysis experience). The operational hours for the haemodialysis outpatient facilities are from 5h30am

till 20h30pm Monday till Saturday and include public holidays. The company also provides a 24-hour emergency service for in-hospital dialysis needs. Patients remain on treatment for years since a transplant is the only other option, which is difficult to get. Therefore, patients are well known to the healthcare workers.

1.3 Problem statement

Humans thrive on interaction and COVID-19 has taken that away where social distancing was seen as showing that one cares. While everyone's lives have been impacted by the pandemic and more attention to mental /psychological wellbeing is expected to be needed overall for all people, healthcare workers had to show up to work daily to save lives and witnessed first-hand the rapid rate at which patients died. They risked their lives by being in the frontline of the pandemic and being exposed to the COVID-19 infection due to the exposure of treating patients daily.

During a crisis such as COVID-19, healthcare workers often neglect themselves and their own wellbeing as they try to save lives and re-assure patients, family, and the community. Psychological hazards can directly or indirectly cause injuries: Directly through a lack of control and indirectly through insomnia, over-medicating, over-drinking, depression, feelings of anger, being anxious, and nervousness (Burton, 2010). It was encouraged that healthcare workers, during the pandemic, find a balance and get sufficient rest during shifts, eat healthily, keep in contact with family and friends, and avoid unhealthy coping mechanism (World Health Organization, 2021). Situations in the workplace can be work stressors as they relate to the psychological and social conditions of the workplace (Burton, 2010). Feelings of stress, fear and feeling under pressure were normal and not a reflection of the healthcare workers not doing their jobs (World Health Organization, 2020). Healthcare workers also faced isolation from family and friends due to stigma and fear, which adds to their stress. Similarly, healthcare workers from outpatient haemodialysis facilities were also exposed to work stressors due to COVID-19, affecting both their physical and mental wellbeing negatively.

There have been studies and recommendations that wellbeing focused on healthcare workers is critical, but in South Africa this appears to be neglected. Worldwide, more focus has been on hospital healthcare workers in comparison to outpatient facilities. The majority of chronic treatment for patients could be delivered to their homes or via consults done online during COVID-19 to avoid physical contact. However, chronic haemodialysis treatment still required face-to-face contact in a dialysis facility where the risk of being infected was increased due to shared spaces and exposure during transport. In a healthcare system that incorporates a variety of healthcare professionals, each responsible for different treatments and patient care, studies on the impact of COVID-19 on the outpatient dialysis healthcare workers is lacking, even though they were also at high risk of contracting the COVID-19 virus.

1.4 Purpose of the study

The wellbeing of healthcare workers is important in providing optimal quality of care to patients. In an already strained healthcare system, more focus needs to be given to these essential workers. A more holistic approach to wellbeing, both physical and mental wellbeing, is important. The researcher has about twenty years' experience in the healthcare dialysis field and has noticed that physical wellbeing of workers is addressed in the workplace, while there is a lack of concern by decision-makers regarding the mental wellbeing of healthcare workers as this is not even a conversation that occurs. Research and recommendations on healthcare workers from other countries, mostly in hospital settings, are well published, but there is a lack of studies on the South African population and in outpatient facilities settings. This study focusses on the wellbeing of clinical dialysis healthcare workers during the COVID-19 pandemic in KwaZulu-Natal, South Africa. South Africa is unique with its own challenges and healthcare systems, and there is a concern that guidelines and recommendations by other countries may not be practical to establish in a developing country like South Africa.

1.5 Significance of study

The study is important in bringing attention to the challenges faced specifically by South Africans healthcare workers in a dialysis facility, which is an important yet under-studied field in the enormous healthcare system. The National Health Insurance (NHI) was aimed at providing universal healthcare to all South Africans irrespective of their socioeconomic status and proposed that by 2030 this vision will be in effect (Mukwena & Manyisa, 2022). With the NHI in the implementation stages, this study is aimed at reaching decision-makers in prioritizing wellbeing amongst outpatient dialysis facilities healthcare workers to create a more robust and resilient healthcare system. A shortfall, estimated at eighteen million healthcare workers, has been projected by 2030 by the World Health Organization (Sovold *et al.*, 2020). A call for urgent intervention is needed before there is a shortage of healthcare workers or sub-optimum workers, compromising the quality of care due to the wellbeing of healthcare workers being neglected.

1.6 Aim and research objectives

The aim of the study was to explore the impact of the Coronavirus pandemic on clinical healthcare workers' wellbeing in a haemodialysis facility in KwaZulu-Natal, South Africa.

The objectives were as follows:

- To determine the challenges that clinical healthcare workers in a haemodialysis facility experienced with respect to their wellbeing during the Coronavirus pandemic.
- To identify the coping mechanisms used by clinical healthcare workers in a haemodialysis facility in assisting them with their wellbeing during the Coronavirus pandemic; and
- To assess what additional support mechanisms are required by clinical healthcare workers in a haemodialysis facility to facilitate their wellbeing during crisis such the Coronavirus pandemic.

1.7 Research questions

The research questions were as follows:

- What challenges did clinical healthcare workers in a haemodialysis facility experience in respect of their wellbeing during the Coronavirus pandemic?
- What coping mechanisms were used by clinical healthcare workers in a haemodialysis facility to assist them with their wellbeing during the Coronavirus pandemic?
- What additional support mechanisms are required by clinical healthcare workers to facilitate their wellbeing during a crisis such as the Coronavirus pandemic?

1.8 Structure of the dissertation

The research is divided into six chapters in a structured manner, through which the study has evolved as briefly described below.

Chapter One introduces the study. It includes the background to the study; the research problem; purpose of the study; significance of the study; aims and research objectives, and the research questions that need to be answered to achieve the objectives.

Chapter Two reviews the literature where other studies and theories similar in nature to the current study are explored.

Chapter Three presents the research methodology and design. The methodology is discussed in detail, focused on how the research was conducted in achieving its objectives. It includes the research methods and techniques used for data collections techniques.

Chapter Four presents the findings from the interviews. Data collected are presented in themes using thematic analysis.

Chapter Five is the discussion and interpretation of the research chapter based on the results provided in Chapter Four and drawing on previous studies.

Chapter Six presents the conclusion and outcome from the study and addresses how the objectives were met. It also includes recommendations on how to address the problems that were identified in the research. Considerations for future research will also be provided.

1.9 Summary

This chapter presents an overview of this study. The next chapter will be focused on studies and information relating to the review of literature.

CHAPTER 2: REVIEW OF LITERATURE

2.1 Introduction

Chapter One highlighted briefly what the research entails and aims to accomplish. This chapter is a continuation of the study and presents literature from prior studies in consonance with the research topic and objectives. In this chapter, the review of literature includes a brief history on pandemics and epidemics, followed by studies on the concept of wellbeing in the workplace, the impact of COVID-19 on the work and personal lives of healthcare workers, risk factors, supportive/protective means by means of motivational theories and coping mechanisms. Finally, South Africa's preparedness during COVID-19 and a summary are provided. It is important to understand the history of pandemics and epidemics as lessons learnt from them help better prepare the country for future ones.

2.2 Brief history of pandemics and epidemics

A pandemic is an epidemic that occurs amongst many countries worldwide that affects a huge population group, mainly due to transmission of the disease amongst humans (Bhadoria, Gupta & Agarwal, 2021). A large group of viruses that causes diseases in animals and humans are referred to as Coronaviruses. Coronavirus is believed to originate from camels, cats and bats that evolve and infect humans. Human Coronavirus was first identified in the 1960s (Liu, Kuo & Shih, 2020). On the 12 February 2020, the WHO officially named the novel Coronavirus, COVID-19, and the International Committee of Taxonomy of Viruses officially named it Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) (World Health Organisation, 2022).

The three major viral pandemics that were mostly respiratory related in the last two decades were SARS-CoV-2, Middle East Respiratory Syndrome (MERS) and the current COVID-19 (Guo *et al.*, 2020; Bhadoria *et al.*, 2021). The SARS-CoV-2 is a β -Coronavirus. SARS-CoV-2 is more transmissible but less virulence regarding mortality and morbidity than the other two β Coronavirus, SARS, and MERS (Guo *et al.*, 2020). COVID-19 is the fifth pandemic reported since the Spanish flu (H1N1) pandemic in 1918, the Asian flu (H2N2) pandemic in 1957, Hong Kong flu (H3N2) in 1968, and the flu H1N1 pandemic in 2001 (Liu *et al.*, 2020). These pandemic timelines are reflected in Figure 2.1. The five major epidemics that have affected South Africa were the smallpox, the bubonic plague, Spanish flu, polio, and Human Immunodeficiency Virus (HIV) (Sebola-Samanyanga, 2021). Long-standing chronic epidemics in South Africa include tuberculous, HIV and Acquired Immunodeficiency Syndrome (AIDS) and more recently H1N1 in 2009, Ebola virus in 2014, and Listeriosis in 2017 (Sebola-Samanyanga, 2021). The Spanish flu is one of the worst pandemics of recent times, taking fifty million lives worldwide, accounting for three to four percent of the world population in just over a year.

South Africa was reported as one of the top five impacted countries, with six percent of the country population dying within six weeks (Liu *et al.*, 2020).

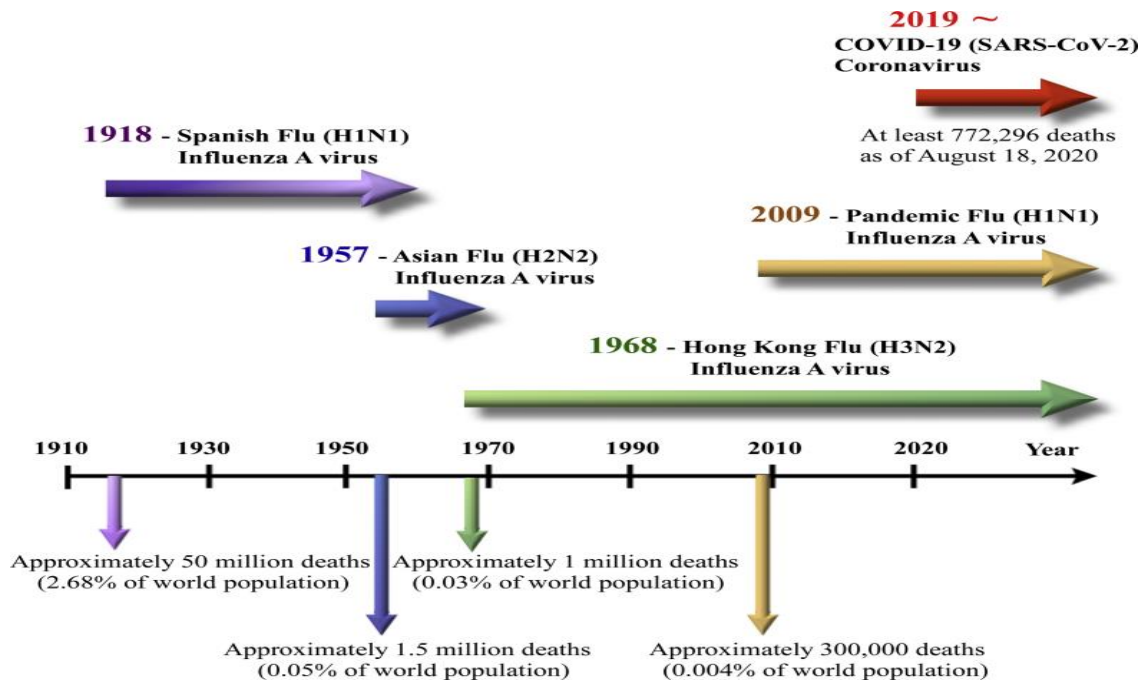


Figure 2.1: Timeline of the five pandemics since 1918 and globally circulating virus (Lui *et al.*, 2020, pg. 329)

Previous disease outbreaks made healthcare workers have feelings of high uncertainty and vulnerability, resulting in both cognitive and somatic symptoms relating to anxiety. The two psychological impacts that were different between the SARS and other disasters, but similar to the current COVID-19, are the experience which included social distancing, interrelationship isolating and change in work tasks with new colleagues. The other impact was family support where workers with children experienced more psychological distress due to a fear of becoming infected and being unable to take care of their children or fear of infecting them (Gavin *et al.*, 2020; Lee *et al.*, 2018). Physical impacts through exposure to the virus, poor sleep, exhaustion, and psychological impacts presented by anxiety, depression, distress, fear and stigmatization have been reported during the COVID-19 pandemic by healthcare workers (Cairns *et al.*, 2021). Similar psychological disorder findings were identified during and after past pandemics amongst physicians, suggesting the presence of long-term psychological disorders (Duarte *et al.*, 2020).

A study in Toronto amongst healthcare workers post the 2003 SARS outbreak, at one and two years after the outbreak, reported that those healthcare workers with pre-existing psychiatric conditions prior to the outbreak were at a higher risk of post outbreak stress symptoms and, surprisingly, the rest scored lower or similar stress levels to community incidence post outbreak, thereby showing the resilience of healthcare workers (Lancee *et al.*, 2008).

2.3 Wellbeing and the workplace

Wellbeing is a broad topic and various definitions exist. Wellbeing has been defined as a mix of feeling good and functioning well that includes experiences of positive emotions, improving one's potential, having control to some extent of one's life, having a sense of purpose, and having positive interrelationships (Ruggeri *et al.*, 2020). Another definition of wellbeing is the point of balance between the challenges individuals face and the resources available to deal with those challenges and developing a balance between the two (Dodge *et al.*, 2012; Nene, 2020). Wellbeing is a positive outcome and signifies that people perceive their lives as going well (Centre of Disease Control and Prevention, 2018). The wellbeing of a person includes good living conditions (global judgment on life satisfaction) such as employment and meeting basic needs like food and shelter, which is easier to measure whereas other indicators such as feelings and emotions are much more difficult to measure and range from depression to joy (Centre of Disease Control and Prevention, 2018). People spend a lot of time at work, so it is no surprise that the work environment is critical to an individual's wellbeing.

What constitutes a healthy workplace has evolved over the years. Previously, the focus was only on the physical wellbeing of a person, but now a more holistic approach is used that includes both mental and psychological wellbeing (Nene, 2020; Burton, 2010). According to the World Health Organization (WHO), a healthy workplace includes the working together of workers and managers on an ongoing basis to better the processes in protecting and promoting the health, safety and wellbeing of the workers, and thereby improving the long-term sustainability of the workplace (Burton, 2010). Businesses have both a moral and ethical obligation to provide a safe and healthy work environment. If workers are not physically and mentally healthy, this impacts negatively on their productivity and performance and results in business failure, as shown in the Figure 2.2 demonstrating an unhealthy workplace result in stress that impacts negatively on physical wellbeing and mental/psychological wellbeing of workers adversely affecting the business.

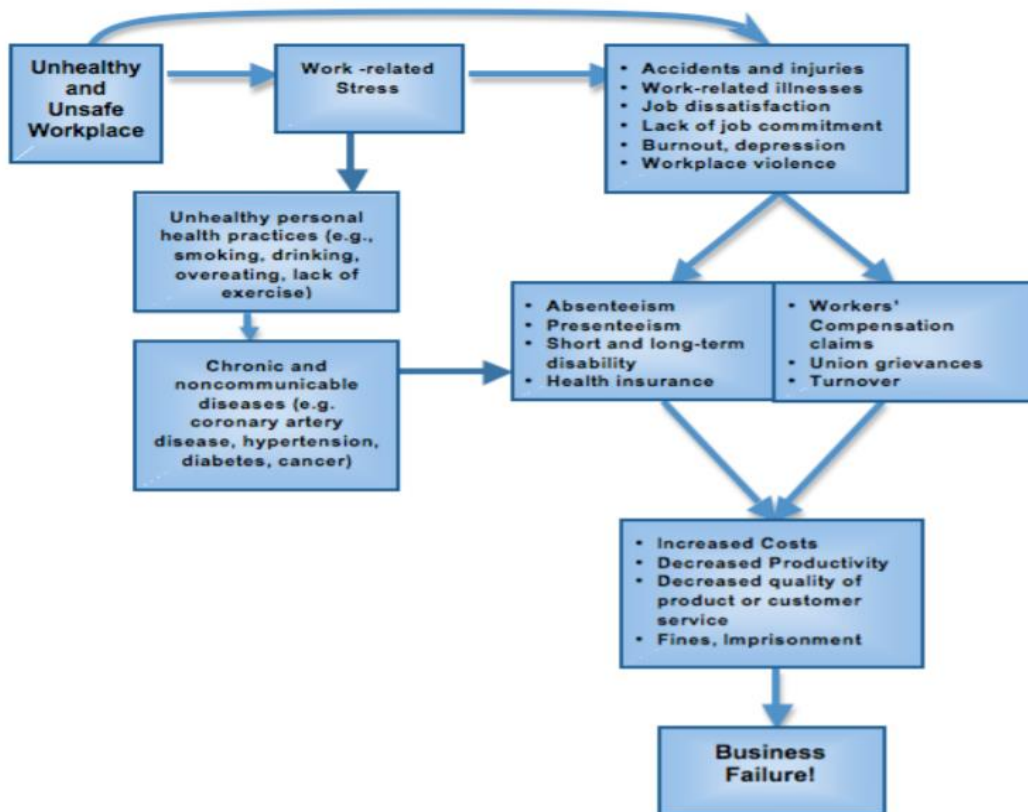


Figure 2.2: Business case in a nutshell: World Health Organization (Burton, 2010, pg. 6)

Healthcare workers by nature of their job are at higher risk of mental/psychological health, even prior to COVID-19, as compared to other professionals (De Kock *et al.*, 2021). A study in Korea found that the main factors that contributed to nurses leaving the profession were structural variables (workload, support from managers, remuneration, more routine), psychological factors (positive and negative affectivity/emotions), and environmental factor (job opportunities) (Dolea & Adams, 2005). There has been more attention by business leaders towards workers and their wellbeing in recent years as they realized the value that it brings to the business (Tomo & De Simone, 2017). However, more effort is still needed to get the “buy-in” of businesses to practice a more holistic approach to wellbeing. Healthcare workers’ wellbeing has gained much popularity amongst researchers, due to the impact of COVID-19 on their wellbeing, and the long-term impacts were of huge concern. Healthcare workers were considered as part of the high-risk group to be infected by the virus. Since healthcare workers belong to different disciplines and differ in duties, needs and responsibilities, the impact of pandemics will affect each healthcare discipline differently (Cairns *et al.*, 2021).

2.4 Types of wellbeing

The workplace must support, protect and promote the physical, mental and social needs of the workers by focusing on the physical environment, psychosocial environment, personal health resources in the workplace, and social community involvement by organizations, all of which are referred to as the avenue of influence (Burton, 2010). Wellbeing can be divided into physical, mental and social wellbeing, all of which are interlinked. Healthcare workers are an industry that requires more research into workers' wellbeing with focus revolving around healthcare workers' workplaces.

2.4.1 Physical wellbeing

Physical wellbeing is the absence of disease and includes living a healthy lifestyle and having a healthy immune system (Nene, 2020). In the workplace, the physical environment includes objects, i.e., anything that one can touch and smell like air, furniture, equipment, chemicals, goods, etc., and employers have a responsibility to protect workers from any bodily harm and injury (WHO, 2020). Occupational health illnesses may not be immediately obvious, like injuries on duty, as some may only present later, like exposure to HIV, Hepatitis, and hearing disabilities due to exposure to loud noise (Burton, 2010). Chronic illnesses are also of global concern and increase due to bad habits like smoking, alcohol consumption and lack of nutrition (Balanzá-Martínez, Atienza-Carbonell & De Boni, 2020). Workers that have psychosocial hazards experience poor sleep, feel depressed, excessively consume alcohol, over medicate, are anxious and nervous, feel angry or reckless resulting in poor judgement, more errors, and temporary distraction, thereby placing stress on their body and increasing the potential of strain and sprain.

Non-physical (psychosocial) hazards can directly and indirectly impact on physical wellbeing through lack of control necessary to avoid threats to life. Psychosocial work includes work organization (work demands, work overload, shift work issues, time pressure, supervisors and colleagues support, job training, poor communication, rewards, and recognition) and culture (inadequate policies, discrimination, bullying, lack of support for healthy lifestyle) at work. It speaks to the beliefs, values and attitudes of the company that are followed daily which affect the physical and mental wellbeing of workers (Digby *et al.*, 2021).

Personal health resources in the workplace are the supportive factors that an organization provides to the worker for them to do their job to promote wellbeing, like access to healthcare, information/knowledge, resources, work schedule flexibility, and opportunities (Burton, 2010).

2.4.2 Mental wellbeing (psychological wellbeing)

Mental health/ illness used to be referred to as diagnostic illness but has since evolved and is now defined by the WHO as a state of complete wellbeing (not just the absence of illness) where a person becomes aware of their individual abilities and can cope with the day-to-day stresses of life, able to be productive at work and contribute to the community (WHO, 2022; Westerhof & Keyes, 2010). Three

main components from the definition identified are wellbeing, effective functioning of individuals, and contribution to society. Although mental suffering/distress may not be at a level of being diagnosable, it still has an impact on the workers' wellbeing. Mental health has both positive and negative dimensions in the neurophysiological and cognitive state related to emotion, mood, thinking and behavior (Nene, 2020). Positive dimensions of mental wellbeing are a complete state of cognitive functioning in which workers can cope with adversity and difficult situations, whereas negative dimensions are psychological distress and psychiatric illness. Mental health is based on biology, psychological and social factors ranging from quality of life-to-life experiences, environment, self-esteem, and nutrition (Franke *et al.*, 2017; Nene, 2020).

Factors in the workplace may increase the likelihood of mental disorders, worsening existing disorders or have a direct impact on mental distress, like burnout (WHO, 2005). Burnout is explicitly used in the occupational context and healthcare workers are amongst the top six workers that are most burnout and stressed (Sovolt *et al.*, 2021). Being a frontline worker was a contributing factor to personal, work-related and client/patient related burnout. The impact of social distancing was linked to isolation and loneliness, which were associated with an increase in mental disorders (anxiety and depression) (Balanzá-Martínez *et al.*, 2020). Ninety three percent of healthcare workers felt stressed at work because of workload, adhoc duties, emergencies, poor environment, lack of management support, lack of equipment, the work, the work environment, and the hazardous equipment that they work with (Pius *et al.*, 2020; Paiano *et al.*, 2020). Burnout is a state of physical, mental and emotional exhaustion that has developed over a long period of time due to emotionally draining demands in the workplace (Duarte *et al.*, 2020). Burnout, as defined by Maslach, is a reaction to protracted / chronic stress in the workplace (Orrù *et al.*, 2021). It develops slowly over time and is associated with a decline in job satisfaction, resulting in poor judgement, delayed or inadequate responses and impacting on patient care through lack of patient confidence care and compromising professionalism.

Burnout is characterized by three dimensions: emotional exhaustion, de-personalization/cynicism and a decrease in personal abilities/decreased sense of personal accomplishment, as reflected in Figure 2.3 (Orrù *et al.*, 2021; Ruisoto *et al.*, 2021). Emotional exhaustion is associated with strain and linked to anxiety, physical exhaustion and insomnia. Depersonalization/cynicism is associated with coping and defensive behaviour aimed at preventing or reducing stressors by treating people as objects. Personal abilities/a decreased sense of personal accomplishment is the result of stress-strain coping mechanism associated with helplessness, while personal accomplishment is associated with positive control as a coping mechanism (Lizano, 1995). Another approach to burnout is three dimensional, namely personal, work and client-related burnout (Duarte *et al.*, 2020). Factors that affect personal burnout are intimacy, marriage/being in a committed relationship, parental status, and a decrease in salary. Satisfaction in life and resilience was associated with a decrease in burnout.

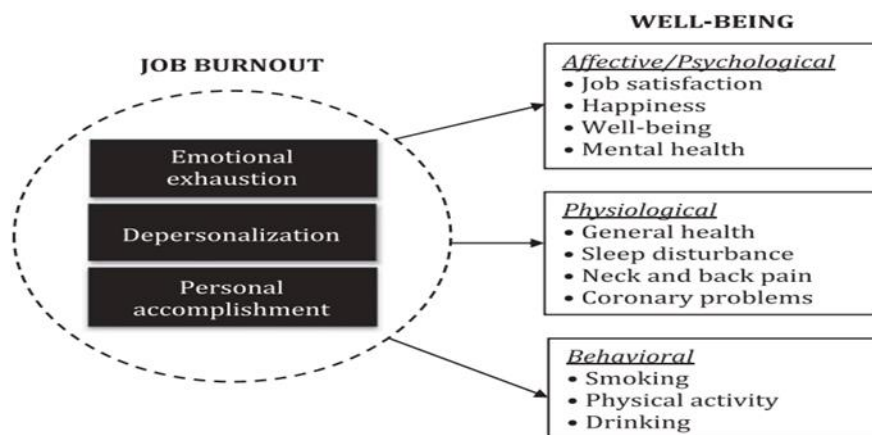


Figure 2-3: The impact of job burnout dimensions on worker well-being (Lizano, 1995, pg. 169)

2.4.3 Social wellbeing

Interpersonal relationships are fundamental amongst humans who need a sense of belonging, affection and love from family, colleagues and romance (Nene, 2020). Organizations exist within a community and workers live within the community, which means that workers' health, safety, mental and physical wellbeing is also impacted by the physical and social health of the community. Enterprise community involvement is the type of physical or social support that the organization provides to the community and can be in the form of activities, resources or expertise to promote the wellbeing of their workers and their families (Burton, 2010).

Some of the community issues that may impact on workers are a lack of access to healthcare, limited access to healthcare or treatment for HIV; disasters such as floods; lack of information about health and safety in the community; contaminated water sources; lack of funding for charity initiatives; deficiency of community infrastructure; and safe means of transport between home and work (Burton, 2010). Healthcare workers were considered at a higher risk of being infected with the virus. These risk factors are discussed in the next section.

2.5 Risk factors on the wellbeing of healthcare workers

An Australian study with 433 healthcare workers investigated their wellbeing during three stages of the pandemic (pre pandemic, at its peak, and a few months after the peak). The study found that self-rated health and wellbeing improved from the initial stage of pandemic but were not back to how it was pre COVID-19 (Stubbs, Achat & Schindeler, 2021). This chapter presents the risk factors on the wellbeing of healthcare workers during COVID-19 and the use of Alderfer's ERG model to explain the risks factors.

2.5.1 The scale of the pandemic

A pandemic of this magnitude has never been seen before. The high rate of deaths and people getting infected by the virus globally gave the impression that no one was safe (De Kock *et al.*, 2021). Healthcare workers had to also treat colleagues that were infected with the virus, adding to the fear and reality that they could also be infected (Shaukat *et al.*, 2020). Netcare's St Augustine's hospital in Durban was one of the first healthcare facilities that had to close their doors to new admissions due to an outbreak of COVID-19 where one hundred and thirty-five patients and staff (eighty staff) were infected, accounting for fourteen percent of the total reported cases in KwaZulu-Natal (Dyk, 2020). The outbreak also spread to the outpatient dialysis facility, National Renal Care, at the same location as St Augustine's hospital, resulting in eleven patients and eight staff in a thirty-nine-bed dialysis facility being infected (Lessells, Moosa & Oliveria, 2020). The Department of Health allowed the dialysis facility to continue a one-week period in providing patients with their life sustaining dialysis while making alternative arrangements at other sites for further treatments (Dyk, 2020).

2.5.2 Nature of work

Past pandemics have shown a substantial adverse impact on the psychological wellbeing of healthcare workers such as burnout, which impacts negatively on their ability to perform their duties and thereby also compromises their capability in mitigating and containing the pandemic (Pou *et al.*, 2022). Professional burnout is a work-related phenomenon and impacts on both the wellbeing of the healthcare worker and the quality of care delivered to patients (De Hert, 2020). In two government hospitals in Nigeria, forty-six percent of healthcare workers have been reported to suffer from s

tress due to the nature of their work (Pius, 2020). Anxiety, severe depression and insomnia were associated with being a frontline healthcare worker (De Kock *et al.*, 2021; Lai *et al.*, 2020). The virus was initially perceived to be only a pulmonary problem, but later found to affect other organs including the kidneys, thereby increasing the workload of the dialysis personnel who provide treatment for kidney failure, and increasing burnout amongst these workers (Sever *et al.*, 2021; Geetha *et al.*, 2022).

A study in a cancer facility, which was in an outpatient facility setting, found that burnout was lower amongst frontline workers than non-frontline workers (Wu, Wang, Luo *et al.*, 2020). Contrary, in the outpatient dialysis facility, dialysis healthcare workers in Korea during the 2015 MERS reported that workers treating patients infected with the virus showed significantly higher levels, even post outbreak (long-term), of psychiatric stress in comparison to healthcare workers treating non-infected patients, suggesting the need for more psychiatric assistance and care amongst the group of healthcare workers treating patients that were infected (Lee *et al.*, 2018).

Many outpatients' treatments were cancelled during the pandemic or changed to telehealth, and for patients on chronic medication, home delivery was the preferred option to reduce face-to-face contact. Haemodialysis, however, remained unchanged, and in-person treatment (face to face contact) was

necessary for this vulnerable group of patients and for the dialysis healthcare workers (Weiner & Watnick, 2020). Dialysis patients have their treatment traditionally thrice weekly, and this repeated unavoidable risk meant exposure during transportation and in the dialysis facility, where a group of patients are dialyzed at the same time in a shared space, thus increasing the risk of infection for both patients and dialysis healthcare workers (Daugidas & Depner, 2015). Additionally, patients that present with COVID-19 are typically asymptomatic, making it a challenge to diagnose (Verma *et al.*, 2020).

2.5.3 Focus on Personal Protective Equipment (PPE) and equipment

There has been much focus on PPE and the short supply of these essential items due to the increased demand. PPE, when inadequate, is identified as a risk factor as opportunists also took advantage of the market shortage, creating a black market (Sorbirova, 2020). The lack of PPE was adversely related to mental wellbeing (O'Brien *et al.*, 2022). The mental wellbeing of healthcare workers was heightened due to the uncertainty on which PPE to use in line with their risk of exposure to COVID-19 patients as new information on the virus came to light (De Kock *et al.*, 2021). Physical health was impacted because of using heavy protective clothing and that impacted on the mental health of healthcare workers (Cao *et al.*, 2020). Fatigue and discomfort were also evident in healthcare workers due to the extra PPE (Sun *et al.*, 2020).

2.5.4 Work overload

Around ninety-three percent of healthcare workers in two Nigeria government hospitals were reported to have suffered with stress due to work overload (Pius *et al.*, 2020). Long working hours and the intensity of the increased number (quantity) of patients that healthcare workers had to care for per hour was considered a risk factor (De Kock *et al.*, 2021; Shaukat *et al.*, 2020; Pius *et al.*, 2020). Worker's shortage and shift work also contributed to work stress (Pius, 2020; Gavin *et al.*, 2020). The continuous long shifts by doctors and nurses reported that their concentration had lowered, and a majority of healthcare workers reported sleep deprivation (Cotrin *et al.*, 2020). The impact of mental wellbeing was due to intensity of focus for such long hours (Cao *et al.*, 2020).

2.5.5 Disruption of usual practice

Healthcare workers had to work outside their usual workplaces and were also placed in higher risk areas. This is in line with a study that reported nurses who wanted more specified tasks as they were put in different roles and tasks (Cao *et al.*, 2020). Interactions with colleagues were also limited due to social distancing, as reported by healthcare workers who previously valued lunch-time interaction with colleagues, which was not possible during COVID-19, and they felt isolated (De Kock *et al.*, 2021).

In the dialysis facility, a group of patients receive repeated treatment at the same time in a common area, increasing the risk of virus infection amongst staff and patients. Patients missing dialysis treatments only worsen their health. This meant that certain precautionary measures in the dialysis facility were necessary to reduce the spread of the virus. This included screening for COVID-19 to

detect suspected COVID-19 cases, having the waiting area less crowded, more disinfecting on frequently touched objects like doorknobs, hand railings, etc. (Weiner & Watnick, 2020). Moreover, a separate area for suspected patients or Persons Under Investigation (PUI) who present with symptoms with more precautionary measures are required by the healthcare workers.

2.5.6 Psychosocial factors /Exposure to the virus

Pathologic Secondary Traumatic Stress (STS), referred to as compassion fatigue, is associated with the stress that healthcare workers have because of helping people that are suffering or traumatized, as seen during COVID-19 (Orrù *et al.*, 2021). Working in close contact with patients that have been infected with the virus increased the risk of them being infected and passing it on to their families, especially during the early stages of the pandemic when there were so many unknowns and treatments (Paiano *et al.*, 2020). Quarantine, isolation from relationships, fear of being infected, uncertainty of the disease, stress of the job, stigma perception, and family wellbeing concerns worsened (Shaukat *et al.*, 2020). In a Brazilian study, ninety percent of healthcare workers (dentists, nurses and physicians) reported being afraid of becoming infected with the virus in the work environment, and more dentists and nurses were reported to have thought about leaving their profession than physicians (Cotrin *et al.*, 2020).

A study amongst Italian healthcare workers found that the emotional reaction due to the COVID-19 pandemic showed the highest level of fear for family members or people that they live with being infected, followed by fear for their patients and then fear for themselves (Marton *et al.*, 2020; Sun *et al.*, 2020; Kumar, 2020). Similar findings amongst healthcare workers in Ireland during the past influenza epidemic and SARS pandemic reported more concern for others than themselves, as well as fear of infecting their loved ones (Billings *et al.*, 2021). Due to the uncertainty surrounding this new COVID-19 virus, fear of being infected and fear of not knowing how to treat a patient if their condition suddenly changed were rife amongst healthcare workers (Sun *et al.*, 2020). The danger of the personal safety of workers included patients giving an incorrect history, patients and relatives not compliant with isolation rules and wearing of masks, and the unavailability of testing for COVID-19 (Kumar, 2020). There were also concerns of support from the hospital management (Gavin *et al.*, 2020).

2.5.7 Perceptions of insufficient training and psychological support

Due to the sudden and rapid outbreak of the virus, healthcare workers did not receive adequate training on the prevention and control of the COVID-19 virus, essential to lessen their panic and insecurities (Paiano *et al.*, 2020; Cotrin *et al.*, 2020). Online and social platforms became the normal means of communication and were used amongst nurses for sharing and disseminating information, to support each other, encourage training on any changes in delivery of care and to educate people (Glasdam, Sandberg, Stjernsward *et al.*, 2022). Anxiety due to the lack of information available was evident amongst healthcare workers (Sun *et al.*, 2020). A study in China where there was a lack of focus on the psychological resources available suggested that if this was available and accessible, fewer healthcare

workers would be negatively impacted on their mental wellbeing (Kang *et al.*, 2020). The first published study at the onset of COVID-19 in China found that there was limited availability and access to mental wellbeing support by psychologists and psychiatrists to support healthcare workers (Kang *et al.*, 2020; Labrague, 2020).

2.5.8 Socio-demographic factors

Healthcare workers showed a higher level of poor sleep quality (De Kock *et al.*, 2021). The younger age group experienced significantly higher depression and anxiety scores but showed no difference in the quality of sleep (De Kock *et al.*, 2021; Stubbs *et al.*, 2021). Females were amongst those with higher levels of poor sleep quality, depression and anxiety (Lai *et al.*, 2020; De Kock *et al.*, 2021; Duarte *et al.*, 2020). Existing chronic illnesses was also both an independent risk factor for heightened anxiety, sleep deprivation and depression (De Kock *et al.*, 2021; Daurte *et al.*, 2020). Studies have shown that healthcare workers with more years of experience were more protected against mental health compared to those with no or little experience (De Kock *et al.*, 2021; Gavin *et al.*, 2020). A study conducted in Toronto also showed an inverse relationship between psychiatric disorders and years of experience and precepted adequate training (Lancee *et al.*, 2008).

Additional personal risk factors identified by Duarte *et al.* (2020) were being the only child, having kids younger than 12 years, being married (or being in a committed relationship), and salary reduction was associated with increase burnout and stress.

2.5.9 Environmental factors

Poverty, inequality, and violence are risk factors to wellbeing problems (WHO, 2022). There was an increased depression and anxiety scores at the peak of the pandemic, but these gradually decreased over time as the pandemic was managed better (De Kock *et al.*, 2021). Stress, chronic disease (heart disease and diabetic) and infectious disease (HIV/Aids) are the top three health risks that drive workers wellbeing in Africa (Global wellness survey, 2010). Not much research exists on healthcare workers from rural areas, but one study found that rural areas were an independent factor for higher insomnia and anxiety (Sebola-Samanyanga, 2021). In South Africa, KwaZulu-Natal, healthcare workers were exposed to limited resources with an increase in work demand; mental wellbeing support was neglected due to local health needs of Human Immuno-Deficiency Virus (HIV) and Tuberculosis (TB) that had to be prioritized (Dawood *et al.*, 2022). Social media reporting also may have contributed to negatively impacting mental health by highlighting the number of deaths of healthcare workers and the rapid spread of the virus within the healthcare system and the use of unreliable information platforms (De Kock *et al.*, 2021). Healthcare workers have also expressed anxiety due to inaccurate information from social media causing panic and fear (Siddiqui *et al.*, 2021).

Prior to COVID-19, burnout, anxiety, and depression were already dominant amongst healthcare workers in South Africa, making the impact of pandemic a significant strain on an already constrained healthcare system. A study amongst KwaZulu-Natal public healthcare workers revealed the poor rated perceived support received in the workplace by two thirds to three quarters of participants (Dawood *et al.*, 2022). In South Africa, the only mental health policy framework and strategic plan 2013-2020 expired in 2020. This mental health policy set out timelines, amongst others, that by 2015 all healthcare workers in a general ward setting would have received basic mental health training and also in the framework that mental health be financed in accordance with the same principles as all other health financing (example TB and HIV) in South Africa (Department of Health Republic of South Africa, 2012).

2.5.10 Logistics and operational issues in the dialysis facility

Logistics and operational issues included public transport limitations for patients to get to treatment, problems scheduling patients, as well as financial problems (Kumar, 2020). The poor supply chain at the onset of the pandemic meant that the shortage of emergency equipment/PPE and dialysate was a huge concern (Geetha *et al.*, 2022). The added burden to the supply chain for PPE and dialysis consumables was the unrest and the floods where delivery into KwaZulu-Natal was stopped or limited (Harding, 2021).

2.5.11 Risk factors of wellbeing using Alderfer's Existence, Relatedness and Growth Theory (ERG)

The ERG theory is an alternate to Maslow's theory of human needs (discussed in the next section), but different, as it does not consider lower levels of needs as a requirement before higher level needs are met. The three-fold theory is based on that there are three needs that human require, existence, relatedness, and growth (Yin & Zeng, 2020). Job satisfaction can influence the workers behaviour which can then impact on the functioning of organization. If needs with higher priority are not met, an individual's focus will shift to lower priority needs but this may lead to frustration and dissatisfaction termed frustration-regression. Job satisfaction is considered as a proxy indicator to physiological health and psychological wellbeing (Singh *et al.*, 2019).

Existence, Relatedness, and Growth are all interlinked and affect each other. The existence needs are mainly focused on health and safety, where health is the healthcare workers physical and mental health and, safety is both, the hope to have access to personal protective equipment (PPE) and the emotional stability of patients' families. Physical and mental health due to COVID-19 were prevented by fear, worry of being infected by the virus, lack of /inadequate sleep, and the need for psychological support (Zhang *et al.*, 2020). Relatedness is the need to have interpersonal relationships, need for concerns of the community, and the need for affection.

During COVID-19, interrelationships focused on healthcare workers wanting to have face to face communication with colleagues, friends, and patients' families. The need of community concern was the need for help, care and support from hospital managers, department managers and the external world, while the need for affection is the need for family affection was stronger during these times (Yin & Zeng, 2020). Growth is the need for knowledge about the virus, and the preventative and control measures by authoritative reports. In the analysis by Yin and Zeng (2020) that was conducted on nurses, 80% of participants showed signs of ERG needs which had an impact on each other. From past pandemics lessons are learnt and improvements made accordingly to better prepare the country and its people for future such crisis. The protective factors on healthcare workers' wellbeing are discussed in the following section.

2.6 Protective factors on wellbeing of healthcare workers

Organizations can influence motivation but are unable to control it since motivation can also be unconscious like hidden memories and impulses that drive the behaviors of human. The two types of wellbeing that are researched and considered as explanations to wellbeing are hedonic wellbeing (also referred to as emotional wellbeing) that involves positive feelings of happiness (absence of negative affects) and includes satisfaction in life, and eudemonic wellbeing which is about discovering one's potential; these are all important to living a good life (Westerhof & Keyes, 2010). The challenge in the workplace by policy makers is to motivate workers to join, to retain them and to have them perform at optimum level (Dolea and Adams, 2005).

Motivation can be defined as being initiated due to a deficiency of physiological need or psychological need which in turn triggers the individual behaviour to achieve a specific goal (Osemeke & Adegboyega, 2017). In Folkman's Transactional Model to Stress and Coping, coping is the behavioural and cognitive effort by individuals to reduce or endure a specific stressor that is beyond available resources and one's abilities (Sehularo *et al.*, 2021). Coping mechanisms by individuals are also considered as a protective measure and influenced by individuals' experiences, education levels and available resources. Motivational theories (Maslow's hierarchy of needs model, Herzberg's two-factor theory) are used to explain the protective/ supportive factors needed for healthcare workers during crisis like as COVID-19.

2.6.1 Maslow's hierarchy of human needs model

The Maslow's hierarchy needs model was formulated by Abraham Maslow in 1943 and the original five model hierarchy of needs suggested that only once the lower-level deficiency needs are accomplished hundred percent, can one move to the next level (McLeod, 2020). It has been suggested that if a person is unable to meet certain needs through the stages on the model it could result in physical and psychological illness (Shoib *et al.*, 2022). Maslow's five model hierarchy of human needs model is reflected in Figure 2.4.

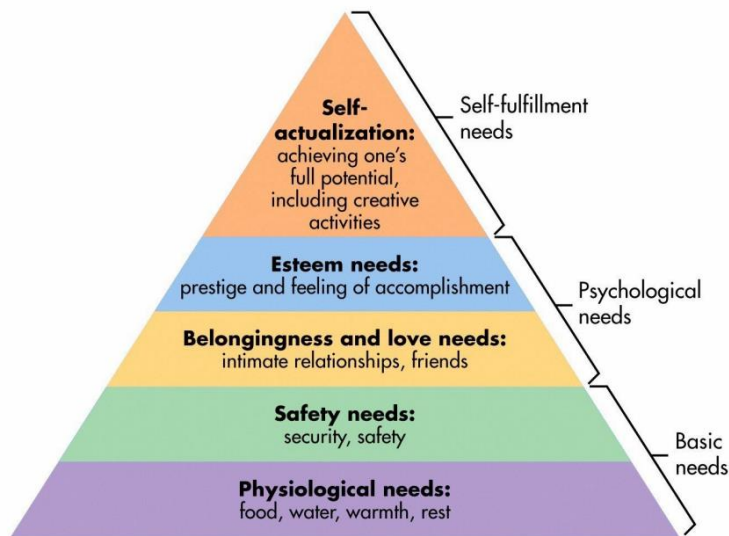


Figure 2.4 Maslow's motivational Model (McLeod, 2020, pg. 1)

Maslow's model can be divided into deficiency needs and growth needs. Deficiency needs are the first four stages (physiological, safety, belonging and love, and esteem) of Maslow's model which are based on the fact that a person that is deprived when their needs in these stages are not met but there is no impact on motivation if these needs are met (Osemeke & Adegboyega, 2017). Growth needs refer to a person's desire to grow individually and are not due to being deprived of anything but to reach one's full potential and includes self-actualization (McLeod, 2020).

Physiological and biological needs, the first level of Maslow's theory, are needs that are required by the human body for it to be alive and these include air, water, clothing, sleep, food, and sex. This is a crucial need stage as these deals with the biology of the human and ability to function and if not satisfied, a person would not be able to move to the next stage of the needs model, safety needs (McLeod, 2020). Poverty and unemployment are high in South Africa. According to the Global Competitiveness Index (GCI) (2019), South Africa, health was the worst rated pillar ranking 118th amongst the 141 economies and scoring of 53.3 of 100 (Schwab, 2019). Access to private healthcare is a luxury as not all people have access to healthcare. Other challenges that South Africans face are the ongoing load shedding, and water interruptions. COVID-19 highlighted the inequity to healthcare that the country still faces.

During COVID-19 many people lost their jobs or experienced a decrease in working hours (Shoib *et al.*, 2022). Normal coping mechanisms like leisure time and physical exercising were severely restricted making normal coping mechanism a challenge (Gavin *et al.*, 2020). Healthcare workers revealed that due to work overload and shortage of staff, physiological needs that required intervention were: to provide food and beverages (due to not being able to take breaks to get something substantial

to eat and drink and many food outlets were closed); breaks and a proper place to sleep and rest (due to the long hours and annual leave being cancelled); increase in salary (healthcare workers felt they were not adequately compensated for the long hours); and fair work distribution and working arrangements (workers wanted more flexibility in working hours due to family commitments especially those who had children)(Pou *et al.*, 2022).

A healthy diet by eating nutritious meals and staying hydrated can assist with mental health wellbeing (Tomo & De Simone, 2017). Good health and wellbeing can be assisted by adequate sleep. According to the National Sleep Foundation, good quality sleep for adults' means being asleep for more than 85% of the duration you are in bed (Department of Health Republic of South Africa, 2020). Lack of sleep has been linked with a decline in emotional resilience, higher levels of irritability, greater risk of obesity and cardiovascular disease (International Labour Organization, 2022). In the workplace support for workers can be in the form of providing transport such as for work activities (Burton, 2010).

The second level of Maslow's hierarchy of needs is safety needs; these are established when a person has security and feels safe and include financial security like employment, health and wellbeing, personal security, social stability, and freedom from fear. In the absence of physical safety as seen during wars and natural disasters, workers may re-experience post-traumatic stress disorders (Osemeke *et al.*, 2017). Healthcare workers reported that maintaining good physical health and safety at the workplace had a positive impact to their psychological and emotional wellbeing (Pou *et al.*, 2022). Consideration of special leave to those that were pregnant, the elderly and those with pre-existing health conditions was needed (Pou *et al.*, 2022; Shoib *et al.*, 2021).

Having safety and infection control processes in place is important in protecting the workers. More stringent infection control protocol to prevent cross infection impacted on the basic needs of safety (Siddiqui *et al.*, 2021). PPE, when adequate supply was available, was considered a protective factor and recognition by authorities to ensure adequate supply of PPE was needed (Cao *et al.*, 2020; Yin and Zeng, 2020). Social support was indirectly linked to better sleep by reducing anxiety and stress and promoting self-efficiency (Orrù *et al.*, 2021).

The quality of clinical, managerial and government leadership is crucial (Gavin *et al.*, 2020). Government, the healthcare team and community support and recognition were also considered a protective measure. Having confidence in the government's ability to implement strong preventative and control measures were linked to positive emotions by healthcare workers (Sun *et al.*, 2020). Creating a healthy workplace also requires the implementation of a successful process by the leaders of the organization which must be updated on an ongoing basis (Burton, 2010).

A study in a hospital that treated COVID-19 patients had the healthcare workers go through three stages of training (pre-work training, training in general and training in the negative pressure rooms) before

treating COVID-19 patients and found that there were increases in confidence and self-prevention and control by the healthcare workers (Sun *et al.*, 2020). A similar study that included twenty-seven surgeons assessed psychological stress pre-training and post-training and found that training helped to reduce stress levels (De Kock *et al.*, 2021). Pre-pandemic computer training was associated with healthcare workers' increase in confidence and pandemic self-efficiency (Gavin *et al.*, 2020).

Emotional security from management included emotional support, motivation, and accurate updates on COVID-19 in a positive manner; this was found to be helpful with reducing stress (Yin & Zeng, 2020). There was also a need for confidence in their leaders by being more "hands on" and engaging workers at the ground level to have insight in their psychological wellbeing and coping mechanism so that seniors can guide them and display more empathy towards them (Pou *et al.*, 2022). To reduce the burden on healthcare workers and protect mental health, the Chinese government employed more medical and nursing staff, implemented strict infection protocols, offered practical guidance, and provided personal protective equipment (Kang *et al.*, 2020). Leaders can promote the growth of workers by making resources for learning and training materials available and accessible for workers to improve competence and this should not be the first to be cut off in the budget cutting during economic cutbacks (Gavin *et al.*, 2020; Osemeke *et al.*, 2017).

Psychological wellbeing was the need for more resources and counselling to assist the healthcare workers' psychological health; even in instances where resources were available, it was not known to the healthcare workers. Research done post pandemics suggests that any psychological support should be on models of adaptation and resilience (Gavin *et al.* 2020).

The highest impact on reducing stress was the safety of family (Cao *et al.*, 2020). Organizations /enterprises can assist by providing free healthcare to workers and their families in communities that lack expertise and resources in health and safety. Organizations can provide this expertise and provide financial support to meaningful community charity initiatives. In a study in China at the initial stages of the pandemic, a hotline service was set up by the psychological department daily between 9am till 9pm to talk to healthcare workers about their feelings, provide support and psychological resources (Cao *et al.*, 2020). This together with ongoing monitoring and early interventions made to ease the stress of healthcare workers were suggested as reasons that there were no highly elevated levels of emotional distress and burnout. Even if these support resources were available, the likelihood of workers wanting to utilize this is not unknown as was evident in a study where doctors were not willing to consult with a psychologist to reduce stress due to the stigma associated with that and some preferred to deal with the stress themselves but were not opposed to speaking to a psychologist via hotlines (Cao *et al.*, 2020).

Healthcare workers benefit where explicit support initiatives are specifically created to assist staff with mental wellbeing like setting up a support call hotline or providing resources like mindfulness videos (O'Brien *et al.*, 2022). The mental healthcare workers also established psychological invention teams,

providing counselling, individual and group psychotherapy, and brochures to support healthcare workers. It is important to make available a variety of psychological support to allow individuals to choose the most suitable option for themselves (Santarone *et al.*, 2020).

The third level of Maslow's hierarchy is belonging and love/social need which is the desire to belong. It is a feeling and emotion of interacting with people, feeling a sense of connection and includes family, receiving and showing affection, friendship, and intimacy. During COVID-19, physical contact amongst people was restricted so other creative means like online communication (video chats, group chats), journaling and keeping a gratitude journal were used to keep connected (Shoib *et al.*, 2021; Pou *et al.*, 2022; Prazeres *et al.*, 2021). Support from friends, colleagues, peers, and family assists individuals in sustaining emotional balance during these times (Labrague, 2020). Avoidance strategy refers to avoiding something unpleasant, where a majority of healthcare workers avoided media news that provided updates on the pandemic, death rate stats and fake news (Sehularo *et al.*, 2021). However, the downfall that was suggested in making use of avoidance strategy is that healthcare workers may miss important updated information regarding the risks and preventative measures of COVID-19. Credible and trustworthy social media however has been regarded as possible mitigation factor to assist in the wellbeing healthcare workers (Gavin *et al.*, 2020; Siddiqui *et al.*, 2021). Some of the challenges faced amongst South Africans regarding access to social media platforms are the cost of data and unequal network coverage, which is lacking in rural areas, highlighting the inequality that exists (Kubheka *et al.*, 2020). There was also a need for more teamwork between colleagues working in the COVID-19 wards and those that were in non-COVID-19 wards which was lacking and created a non-supportive work environment (Pou *et al.*, 2022).

The fourth level in Maslow's hierarchy is esteem; this is classified into esteem for oneself (including independence, dignity, and achievement) and the need of reputation or respect from others (include status and prestige) (Shoib *et al.*, 2021). Healthcare workers wanted recognition in the form of rewards or incentives for the sacrifices that they were making as frontline workers as a sign of respect and that they are valued (Pou *et al.*, 2022). The deficiency needs were not met and proved a challenge impacting negatively on healthcare workers' wellbeing. Physicians in Germany demonstrated higher satisfaction with protective factors like incentive payments known as "corono funding" which were found to be of statistically significant in reducing stress (Herraiz-Recuenco *et al.*, 2022). Short term acts of mood boosters were free meals, applause, posters, and recognition of their contribution to the fight against COVID-19 (Sovold *et al.*, 2021).

Self-actualization, the fifth level, is the peak of personal growth and personal fulfilment, it includes acknowledgement of personal fulfilment and becoming the best that one can be. People are different hence self-actualization varies amongst people. Some may want to become the perfect mother, others the best athlete or painter. Self-actualization was demonstrated during COVID-19 by healthcare

workers having a positive mindset and demonstrating resilience (Pou *et al.*, 2022). Evidence prior to COVID has suggested that even when basic (deficiency) needs are not met, healthcare workers continued to go to work and provide services (Dolea & Adams, 2005). Self-care is critical during uncertain times like the pandemic by self-reflecting on one's emotions and stress levels and mitigating the negative impacts (Sovold *et al.*, 2021). Increase in stress at the height of the pandemic was likely to be seen in workers that were less physically active suggesting that exercise helped ease stress (Stubbs, 2021).

Self-efficacy was found to be a protective factor and was also associated with better sleep and therefore better mental health (Cao *et al.*, 2020; Orrù, 2021). Most healthcare workers relied on being self-reliant and did not seek external health support even when presented with increased workload, working away from their normal work environment, and the nature of COVID-19 pandemic (Dawood *et al.*, 2022). Workers that presented with subthreshold and mild mental problems were more willing to develop new skills to cope and willing to find better ways to help others than those with severe health problems (Kang *et al.*, 2021).

Abraham Maslow later clarified this “misperception” in Maslow's eight model hierarchy of needs, by stating that one does need to accomplish in full all the lower-level needs before going up the higher level since the order of levels varies amongst people due to their individualized goals (McLeod, 2020). An additional three levels (cognitive need, aesthetic need, and transcendence need) were included under the growth needs. Cognitive need (above esteem need) is about curiosity, understanding and knowledge, exploration, meaning, and predictability needs. Aesthetic needs (below self-actualization) are the appreciation and the search for beauty, balance, and form. The highest level was now transcendence needs (after self-actualisation need) and includes values that are from the outside of oneself and includes things like mystic experiences, service to others, nature experiences, religion, and faith. Religion is a person's belief towards a specific religion and is measured by going to churches, temples, praying and reading scriptures (Prazeres *et al.*, 2021). Spiritual support includes meditation, being with nature, listening to music, and relaxation; this has been associated with a decrease in depression, anxiety, and improvement in psychological wellbeing (Prazeres *et al.*, 2021).

Maslows model suggests that once a certain need was satisfied, that need is no more important but fails to consider aspects like tolerating a low pay for the promise of better benefits in the future (Doleo & Adams, 2005). Healthcare workers are part of a profession that is driven by care and compassion for others and even if their deficiency needs are not met, they still offer a service to their patients.

2.6.2 Herzberg's Two-Factor Theory

Researchers have suggested that job satisfaction is important to keep employees (Alrawahia, Sellgren, Altouby *et al.*, 2020; Al-Awar, Al-Habeet, Gafer *et al.*, 2022). Job satisfaction to the healthcare workers is a gathering of feelings that one has towards their job that impacts motivation, performance of staff,

and retention of workers (Al-Awar *et al.*, 2022). Similarly, it is also defined as the extent that an employee feels positive or negative towards their work (Singh *et al.*, 2019). Job satisfaction depends on various factors that affect employees' behaviors which then impact on the organization (Singh, *et al.* 2019). These factors of being satisfied and unsatisfied can be explained by the motivation-hygiene Herzberg model/Frederick Herzberg two-factor theory. There is a lack of studies done on healthcare industry using the Herzeberg two-factor theory (Al Awar *et al.*, 2022).

The concept is based on that some factors on wellbeing operate independently to job satisfaction, known as motivators, and other factors work on job dissatisfaction known, as hygiene factors (Osemeke, 2017). Motivating factors (satisfiers) include achievement, the work itself, responsibilities, career advancement, potential for individual growth, recognition and organizational culture; these are regarded as the main factors for job satisfaction or motivators for higher performance (Rai *et al.*, 2021; Doleo, 2005). Hygiene factors (dissatisfiers) include the condition of work, nature of work, salary and benefits, relationships with coworkers, supervision and administrative policies, and are regarded as the main factors for job dissatisfaction (Singh, 2020; Al Awar *et al.*, 2022).

Motivational factors and hygiene factors are independent of each other so there is a possibility that workers can be neither satisfied nor dissatisfied. The absence of hygiene factors creates dissatisfaction, and the presence of it creates lower job dissatisfaction but will have no impact on job satisfaction (Tom & De Simone, 2017). The presence of motivating factors creates job satisfaction and an absence of them will have no effect on job dissatisfaction (people will continue to do their job) (Tom & De Simone, 2017). Hygiene factors or dissatisfiers relate more to the job contents while motivators are related to one's willingness to work hard. An employee with the hygiene factors present does not mean that they are satisfied employees, it just means that they are not dissatisfied. Only when staff motivational factors are present are they considered satisfied (Al Awar *et al.*, 2022).

Dissatisfaction factors identified in a study with medical laboratory healthcare workers were the absence of health and safety (the main dissatisfier due to the exposure to infectious disease, and poor ventilation); work overload and the promotion system which they felt was unworkable and unfair, poor bonus; no transparent appraisal system and inadequate job descriptions of the organizational policies; and lack of recognition for their professional status (Al Awar *et al.*, 2022). Similar dissatisfier factors; working conditions reported as high as 75.3%, fringe benefits, promotion aspect, and contingent rewards were identified amongst healthcare professionals of doctors, nurses, pharmacist, and lab technicians, were the most satisfied with their job were lab technicians and nurses the most dissatisfied (Singh *et al.*, 2019). Professional development and training, relationship with supervisors and coworkers were identified as satisfaction factors (Al Awar *et al.*, 2022; Singh *et al.*, 2019). A study amongst Saudi nurses found that demographic factors influenced hygiene and motivators factors. Nurses with less years of experience were less satisfied compared to those with more years of

experience. Recognition, sufficient leave and reasonable work hours were linked to healthcare workers retention and a higher sense of control (Rai, Thekkekara & Kanhare, 2021; Marton *et al.*, 2020).

Researchers argue that the model focuses more on job satisfaction and dissatisfaction rather than job performance. The theory is criticized for not considering individual differences and failed in defining the constructs, or thought units were lacking in reliability and accuracy (Doleo, 2005; Nene, 2020). Motivation is what occurs within an individual's mind and heart, so while managers can have an influence over motivational processes, they cannot control it (Osemeke & Adegboyega., 2017).

2.6.3 Relationship between Maslow's hierarchy needs model and Herzberg's Two-Factor Theory

In Maslow's hierarchy model it suggests that only once the lower level (extrinsic levels) of the pyramid of needs is accomplished, can a person move up to higher levels (intrinsic levels). The same with Herzberg's motivational model of motivational and hygiene factors where hygiene factors must be present for motivational factors to be accomplished (Al Awar *et al.*, 2022). Both theories are motivationally driven and require certain needs of the individuals to be fulfilled to achieve the desired behavior, and if not, can lead to demotivation (Osemeke & Adegboyega., 2017).

2.7 South Africa's preparedness during COVID-19

A study amongst South African healthcare workers in the public sector KwaZulu-Natal found that the perception of preparedness was linked to less stress (Dawood *et al.*, 2022). The wellbeing in the workplace is a challenge in organisations especially during Volatile, Uncertain, Complex and Ambiguous (VUCA) times (Ochoa *et al.*, 2019). Although the COVID-19 pandemic has affected all regions of the world, the impact of it varies across countries in terms of demographic, healthcare system, rates of infection, death rates, history of health, and national responses (Bulled and Singer, 2020). Healthcare professionals have been at the centre of the COVID-19 pandemic and directly responsible for caring and managing those infected by the virus and most likely would have experienced stress when caring for these patients (Paiano *et al.*, 2020).

The pandemic has exposed South Africa's lack of preparedness and the socio-economic inequality that still exists, poor leadership, weak socio-economic supporting structures, and inadequate healthcare infrastructure (Sebola-Samanyanga, 2021). In a study amongst healthcare workers in the public sector of KwaZulu-Natal, South Africa, during COVID-19, the prevalence of mild to severe symptoms of depression, anxiety and stress and traumatic stress were reported by 44.3% to 86.2% of healthcare workers, significantly higher than other country studies (Dawood *et al.*, 2022). It has been implied that this increase is due to the pre-existing mental health challenges that already existed prior to COVID-19.

The COVID-19 pandemic as mentioned had a huge impact on the wellbeing of healthcare workers. Experts and regulatory bodies implemented preventative methods to try and lessen the spread of the virus. Many of these initial preventatives and managing methods were based on lessons learnt from previous pandemics and crises. South African leadership was questioned for having one of the most stringent lockdowns and, ironically, regulations like social distancing, curfews, and travel restrictions that were intended to manage social interaction to reduce the spread of infection, harmed the vulnerable and informal sector who depended on daily wages (Sebola-Samanyanga, 2021). Better preparedness of healthcare workers and better ways in managing the pandemic will help in their physical and mental health. This was supported by a study where nurses felt that the pandemic would have a positive impact due to them gaining more experience which will serve them well in their profession and be better prepared for the next one (Cotrin *et al.*, 2020).

2.8 Summary

It is well documented that healthcare workers are amongst the most vulnerable professions in developing mental health issues. COVID-19 has tested the resilience of healthcare workers with all the uncertainties, lack of protection and support, and highlighted the need for more wellbeing focused initiatives. Not much research exists with outpatient facility healthcare workers, like dialysis workers, and amongst the South African environment. Businesses have a moral and ethical obligation to provide a safe and healthy work environment (Burton, 2010). The ethical responsibility focuses more on the physical safety aspect of not exposing staff to harmful chemicals or hazards that can cause harm. The wellbeing of workers which encompasses a healthy workplace to the workers mental and psychological wellbeing is a moral responsibility (Burton, 2010). More attention is needed to the psychological wellbeing of healthcare workers. The next chapter will discuss research methodology.

CHAPTER 3: RESEARCH METHODOLOGY

3.1 Introduction

Chapter Two presented a review of literature from past studies relating to the current topic. The research methodology is discussed in this chapter. Different methodological approaches have been researched to investigate the impact of the Coronavirus pandemic on healthcare workers' wellbeing, as evident in Chapter Two, with the intention of assisting healthcare workers to better manage their wellbeing, mitigate any long-term impact, and develop recommendations for policymakers to better prepare them for future crisis situations. Research is a systematic approach towards finding solutions to a problem (Creswell, 2014). Mishra & Alok (2017) describe research as defining and re-defining problems, data collecting and analyzing, and finally obtaining a conclusion.

This chapter presents the research approach, research design, methods used to collect data and methods used to analyze the data. As with everyday life decisions, the choice of the research methods and techniques used are affected by the individual's beliefs and assumptions when developing knowledge, known as the research philosophy, according to Saunders *et al* (2019), or as the paradigm (Nene, 2020). The overall stance is that in order to develop this study to produce results, the most suitable approach was an in-depth look on the impact of COVID-19 on the clinical dialysis healthcare worker by making use of a qualitative analysis to gain an in-depth understanding. The aim of the study was expressed as the overall intention and presented in the wider part of the purpose (Blanche *et al.*, 2006). Research is planned in accordance with a question that needs to be answered, or a problem needing to be solved (Saunders *et al.*, 2019). The research philosophy and approach impact the way in which the research question is answered and in turn, the research question will apprise the data collection and the data analysis choice used, which are included in the next sections (Saunders *et al.*, 2019).

3.2 Aim and research questions

As discussed in Chapter One, the aim of the study was to explore the impact of the Coronavirus pandemic on clinical healthcare workers' wellbeing in a haemodialysis facility in KwaZulu-Natal. The study aims to answer the following questions:

- What challenges did clinical healthcare workers in a haemodialysis facility experience with respect to their wellbeing during the Coronavirus pandemic?
- What coping mechanisms were used by clinical healthcare workers in a haemodialysis facility to assist them with their wellbeing during the Coronavirus pandemic?
- What additional support mechanisms are required by clinical healthcare workers to facilitate their wellbeing during crises such as the Coronavirus pandemic?

3.3 Types of Paradigms in the research field

People view the world differently, and this forms the basis for how the research will be conducted. The assumptions and beliefs that one has about life are influenced by what is known, how knowledge is formed and what knowledge is of value, which is known as paradigms in the research context (Davies and Fisher, 2018). The importance of determining what paradigm to use at the preliminary stage of the research allows for the study to follow a set method and technique to eliminate the researcher's own beliefs and assumption, and hence does not compromise the validity of the study. The four paradigms commonly used are positivism, interpretive, advocacy and pragmatism. Each differentiates from the other as reflected in Table 3.1.

Positivism is also referred to as the scientific method, empirical science, whilst post-positivism is believed to be based on real knowledge being obtained from experiments and observations (Creswell, 2018; Rahi, 2017). Positivism is more quantitative in nature, based on a stable environment and observations are made through objectives (Rahi, 2017). The constructivism paradigm, also referred to as the interpretive paradigm, social paradigm or naturalistic, is a subjective understanding of the world that one lives or works in and is more about developing a deeper understanding of experiences (Creswell, 2014). The constructivism paradigm is more qualitative in nature and seeks to gather as much information as possible from the participants, thus more open-ended questions are used. Information was formed through interaction. This is also referred to as the social paradigm. Furthermore, the Transformative paradigm is also known as the advocacy, critical, participatory paradigm which interlinks political and social issues that supporters found the positivism paradigm does not adequately consider (Rahi, 2017). This deals with issues like inequity, oppression, etc. and becomes the voice of the participants. The pragmatism paradigm is based on the problem that is considered important and not the method and should not be limited to a single approach. Therefore, a mixed method approach (qualitative and quantitative) can be used in addressing and solving the problems of studies using the most appropriate techniques (Creswell, 2014; Rahi, 2017).

Table 3.1: The four paradigms (Creswell, 2014, pg. 36)

Postpositivism	Constructivism
<ul style="list-style-type: none"> • Determination • Reductionism • Empirical observation and measurement • Theory verification 	<ul style="list-style-type: none"> • Understanding • Multiple participant meanings • Social and historical construction • Theory generation
Transformative	Pragmatism
<ul style="list-style-type: none"> • Political • Power and justice oriented • Collaborative • Change-oriented 	<ul style="list-style-type: none"> • Consequences of actions • Problem-centered • Pluralistic • Real-world practice oriented

Research plans will involve the use of theories which may or may not be used in the design. A set principle by which researchers explain relationships between concepts or components is known as theory and includes two levels of theory, namely the abstract level (that uses the inductive theory) and empirical level (that uses the deduction theory) (Rahi, 2017). Inductive theory is a process of observations during the study, where data is collected and from this data, theories are then developed and linked more towards interpretivism (Saunders *et al.*, 2019). Deductive theory is based on existing theory/hypotheses that have already been proven, but here the researcher designs a research strategy with a new fresh set of data to test that theory/hypothesis and is linked more to positivism (Rahi, 2017; Saunders *et al.*, 2019).

The study made use of a constructivism approach. It aims to obtain in-depth insight into the experiences affecting wellbeing during COVID-19 from the perception or view of clinical dialysis participants, directly making use of interactive open-ended interviews and then developing a conclusion. This paradigm is important in the study as it intended to provide insight into the impact of COVID-19 through the eyes of a specific group of healthcare workers that work in a dialysis facility since healthcare professionals are so diverse and the impact of the pandemic on their wellbeing may vary. The research design and methods are presented in the following section.

3.4 Research Design and Methods

A good research design is dependent on quality research questions being formulated (Mishra and Alok, 2017). A research design is the formulation of a consistent and logical process of combining all the various components. It is important to note that qualitative research is emergent, which means that it cannot be fully prescriptive initially, and the process may change as the researcher enters the study site (Creswell, 2014). In this study, face-to-face interviews on site were not possible due to COVID-19, hence the researcher had to opt for online interviews.

There are three types of research designs, namely exploratory, descriptive and explanatory. Exploratory studies are based on finding new insights by asking questions and seeing things in a new light in order to basically get clarity on a problem where a lot of uncertainty exists (Saunders *et al.*, 2019). This type of research is used when there is no/few previous research to which reference can be made. Hence this type of research allows for high levels of flexibility and do not have a formal structure (Akthar, 2016). This can be done via literature searches, having expert interviews, or interviews with focus group (Saunders *et al.*, 2019). Descriptive studies aim to reveal a full profile of situations or events accurately as the phenomena occur (Saunders *et al.*, 2019; Akthar, 2016). It is used to study an existing situation and tends to answer the questions of when, how, what, who and where, and is more structured (Akthar, 2016). Explanatory studies, also referred to as analytical studies, are used to find any casual

relationships/links between different variables, which means that one is required to study a situation or event to then find this relationship (Saunders *et al.*, 2019). Exploratory research was the best approach for the current study as COVID-19 is new and studies are limited. Furthermore, no known studies, to the researcher's knowledge, have been documented amongst South African dialysis clinical healthcare workers and the impact of this pandemic on the wellbeing of the clinical dialysis workers. This study will provide new insight into this field amongst this group of healthcare workers.

The most suitable research method that a researcher decides on for their study must take into consideration the components mentioned above, such as the paradigm/philosophy, approaches and design. The two main research methods are qualitative and quantitative, while the third is a mixed methods study. Mixed methods represent components of both qualitative and quantitative approaches and allow the researcher to use quantitative measures and experiences through qualitative methods (Creswell, 2014). It is important to note that qualitative and quantitative are not complete opposites, but rather a study may appear to merely be more qualitative or more quantitative in nature (Creswell, 2014). Quantitative research generally uses systematic analysis that involves quantity, generally using numbers (Mishra and Alok, 2019; Creswell, 2014). It involves closed-ended questions using quantitative hypotheses.

Qualitative research relates to quality or variety and involves closed-ended questions by means of interviews (Creswell, 2014). Generally, it involves the use of words. It is a descriptive study about participants' opinions, experiences and feelings to describe a set of circumstances in its current state (Mishra, 2019). A qualitative approach was best suited for the current study as it allowed the researcher more freedom to gain in-depth knowledge (feelings and experiences) on the impact of the pandemic on the participants' wellbeing, both in the work and personal environments. The current study makes use of open-ended interviews, and a case study (interviews from clinical dialysis healthcare workers) strategy allowed for an inclusive understanding of the participants around the research topic from their perception. The study setting is discussed in the next section.

3.5 Study setting

Researchers that choose qualitative research generally collect data in the natural setting, where the participants' problems under study are experienced (Creswell, 2014). In-depth interviews with participants were conducted online with Microsoft Teams as per the company policy of limiting face-to-face contact. Participants were enrolled from all four locations (three in Durban and one in Ladysmith) of a private practice haemodialysis facility in KwaZulu-Natal, South Africa. This is an outpatient facility (patients attend treatment at scheduled appointments) that has been in existence for eight years. Both medical aid and non-medical aid (cash-paying) patients that have been diagnosed with end-stage kidney failure are accepted for treatment. These patients receive life sustaining dialysis

treatment typically thrice weekly, with each treatment being four hours long. The four dialysis locations have between a five to eight station unit, which means that each facility can accommodate up to a maximum of five or eight patients at the same time depending on the number of stations, suggesting that a shared space is used for multiple patients at any given time.

In qualitative research, gatekeepers are a means to gain access to participants and are individuals who can assist the researcher to identify the most suitable participants for the study (Given, 2008). The practice (often referred to as such in the medical setting) is registered under Clinical Technologists specializing in the category of nephrology, which is regulated by the Health Professions Council of South Africa (HPCSA). There are two owners (the gatekeepers) who are also Clinical Technologists with more than 16 years' experience in the field and the business is hundred percent Black Economic Empowerment (BEE) owned. The employee complement of the business includes clinical staff (clinical technologist and registered nurses) who are responsible for overall patient care; general assistants who are responsible for the cleaning; and administration staff responsible for the general secretarial and billing of medical aid duties. The target participants in the study were the clinical workers who were skilled in this very specialized field. The target study population is discussed in the next section.

3.6 Population and Sample of the study

A research population includes all people or items that one wants to understand, while a sample is the process of selecting a portion of the population that will be best suited in providing evidence towards the study topic (Rahi, 2017; Mishra, 2017). A Census inquiry/study is one in which all the objects are used and not even one is excluded, allowing for the highest level of accuracy. However, it is not always practical due to it being time-consuming, costly and having the presence of bias, resulting in the contamination of results (Mishra & Alok, 2017). A smaller group of sampling is intended to represent a larger target population group and the benefit of sampling is faster data collection, accuracy of results and cost saving (Rahi, 2019). Considering that when researchers use a qualitative approach, it is generally based on a small population size, hence the researcher's chosen sampling must allow for good analysis (Flick, 2014). The researcher is required to select a sample for the research by deciding between two sampling techniques, probability (random) and non-probability (non-randomized) sampling (Mishra & Alok, 2017).

Probability sampling includes simple random, systematic, stratified and clustered sampling. This type of sampling allows an equal chance for all objects in the population to be chosen for the study (Creswell, 2014). Since probability sampling is recommended when conducting quantitative research, this method was not suited for the current study. Non-probability sampling makes use of the subjective method of choosing the correct people or items for the study, which is easy, fast and inexpensive (Flick, 2014). The current study made use of the non-probability type of sampling and considered it appropriate as it

is a qualitative study with a small sample size of nine participants. The types of non-probability sampling (also referred to as deliberate sampling) are the convenience sampling method, which is based on the availability of the participants; quota sampling method; snowball sampling method and purposive sampling (Creswell, 2014). Convenience sampling and quota sampling methods were not appropriate to this study as they do not allow the researcher to choose the most appropriate participants for the study. Quota sampling was also not appropriate as it makes use of the vulnerable population and participants are enrolled on a referral basis (Flick, 2014).

Purposive sampling was the most appropriate method for this study. The participants were deliberately selected by the researcher and limited to qualified clinical dialysis healthcare workers (clinical technologists and registered nurses), suggesting a purposive sampling technique to keep the research project within the required time-frame, and indicating a non-randomized sample. In a purposive sampling method, the researcher selects participants who are considered as the most appropriate participants for the topic and who represent the entire population group (Nene, 2020). The inclusion criteria in the current study were only qualified clinical staff (Clinical Technologists and nurses), all age groups, all races, any gender, only clinical healthcare workers working in the outpatient hemodialysis facility in KwaZulu-Natal, and permanent employees of the study organization.

The reason for the selection of this group of workers is that they had direct contact with patients and therefore were at the highest risk of either contracting the virus or infecting others. The recruitment strategy included sending email requests to potential participants. All nine requested participants agreed to participate and their biographical profiles are reflected in Table 3.2. All participants were African and represented mainly females (seven of the nine), indicating employment equity and female empowerment. The majority (seven of the nine) were above the age of thirty years old, thereby indicating maturity in the professional setting. Eight of the nine were single. All participants were highly educated with degrees, with five being Clinical Technologist and four Nurses, indicating equal representative of both professions. Most participants had over 5 years of experience (seven of the nine), thereby indicating high levels of experience. There was an even number of 'one breadwinner' and 'multiple breadwinners. Most participants had more than one dependent. All participants (7 participants) that had children had a last-born child dependent below 9 years old. The target group were not at risk of severe illness from COVID- 19 as only one had a pre-existing condition.

Table 3.2: Biographical data of participants

#	Age	Gender	Marital status	Experience (years)	Km from home to work	Risk of severe illness	Nr of Bread winners	Nr of household People	Nr of Children Dependants+ age	Nr of Adult dependants (care/financial)
P1	30-34	F	Single	10 -15	20-30	No	1	2	2 X1 (0-4) X1 (5-9) Care and finance	2(finance)
P2	35-39	F	Single	5 -10	< 20	No	2	3	1 (0-4) Care and finance	
P3	25-29	F	Single	< 5	< 20	No	1	1	-	
P4	30-34	F	Single	5 -10	>30	No	2	> 3	1 (5-9) Care and finance	1(finance +care)
P5	35-39	F	Single	10 -15	20-30	No	2	> 3	>3 X1 (0-4) X1 (5'-9) X1 (10'-17) Care and finance	X2 finance
P6	40-44	M	Single	10-15	>30	No	More than 2	2	2 X1 (5'-9) X1 (10'-17) Finance	1 (finance)
P7	25-29	F	Single	< 5	>30	No	2	> 3		2 (finance)
P8	35-39	M	Married	> 15	20-30	Yes asthma	2	> 3	3 X1 0-4 X2 5'-9 Care and finance	
P9	40-44	F	Single	5 -10	<20	No	1	3	2 0-4 10'-17 Care and finance	1 (finance)

3.7 Construction of the instrument

Since qualitative research typically involves humans, it is therefore important that the proper means of gaining access to participants is obtained. Having a good relationship with the gatekeepers is essential to developing a good relationship with participants and access to the participants (Maxwell, 2013). Trust is important for the researcher to develop with the participants in order for them to share their feelings and experiences more openly. Researchers are the ones responsible for collecting the data and qualitative research makes use of tools such as observations of participants, open-ended interviews to collect data and through documents (Creswell, 2014).

In the current study, the primary research instrument was an interview schedule that was used by the researcher in a semi-structured manner as per Appendix 3 attached. Data was obtained and compiled by the researcher through in-depth interviews with the participants, which is in line with an exploratory design allowing the interviewer to ask further questions for clarity. The questions for the interview were formulated based on the researcher's experience in the field and reviewing literature and studies of a similar nature, which mainly focused on aspects of wellbeing as listed in Table 3.3, obtained from the Center of Disease Control and Prevention (2018).

Since the current study explored the impacts of the Coronavirus pandemic on Clinical Dialysis healthcare workers, their personal experiences, feelings and beliefs formed part of the evidence. Interviews were conducted in English since the target population were healthcare workers where English is the required means of communication. Due to COVID-19 still being prevalent at the time of the interviews, face-to-face interviews were restricted at the facilities. Interviews were thus conducted via online video-conferencing using Microsoft Teams. The interviews ranged between forty to sixty minutes in duration. The recording of interviews is important for accuracy in the reporting of the findings as it is not possible for the researcher to transcribe everything during the conversation (Noor, 2008). In the current study, the interviews were all recorded, ensuring that no information was lost. Confidentiality was also maintained by keeping participants' identities anonymous.

Table 3.3: Aspects of well-being (CDC, 2018, pg. 1)

Aspects of well-being that can be examined
Physical well-being
Economic well-being
Social well-being
Development and activity
Emotional well-being
Psychological well-being
Life satisfaction
Domain specific satisfaction
Engaging activities and work

3.8 Data Analysis

Research allows for new knowledge to be created and distributed. Data analysis is the method of using scientific means to interpret the data collected during the study into information that can be transferred to others in a meaningful manner (Thomas, 2013). Data analysis is of importance in qualitative studies as it influences the results to a huge extent (Flick, 2014). One of the key aspects of qualitative research is to develop a storyline which is related to the question (Stuckey, 2015). Unlike in quantitative analysis, there is no standard approach to analysis data in qualitative research where in some models' data analysis starts after the collection of data, while other data analysis runs parallel to the data collection, or it may be the central step within the research (Creswell, 2014). There are generally four key steps to data qualitative analysis, namely data collection, data reduction, data displays and conclusion verification, and their interaction amongst each component is illustrated in Figure 3.1 (Palic *et al.*, 2016).

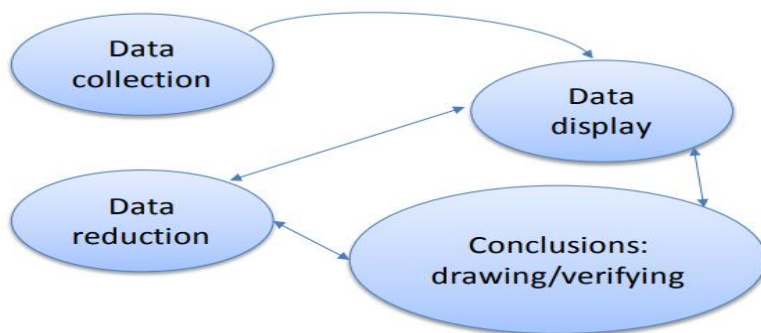


Figure 3-1: Components of qualitative research (Palic *et al.*, 2016, pg. 62)

Much information is accumulated to analyse and is therefore important to be documented and reduced on an ongoing basis into a more manageable amount whilst still providing the data necessary for meaningful information (Thomas, 2013). Forms of reducing data may be editing, early stages of summarizing and the use of coding. Coding is used to retrieve and organize data of similar themes and sub-themes quickly, saving time. The advantage of using modernized research software such as Nvivo and Atlas.ti is that these are less time-consuming, while the procedure of reading and coding of data does not change (Stuckey, 2015). Data display arranges and gathers information by visual forms (graphs, charts and diagrams), and the last step is drawing/verifying meaningful conclusions from the reduction of data and the data display steps (Palic *et al.*, 2016).

In the current study, data analysis occurred only after the data was collected and prepared. Data collection was by means of semi-structured interviews, as already discussed. NVivo is software used as an option to store, manage and analyze qualitative research (Bazeley & Jackson, 2015). The current study made use of coding with the use of Nvivo 12 software for thematic analysis.

The techniques applied were word clouds, tree maps, cluster analysis, hierarchy charts and word trees (Nvivo, 2022). Word Clouds demonstrate the most frequently used words. The larger the font, the more the word was used. This helps to identify key areas/themes. Tree maps show the data (frequently used words) in terms of the size of blocks. Hence the larger blocks reflect those words mainly used. The entire map gives a holistic view of how data is placed in terms of the size of reference. This connection helped to establish relationships between these words, which also informed themes and sub-themes. Bubble diagrams were used to demonstrate cluster analysis. These diagrams illustrate the data (key words) in the form of bubbles. The larger the bubble, the higher frequency of words/references. Furthermore, the closeness of the bubbles shows that there was a relationship between those words and colour-coded words are related, and they belonged within a certain cluster within a specific theme. Hierarchy charts reflect the size of the themes and sub-themes. The larger the size, the more

volume/concentration of responses in that area. Word trees are used to depict key words and the words/sentences connected to that word. It allows one to see how these words connect to other words and sentences/views. The purpose of these diagram was to establish the significance of the word, which served to inform the themes and sub-themes.

3.9 Trustworthiness

For research to be trustworthy, the researcher must show that the data analysis has been done in an accurate and consistent manner which is transparent to the reader to validate the credibility of the study (Nowell *et al.*, 2017). There has been much debate from positivists regarding the validity and reliability of qualitative research due to the assumed subjectivity associated with this type of research (Shenton, 2004). Researchers thus aim to satisfy four components of trustworthiness for qualitative research, namely credibility, confirmability, transferability and dependability, which are described below (Creswell, 2018).

3.9.1 Credibility

Credibility is the measure of the confidence the researcher has in the truth of the findings of the study and ability to demonstrate the accuracy of the study (Shenton, 2004). This was achieved in the current study by the researcher making use of open codes to identify common themes from the data collected, thereby ensuring credibility. Since the researcher was familiar with the work environment, participants were also easily accessible, and credibility was achieved by allocating ample time for participants during the interviews, thereby gaining adequate in-depth insights.

3.9.2 Confirmability

Confirmability is the extent of neutrality of the study that no bias or assumptions by the researcher (Given, 2008). In this study, the research findings were linked to previous similar studies from the review of literature chapter, thereby confirming that the research is objective and not based on bias from the researcher. The use of objective research questions only eliminated unnecessary questions and information.

3.9.3 Transferability

Transferability measures the extent to which the study can be utilized in other contexts and settings (Shenton, 2004). This was achieved by presenting thick descriptions of the participants, the study environment and the data by making use of quotes, making the participants' experiences explicit.

3.9.4 Dependability

Dependability is used as a measure of stability, consistency and reliability of the study (Shenton, 2004). This was achieved through the collection of data. The participants were not led nor influenced on how to answer the questions.

3.10 Bias control

The study was not influenced by any bias whatsoever. The researcher is a Clinical Technologist specializing in nephrology and is one of two directors of the dialysis facility that was used in the study. Since the study was not on management styles, the researcher did not foresee a conflict of interest or validity of accuracy. Furthermore, interviews were all recorded to validate data.

3.11 Ethical consideration

Ethics refers to the standards and values when conducting research and distinguishes right from wrong. Research involves collecting data from humans and gathering data about people, so it is critical that all necessary processes are met to ensure that participants are protected by the researcher (Creswell, 2014). It was imperative that the study was accepted by the University of KwaZulu-Natal's ethics committee prior to the research being conducted. Ethical approval was attained, as per Appendix 3. All formalities and permission from gatekeepers were obtained from the study organisation as per Appendix 1. Informed written consent was obtained by all participants by means of written consent, as per Appendix 2 and opportunities were given for any clarification that were needed. The participants were made aware that their contribution was voluntary and could be terminated at any stage of the study without any repercussions. All participants' personal information remained confidential.

3.12 Summary

This chapter detailed the research methodology of the current study and the reasons for the chosen research design and techniques. A qualitative research design approach was used with a constructivism paradigm. A non-probability purposive sampling method was considered the best option. Semi-structured interviews from nine participants were collected via online interviews which were recorded, transcribed and analyzed by means of Nvivo software. Trustworthiness and ethical consideration were also fulfilled in the study. The following chapter presents the results based on the study objectives.

CHAPTER 4: RESULTS

4.1 Introduction

The previous chapter presented the research methodology used in the study. In this chapter, the results gathered from the study are presented. Thematic data analysis was used to analyse the study data. Data is thus presented in themes from the data that emerged from the direct quotes of participants. The use of graphs as discussed in Chapter 3 will also be made for easier understanding.

4.2 Biographical Data

The study included the entire team of clinical dialysis healthcare workers from the study organisation, which comprised of nine participants. The characteristics of the participants are discussed in this section.

4.2.1 Gender profile

The study sample group represented seven females and two males. Most participants were female indicating a profession that is highly representative of females, and in accordance with employment equity and female empowerment.

4.2.2 Ethnicity

All participants were African, also indicating employment equity. This meant that the data collected in the study was representative of views from only the African ethnic group, which is the majority population ethnic group in South Africa.

4.2.3 Age

With regard to participants' age range, Figure 4-1 indicated only two participants were below 30 years of age; five were in their thirties and two in their forties. Most participants were above the age of 30, thereby indicating the likelihood of maturity in the professional setting. The elderly (above 60 years) were also considered amongst those at higher risk of severe illness due to COVID-19, which was not evident in the study population.

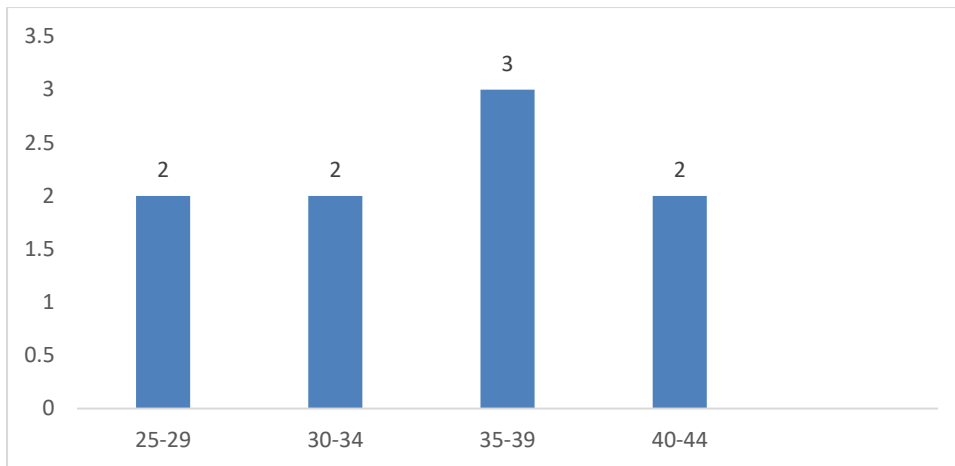


Figure 4-1: Age groups of participants

4.2.4 Marital status

In terms of marital status, Figure 4-2 indicates only one was married and eight participants indicated being single. For this study, the assumption is that a committed relationship alludes to those that are married or cohabitating. Therefore, the study population group is representative of mostly participants that are considered single.

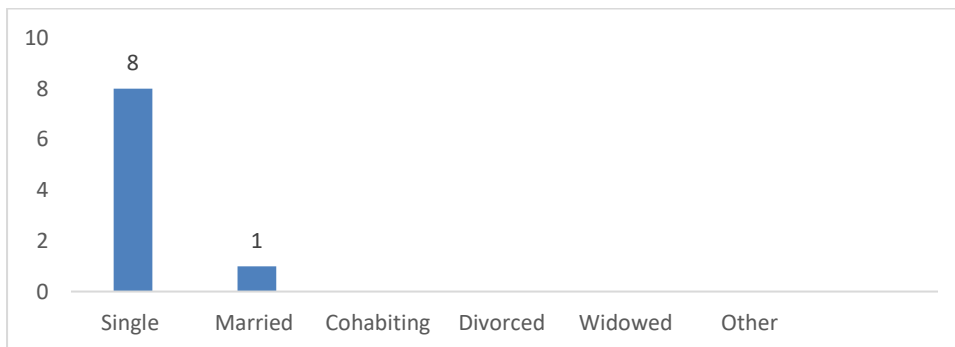


Figure 4-2: Marital status of participants

4.2.5 Qualifications

All participants were highly qualified with degrees, indicating a highly educated study population group. There was also an equal representation of both professional groups with Clinical Technologists being represented by five participants and Nurses by four as shown in Figure 4-3. It was important to determine the level of qualification as Diploma Clinical technologists and Enrolled nurses have limitations in what they are allowed to do independently and what is required to be conducted under supervision. Hence, their experience will be different compared to those that are allowed to work independently under their professional regulations. This study, however, only represented participants that can work independently (unsupervised).

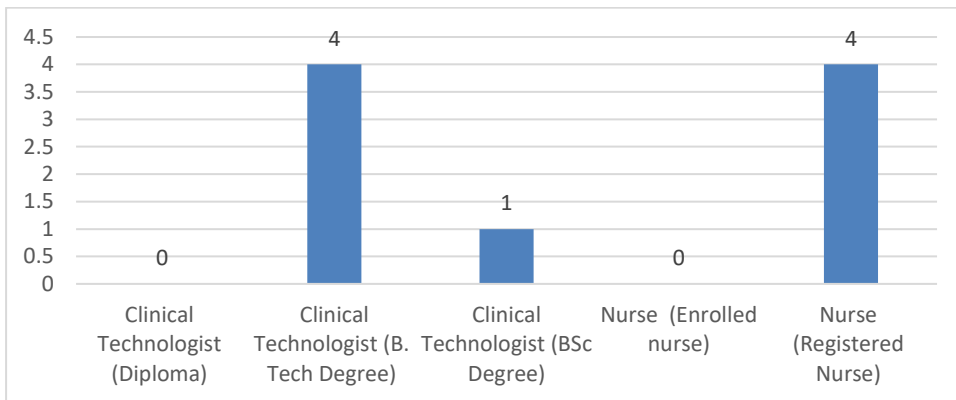


Figure 4-3: Qualifications of participants

4.2.6 Experience in the dialysis field (years)

Figure 4-4 indicates two participants had less than 5 years of work experience; three had 5-10 years; three had 10-15 years and one had more than 15 years' work experience. Most participants had over 5 years of experience, thereby indicating high levels of experience. This was important to determine if years of work experience had an impact on how participants' wellbeing was impacted.

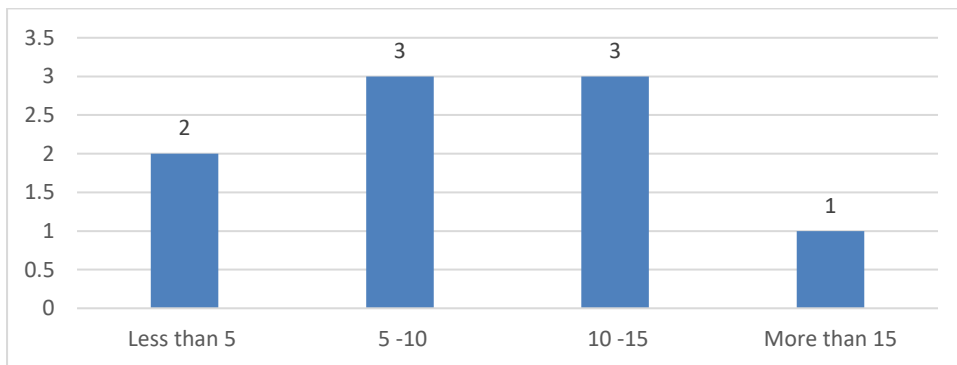


Figure 4-4: Years of work experience amongst participants

4.2.7 Number of breadwinners

Three participants were the only breadwinners, five had two breadwinners and one had multiple breadwinners, shown in Figure 4-5. There was an even number of 'one breadwinner' and 'multiple breadwinners'. This was an important factor as during the COVID-19 pandemic people lost their jobs or worked less hours due to company closures as a result of Government regulations to restrict person to person contact. Changes to their financial situation was expected to have an impact on participants' wellbeing.

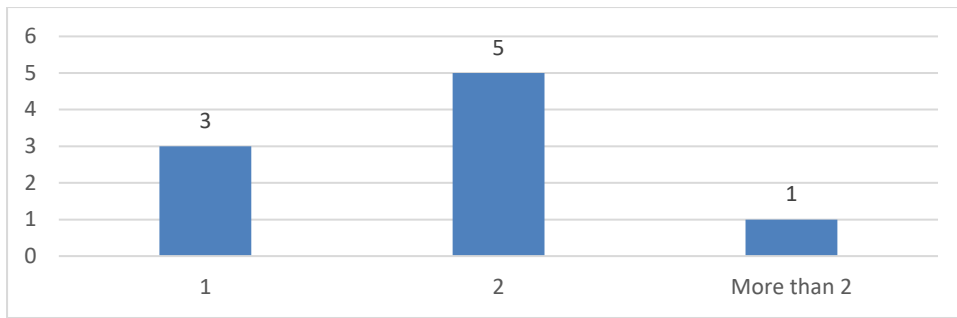


Figure 4-5: Number of breadwinners of participants “household”

4.2.8 Number of Dependents

This section provides insight into the responsibilities of the participants outside the workplace. Figure 4-6 illustrates that most participants had more than one dependant.

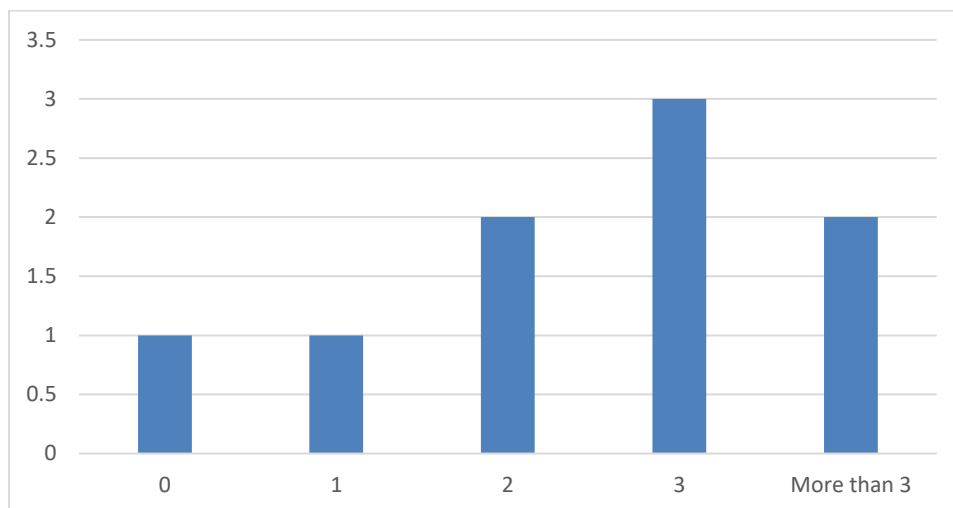


Figure 4-6: Number of dependants of participants

This category was further expanded into the age of dependents and the type of dependency, which demonstrated the level of commitment that was required by the participants in their family life. Type of dependency was divided into “care”, which implied physically being responsible for the dependant’s care, and “financial” implied monetary contribution. All participants (seven participants) with dependent children had the last-born child dependent below nine years old.

4.2.9 Risk of severe illness from COVID-19

Most participants were not at risk of severe illness from COVID-19. People with existing co-morbidities were considered at higher risk of developing severe illness because of COVID-19 and therefore had to take extra precautions for keeping safe. Only one participant represented this vulnerable group in having a pre-existing condition.

The next section focusses on the responses from participants and as seen in Figure 4-7, the largest theme was Impact, followed by Support vs Pandemic effects, Interaction and Communication, and Pandemic and Profession. These were the 4 primary themes informed by a plethora of sub-themes. These primary themes and sub-themes are discussed below, together with some of the techniques used in developing these themes.

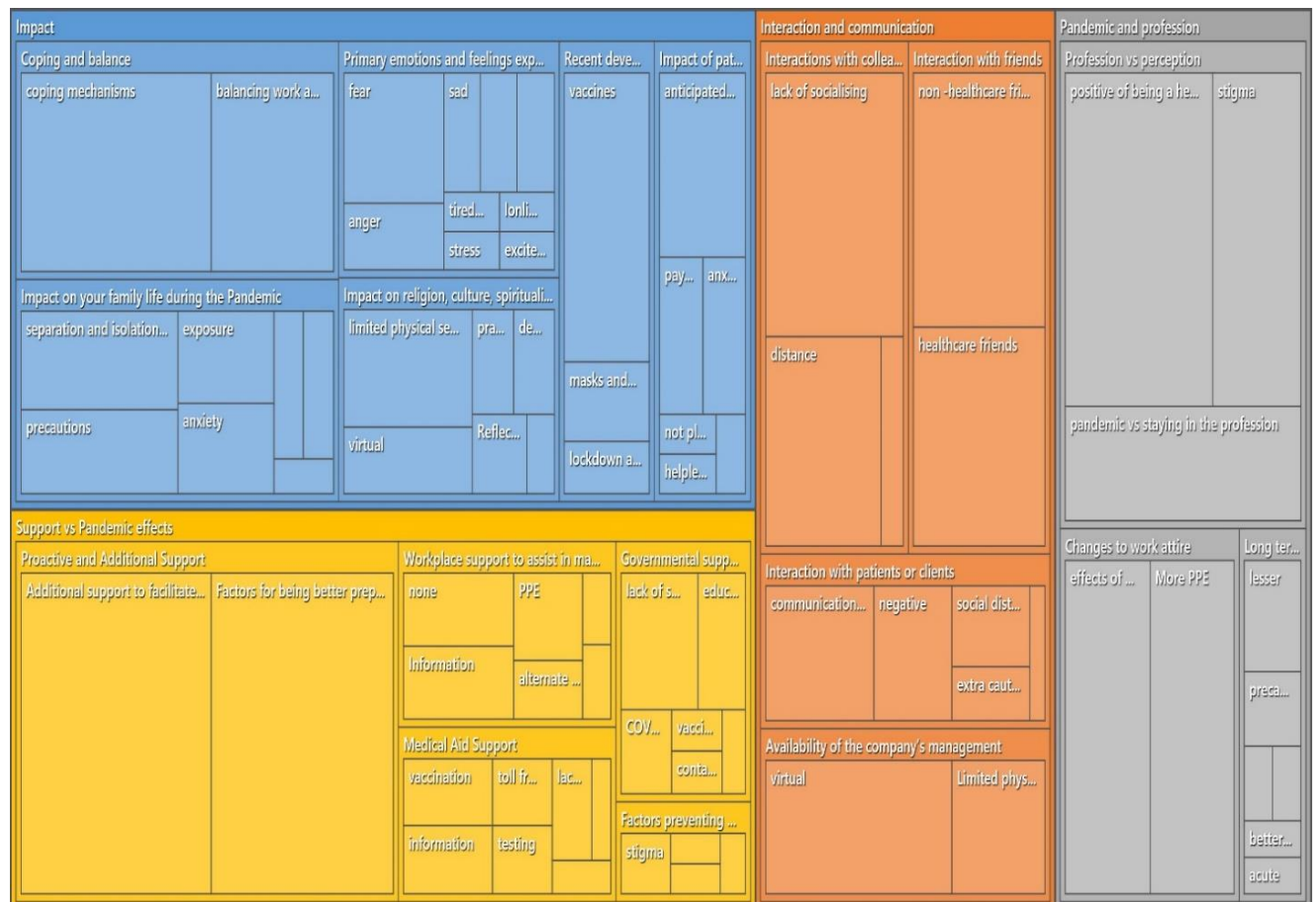


Figure 4-7: Hierarchy Charts on current study

4.3 Pandemic and profession

Being healthcare workers meant that the respondents were in the centre of the pandemic and changes within their work environment impacted them. This primary theme examined the impact of the COVID-19 pandemic and the participants profession (dialysis healthcare workers) on the participants work and personal life. The various subthemes by participants from the key theme Pandemic and Profession are graphically represented using hierarchy analysis, as shown in Figure 4-8 and in Figure 4-9, using cluster analysis from were subthemes of changes in work attire (physical wellbeing and PPE) and profession versus perception were derived.

4.3.1 Physical wellbeing and PPE

For healthcare workers, there are certain safety measure that are common practices regarding infection control policies and dress attire when treating patients. However, the COVID-19 pandemic was an unknown virus that was transmissible through human-to-human contact which meant the work attire changed to add more protection to them. Participants indicated experiencing discomfort with this additional attire.

4.3.1.1 PPE changes

More PPE was evident and logical as more protected gear was needed for the participants' physical safety. As indicated by participants, there were replacements of certain items like the use of N95 versus surgical masks, gowns versus aprons, and then also the additions were face shields/safety goggles, head, and shoe coverings. These PPE had to be used for long hours. These are supported by the following participants who conveyed the same.

The N95 masks and face shields were the most prominently used in accordance with World Health Organisation's Covid-19 laws and regulations for extra protection. These masks and face shields had to be used for long hours.

"We had to have our mask on all the time". (P2)

"So those were the changes, including the goggles, the face shield, the N95 mask compared to the usual ones that we normally use, which was the surgical mask". (P4)

Gowns had to be additionally used. Previously it was mainly aprons, but now gowns were mandatory.

"We had to change the dress code, obviously in terms of how we do things, especially the gowns. We had to change from the normal gowns, especially if you are dealing with the patient that is infected with the virus. I remember we had to go in dialyse those patients (that were infected with the virus) we had to have a different dress code and gowns and not the same ones as we use in the unit. So in in terms of a dress attire, even our uniform every day we had change them, we must wash them (wash it separately from other clothes). We have to do all those things. There was a change". (P6)

Participants had to be fully adorned, inclusive of having hair and feet covered and additional PPE, according to the mandatory WHO recommendations.

"I had to have my hair covered, to cover my shoes". (P2)

The use of gloves was part of the recommendations, but double gloves were part of the company protocol to ensure added protection when treating COVID-19 patients.

“The changes were, we used double gloves as well as the apron as protection. We used to use extra PPE if I can put it that way”. (P4)

4.3.1.2 Effects of more PPE

As outlined above, the respondents had to wear added PPE which holistically served to protect the participants. However, it did lead to other discomforts. Participants reported significantly higher levels of overall discomfort due to the extra layers of PPE.

“Dress up in more PPE than usual, that can be a cause of a little bit of discomforts because you're not used to it. You already had this standard PPE that we normally wear as health professionals, now with the pandemic we had to wear additional and even more protective gear. So, there are the bit uncomfortable to get used to”. (P1)

“It was very uncomfortable at first because we were not used to the dress code, the face mask the gowns. So, it was a bit uncomfortable, but as the time went on, we eventually got used to the dress code”. (P3)

“It wasn't comfortable at all because we're not used those. Some of them were not nice, If I can put it that way but we needed to adhere with the rules. I can say the type of material part, well, it feels like it's just too much. It wasn't comfortable at all”. (P6)

One participant was not comfortable due to not being able to use make-up since face mask had to be worn.

“No, it was uncomfortable. It was not comfortable because you used to wear makeup when going to work, now you can't wear your makeup because of the face mask and everything. So, it was uncomfortable, the mask strings are too tight, so uncomfortable”. (P9)

The extra PPE caused added levels of warmth/heat when working.

“It was uncomfortable because we had to wear the gowns, the mask, the visors, the full PPE. It was hot. It was just difficult to work in but as time went by, we got used to it”. (P5)

One participant mentioned that although it was hot in these layers, they didn't mind it because it was added protection for them.

"Knowing that we had that PPE as well, so also putting on the gowns and stuff made it a bit warmer than usual on hot days, but I think at the back of your mind knowing that it was for your protection, it compensated for that". (P8)

It took extra effort and time to put on the PPE and took added effort to work throughout the day with the PPE.

"it didn't have much of impact, but because we were also expected to know how to put them correctly. So, it was very stressful, but over some time we got used to it. We also mastered how to put them on. So yeah, it was very stressful. But over some time, we got used to it". (P7)

"I could say that the pandemic has forced us to re-evaluate who we are and how we present ourselves. We want to be professional, but we also want to be comfortable, but having to wear the PPE for more than 6 to 8 hours in a shift (was difficult)". (P9)

One participant reported skin irritation due to the PPE causing sweatiness.

"But it was, with my experience, I used to have a breakout cause of the skin because of Being sweaty all the time". (P4)

Two participants reported allergies and blisters around the nose area due to ongoing mask usage:

"I started having some allergy around my nose (due to mask) but got used to it. And the fact that we had to wear the mask all day, every day, even when you go home, you have to use it". (P7)

"The face mask we normally wear those but having to wear the KN95 the way we did with the pandemic, that's what caused our scarring's and blisters. So does a lot of adjustments and pain, but it was a bit uncomfortable in the beginning". (P1)

The mask also made it difficult to breathe, at times creating a sense of suffocating:

"So sometimes suffocating on that mask. The whole day was one thing that I didn't like, but otherwise it didn't impact much". (P2)

4.3.2 Profession vs perception

This subtheme examined the perception of the profession amidst the pandemic both by participants and others.

4.3.2.1 Pandemic vs staying in the profession

It became important to ascertain if the pandemic had an influence on participants' decision to stay in the field. Most preferred to stay in the field as the profession was more of a passion/calling as opposed to a job. Many participants were loyal to the profession and saw it as a passion/calling. The profession of a Dialysis Clinical Healthcare worker was seen as a "calling" and not a job. Hence, participants had a passion for the field and saw themselves as critical entities in healthcare and in the fight against the pandemic. The healthcare profession will always face risks, but it comes with the territory of being in the profession and helping others.

"You can't take this (profession) if you're not passionate about it because it makes you question, especially if you also got loved ones that you leave at home, you question yourself if it's really worth it because now you basically a frontline worker and you need to be there and leave those loved ones at home to go and care for others. So, when we take the profession, you are supposed to help others and you want to help." (P1)

"I think it comes with the passion. Yes, it comes with a passion when you know you want to conquer the world. Cause if you're not there, then who's going to do it? Can you imagine if there were no health care professions and there was the pandemic how life would have been? So yeah, it's to know that you have to conquer. There's nothing that is impossible". (P2)

"During the first lockdown. Yes, I had those thoughts, yes, but as the time goes, I realize that if I'm not the one doing this, then who else because at the end of the day the healthcare profession is a calling". (P4)

Hence, relating to the above, some found themselves staying loyal to the field.

"No, I'm not a coward. I just told myself I'm not going to run away. Running away is not an option. Even though there are so many challenges. In this profession, the healthcare profession, everybody who's sick will report to you first. It's risky but I haven't changed my mind about it". (P2)

Another participant asserted that the pandemic affected everyone irrespective of their field.

“Yes, I was scared but I didn't have any opinions about my profession. I will still choose my profession with COVID or no COVID because I think we were all affected. So it's not like other professions you were not going to be affected. It's just that with the healthcare profession we were more exposed”. (P7)

There were, however, those with conflicting emotions due to the following.

The risk to family was the primary concern. Health workers felt that they could expose their families (especially those with children) to the risk of the virus due to their line of work.

“Yes, it did. It made me think that if this had happened before I became a nurse, maybe I would have chosen another profession because it was so difficult coming to work and working in the healthcare facility then having to go back home. For people that have kids that are not going to school and people that are not going to work, So I felt like I was putting them at risk of being sick”. (P5)

One participant had mixed feelings based on what they saw and witnessed for the day.

“Like I said, at times I would feel really privileged to be in the field or to be in this Department of Health. Sometimes it will be so draining that I will feel like a change a career. It was sort of like mixed feelings. I think it would first depend on what we have heard that day or what we experienced that day”. (P3)

It was hard to sometimes see others working from home with their families whilst healthcare workers had to physically go to work due to the profession. This meant that they had to leave their families and brace the pandemic.

“Slightly it did. It did because I was always so excited about helping people, about going all out, taking care of patients. But I feel like the pandemic made me realize that I wouldn't want to be in the same situation again. I would rather be those people who had to stay home”. (P3)

Healthcare workers were often looked at for first-hand advice and knowledge about the virus and precautions to the general community and therefore felt a sense of purpose and importance.

“I did not feel stigmatized, but I feel like it was an advantage in most of the times. instead of people isolating me, they will come to me with questions of things they will not sure of, such as with questions regarding how bad it (COVID) is, whether they really have to vaccinate, whether they really have to wear masks and a lot of people was curious around my area. So I didn't really feel the stigma. Instead, I felt, I don't know, like I had the answers, I felt so privileged”. (P3)

“The positive is the knowledge, you know what is happening. You know what to do. You always up to date on things like the policies, the new things that were been implemented from the management, we were taught early. It brings more positivity to us than people who are not in this profession. Also, we the ones who need to explain to them”. (P6)

“And I think to get more information, it also helped with you having to deal with everything. I think the knowledge about it also made it easier to sort of handle things”. (P8)

Relating to the above, knowledge of COVID-19 vaccination and disseminating this knowledge helped participants to feel safe. Participants also took to informing patients more about the vaccine so any doubt could be eradicated. The more people took the vaccine, the better it would be for the welfare of patients, healthcare workers and the public.

“That I think for any normal person you are going to be a bit conflicted especially sometimes knowledge is very important, but then you also then base your knowledge and then you there's a vaccination so straight away, so you are bit conflicted because now you don't know it's the first time is you don't know how this is going to work. You don't know how it's going to react. Is it going to work? So, you are conflicted. But it's also helps to be informed about it also to have that knowledge so that even though you are conflicted. But, you know, with the theory part on how vaccinations work it also helped us in informing our patients also about it.” (P1)

“With I think even with patients, because I think growing up having in vaccines you know like as from kids, I think everybody knew once they get a vaccine, you can be protected from a few viruses and stuff or few diseases. I think everybody had that mentality at the back of their head, which made it simpler for them. And I Guess put them at ease”. (P8)

However, one participant was still unsure on the efficacy and effectiveness of the vaccine and whether it would work.

“I would say, I was still unsure of some things, but I had hope because after the vaccine was rolled out, so I had hoped that maybe that was something that could work”. (P5)

4.3.2.2 Long term impact and the future of professionals

Participants felt that there will be fewer people pursuing the field due to the stress, fear, pressure, and risks involved especially during the pandemic and even suggested convincing their children not to pursue a career in healthcare.

“No, our kids are not going to embark in this route of the healthcare profession. I think there will have less health care professionals”. (P2)

“I think there will be shortage because I can look back during that time. Some people resigned during those challenging times because they couldn't handle what was going on, like I said before, that people are different, so we handle things differently. We are not all as strong as we think because most of the healthcare professionals, they resigned. They felt like they chose the wrong professions for themselves so this will impact the healthcare facility and negatively in the long run”. (P4)

“I think more people don't want to do healthcare because they are scared now because of covid”. (P9)

However, the positives of being in healthcare abounded in the following.

Job stability was the highest ranked factor. During the pandemic and its effects on the economy, many people lost their employment. However, the healthcare sector was at the forefront and healthcare workers were much needed during this time. Being able to earn an income was viewed as a benefit in times where others were unexpectedly told not to return to work and are still struggling to make ends meet financially.

“So yes, that was a positive side of things. So many people lost their jobs during that time. You told you staying at home, it's lockdown and then you're getting texted, don't return to work, so I guess as much as our job is so demanding and exhausting but to be able to still wake up and at the end of the month still have a job that is a benefit”. (P1)

“No, there were no benefits except for yes, for the fact that I still had my job. I was getting my salary in full. They were no short times or anything like that. Yeah, that was the only benefit, I didn't suffer financially because of the pandemic.” (P2)

“Most of my friends were so worried about losing jobs and I think that was like the least of my worries. I was worried about my health but not losing your job. So, I think that was like the best benefit of them all”. (P3)

“Like you know, most people lost their jobs during the pandemic because many businesses have to close down so having a job was kind of a good thing”. (P4)

“We are lucky, when it comes to our profession here, it did benefit us. There's no one who lost his or her job. Our job was secured”. (P6)

“Yes, it was relief as a healthcare worker because I knew if there was COVID or no COVID, I would still have to go to work, that was a very big relief or advantage, my job was safe”. (P7)

“I know a lot of people who lost income during COVID, with some of those people still have not recovered even now. I felt lucky in a way. So, I thank God in a way, for the job that I had. Yes, it had the challenges, but I could put food on the table for my family with that and fortunately for me, I didn't have to worry like people in the food industry, restaurants that were out of a job”. (P8)

Due to the stability of healthcare and job security during the pandemic, others seemed keen to join the healthcare field due to the reality of businesses being closed and their jobs in other sectors were perceived to be unstable due to the impact of the pandemic.

“And I think at that stage a lot of my friends that are not in healthcare even considered to change a career. You know, after the pandemic they want to do something in health because they realize how a pandemic can affect a lot of them in the other Departments”. (P3)

“Surprisingly, yeah, I think a lot of people really consider going there because I think the only reason behind that will be the fact that the jobs were secured. So a lot of people might consider staying in the field or going into the field due to the fact that they didn't lose their job or they are more job opportunities”. (P3)

Healthcare workers were also among the first to be given permits which meant that they had easy access to most amnesties.

“I remember I was still in Durban, it benefited in a way that sometimes when my dad was not well, and we were not allowed to go far or without the permit. But I had to use the permit to get his medication and to deliver it to home. It helped me. It helped my family to. It helped him”. (P6)

One participant asserted that this pandemic experience should be used to learn lessons so the profession can be better prepared for the next.

“The pandemic, I think the experience really taught a lot of the clinical dialysis professionals if we had to face a similar situation, we will be able to handle it much better than before. So I say it did help us grow in a sense not just in the workplace, but also it did help us grow emotionally and in many other ways”. (P3)

Interestingly, one participant posited that the profession would become more virtual in terms of communication, education, and trainings, due to the move to online during the pandemic.

“As well in terms of communication I think we need to move more to virtual side of things, more education even when you are educating another patient, have TV's that they watch maybe it's high time that we have things like educational programs that needs to be there as a means of communication and means of training or educating them as well”. (P8)

A participant did argue that the profession may change in terms of ‘acute’ dialysis which was not done by them in hospitals during COVID-19. This can have a decreasing impact on the profession as hospitals limited the number of companies servicing the hospital which meant less work for the study company and the workers.

“I don't think they will leave and the fact that we had to change the ways of doing things, going to do the patient while admitted it was limited in terms of, you know doing acute patients. It was limited. So I heard that most of the people they tend to say there's Nothing now here in dialysis because you can't even do acutes in hospital, they prefer a certain company to do acute, you know those are the things that can take more of us away from the profession”. (P6)

4.4 Impact on the pandemic on mental wellbeing

This was the most prominent theme as it centred around the crux of the study. It examined the impact of the pandemic on health workers from different perspectives. Each are outlined below within their own subtheme. Participants’ responses are graphically represented in a hierarchy chart analysis in Figure 4-10 from which subthemes of primary emotions and feelings experienced impact on family life during the pandemic, impact of the deaths of patients or colleagues, and impact on religion, culture, spirituality to their wellbeing.

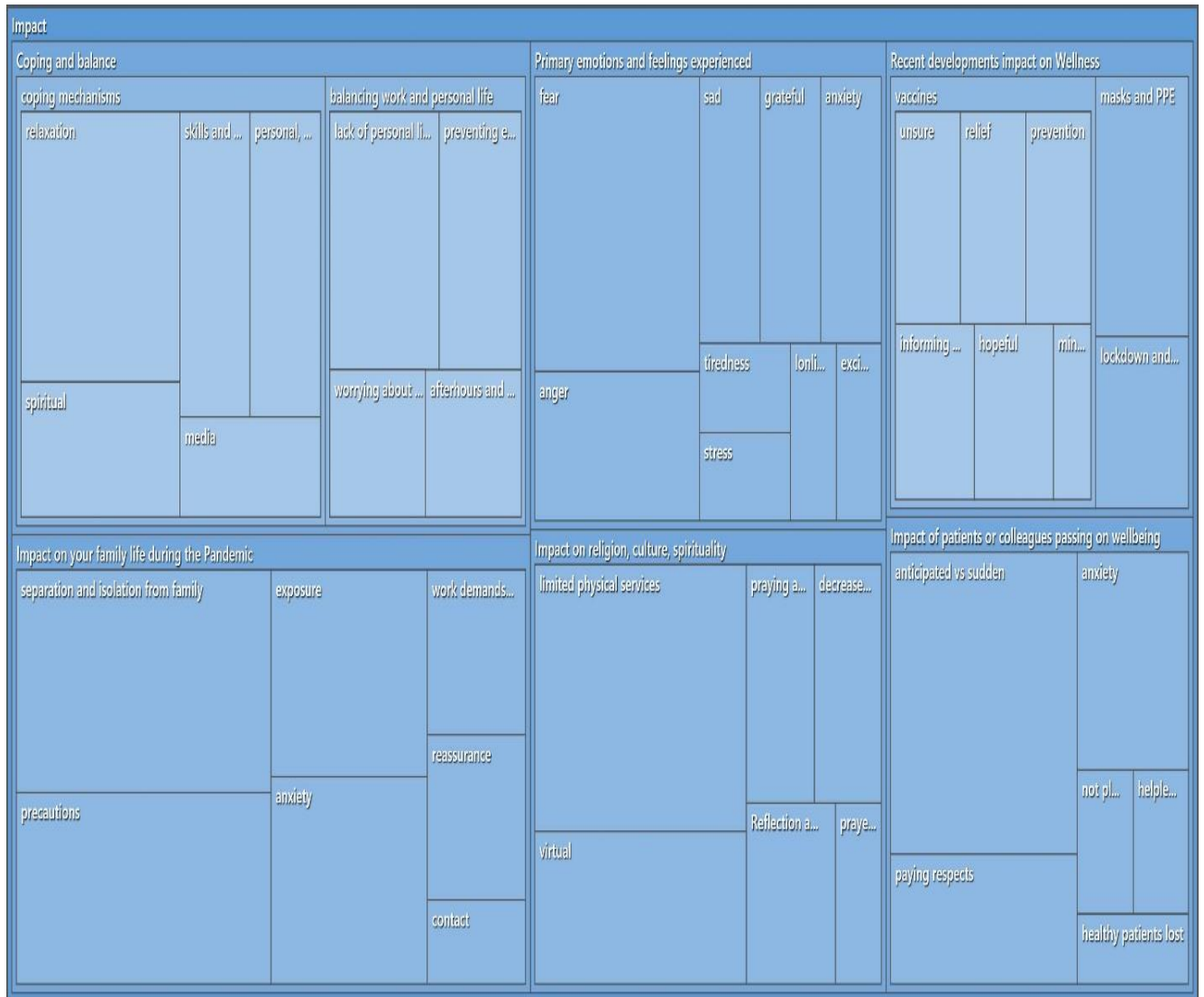


Figure 4-10: Hierarchy chart analysis of current study reflecting subtheme “Impact of mental wellbeing”

4.4.1 Primary emotions

Primary emotions and feelings experienced by participants as represented in Table 4.1. Various emotions were experienced. Understandably, mostly negative emotions were expressed due to being in the frontline of the pandemic and the uncertainty that is associated with it.

Table 4.1: Expression of primary emotions during the pandemic

Emotions	Dialogue
Fear	<p data-bbox="628 689 1390 972"><i>“I was really scared because people were losing close family members, loved ones like people who are well and then the next day they were gone. So you're scared for the people you care about. So always I won't lie. I was very scared. You wake up anxious because you don't know what news you're going hear”.</i> (P1)</p> <p data-bbox="628 1043 1390 1279"><i>“My one is fear. Yes, fear was the most the ruling one because, when the disease is airborne and everybody's supposed to be at home and you outside there meeting people coming from different places so we don't know what we going to get (infection wise)”.</i> (P2)</p> <p data-bbox="628 1350 1390 1429"><i>“Fear of losing my family, fear of losing colleagues, fear of my friends losing their jobs”.</i> (P3)</p> <p data-bbox="628 1500 1390 1579"><i>“Yes, we were very scared but still we had to had to be strong”.</i> (P5)</p> <p data-bbox="628 1650 1390 1930"><i>“It started with me. I was pregnant. I had to be admitted. Using the oxygen for plus minus four days, it was not a game. It was hard. You pray like, you pray to God that please God can I get better so that I can be with my family because especially to me, because I'm the breadwinner. But It was very difficult. we also almost lost our Big Brother”.</i> (P9)</p>

Anxiety	<p><i>“Anxiety. You know When you don't know when you wake up in the morning and not knowing whether you'll be infected on that day, that's the fear”. (P4)</i></p>
Anger	<p><i>“Yep, there is. The anger also. You become angry. Why is this thing happening now? Now what is happening in tragedy? We were so angry. I was so angry at humans, at government when it comes to the regulation, the restrictions. I remember some of the restriction, they will be taken too late at times like”. (P6)</i></p> <p><i>“Anger, anger and sadness because most of the people lost their jobs and some of them, even now they are not working”. (P9)</i></p> <p><i>“And sometimes you feel angry because now I'm the only one who's working at home”. (P9)</i></p>
Grateful	<p><i>“Grateful to have a job and to be alive”. (P3)</i></p> <p><i>“It's definitely mixed feelings. We spoke about having a job When other people were out of a job, having an income. So definitely very grateful for that, I still had a job”. (P8)</i></p>
Sad	<p><i>“Sometimes I'll feel sad. I'll feel sad About what is happening to everybody, to our patient, to everything that was happening? It wasn't Good. So, the happier times were so minimal than the sad times”. (P6)</i></p> <p><i>“We even lost family members. We lost patients. You can't go to the funeral because there were limits with the numbers. You can't be there for loved ones because of the number that is limited. So, it was sad, frustrating”. (P9)</i></p>
Stress	<p><i>“There was stress, stress, stress”. (P5)</i></p>

Tiredness	<p><i>“And the second one was exhaustion, Tiredness from working heavy hours and Having the schedule to change at work to accommodate for the positive patients”. (P2)</i></p>
Loneliness	<p><i>“I think it's the loneliness that the fact that we couldn't go home and see our families and be with our friends. I think being alone since I was staying alone”. (P7)</i></p>
Excitement	<p><i>“And the third one, I would say it was also kind of like excitement Because it was exciting. If you somebody who like to learn new things, experience new things. It was the talk of the nation. So, i should be there and take part in that and in trying to make sure that by the time it ends, you will know that you were a part of this thing, and you made it work”. (P2)</i></p>
Helplessness	<p><i>“I feel like during the pandemic a lot of us were very helpless. It was one thing that we had no power over. We feel like we couldn't help a lot of people and I don't think anyone would like to be in a situation when they feel like they are helpless, and they can just sometimes look at people dying so it was a bit scary and, I feel like I also wanted to be safer. I feel like it was a lot of pressure, not just for me, but for a lot of us to be amongst those people who is supposed to be out there and helping other people, where a lot of people were at home and being safe and being told to stay away”. (P2)</i></p> <p><i>“As frontline you feel helpless. A part of you does feel helpless. And when you start this, you feel like you know your textbook. You know you've got the textbook and you've got the experience. You feel like now if you combine the tools, you've got the answers, but with the pandemic you realize that even with the textbook's information, the theory part of it, there's a lot of information, things that just keep coming through and patients would keep going(dying). So, you think, why did I take this profession if I'm unable to also help”. (P1)</i></p>

Relating to emotions, participants also felt stigmatised, which impacted their wellbeing negatively. The healthcare workers did face a degree of stigma. The highest ranked stigma was that people often saw health workers as the potential spreaders of the virus due to the nature of their work and exposure thereof.

“Yes yes, I used to get that a lot because many people had that mentality that the healthcare people are the ones spreading the virus, so we used to be stigmatized due to our profession, Due to the exposure that we have to treat sick people with COVID”. (P4)

“You felt like when people looked at you, sometimes people felt like you had the virus with you at all times. It was all around; people would see you when you're coming from work, they'll see you would have your scrubs, people would avoid coming close to you”. (P8)

Relating to the above, the exposure from working daily in healthcare made them feel as if they can contract the virus at any time.

“Because you are exposed, but you get stigmatized if anyone is sick. It's because you are exposed, you are carrying the (virus)”. (P1)

“Yes, we were. People wouldn't want to interact with us because we were at risk of Getting covid at the time. Even at home, they were uncomfortable”. (P5)

“There were scared, they didn't want me to come back home. So, when I was home, you see people there look at you in a very strange way. Not in a way that they used to look at you, so I think they were very scared. It just when you go home”. (P7)

Some also automatically made healthcare workers feel as if they were better than the rest even if this was not the case, but such was the perception of others about them.

“I did feel OK with family because I'm in the healthcare profession. So if somebody's sick, you know you bring it home. But with society it was different kind of stigmatization, you'd get those who feel if you're getting privileges because you are frontliner you know”. (P1)

“No, except that sometimes other people would think maybe you think you are better than them”. (P7)

“That's because in other professions, they didn't go to do their job Since we on the lock down, so they didn't go to work So now when you are going to work, it was like You think you are better than other people”. (P2)

Some people, including families of healthcare workers, were also discouraging them from going to work and undermining their work/profession.

“Even that statement that we should be killed. Since we are coming from patients where we are exposing them to the virus, coming home with the virus. Yes, I did because even when you with the family they like discouraging you, everybody is sitting at home it's the lock down and you are going out there”. (P1)

“Watch, what do you trust out there? How? How do you go out there and expose yourself like that? This is not a real job. Those are the comments you would get. This is not a real job. How can you go outside when there's a huge war that is happening, you need to really find a good job, suitable for you, because this one is not a real job. it is like they were undermining me. My job was like being undermined”. (P2)

4.4.2 Impact on your family life during the Pandemic

This important subtheme examined the impact of the pandemic on family life which was a pertinent area in the participants' lives.

Separation and isolation from family was the most negative impact that affected participants. During the pandemic, and due to their line of work, participants had to keep significant distance and isolate themselves for long hours from their spouses and children. Physical contact of members was also restricted. Some participants also lived separately from family and could not even visit their families e.g., during weekends and breaks.

“It was hard because you could not be locked down with your family, and there was times where I think 90% of the time I had to be separated with my son because I had to be at work and he was on lockdown and there was no one to care for him, so he had to go to relatives. So you become isolated from your family due to the lockdown and you are being exposed (treating COVID patients), so you can't bring that to them”. (P1)

“I have kids. The first instinct when you get home, you have a child would want to welcome you home. They want to run to you, hug you. You want to hug them back. You want to play around a bit with them. So now during COVID, all that was scrapped”. (P8)

“And they don't know if I'm going to come home with (the virus) and during that time the pandemic, when the waves, are at the peak we've got kids at home. And when you come back home, you cannot even play with the with the kids because you have that fear that You might give your kids something”. (P2)

“It was a bit of a challenge because they used to feel unsafe around me due to fear as well, because the pandemic was a new thing to us all so it was a bit of a challenge because I felt like I was the one who knew more about it, so I had to explain to them that you know what we need to do this, I will be as isolated, even though I haven't been tested positive, but I'll use my own room”. (P4)

“I think my family was more impacted than me because there were more scared than me. So yes, during the lockdown, the shutdown, I couldn't go home. That was very stressful because now I have to stay in my place, just had to go to work, come back from work, go to work and I couldn't visit home”. (P7)

“I can say that the separation from your family, whether it is physical or even if they are in the same premises. But you have to separate yourself being in another room. so, it's that separation from them because they were on lockdown, and you had to be exposed”. (P1)

Relating to the above, significant precautions had to be taken around family. Extra cleaning and sanitising and leaving clothes outside in a separate laundry pile had to be done.

“When there's a case of a in the family of somebody who's positive, automatically you brought it. It was you who gave it to that person because you come from place from a place where people are sick. You come from a place where people are exposed even though you're the one who's taking the most precaution”. (P1)

“So you've got to take your time In Washing, clean up, clean up yourself and prepare yourself to be ready to meet your family? “. (P2)

“I was affected. I remember the 1st (lockdown) 2020, I was staying with my cousin. It was difficult. When I come back from work, we had to change things at house like the door that I need to use when I come from work had to be a different one”. (P6)

“Take all my clothes out outside Put it in the bin that we place outside and then get inside, take a bath, take a shower before even interacting with anyone in the house”. (P6)

“After work I used to take off my clothes on the veranda and wash them outside during the warm water and the soap take a full shower, then go and stay with them (kids)”. (P9)

The healthcare workers were at the frontline and exposed to a very high level. This meant that they could carry the virus home even unknowingly. Hence, being around family members who could have comorbidities could run the risk of the family members contracting the virus.

“My mom was an elderly. And she has hypertension and diabetes, so she was high risk”. (P5)

“We had to change things in the House. Had to change things. How we do things in the House because I was the only one who was at risk of infecting them”. (P6)

There was considerable anxiety both in terms of participants for their families, as well as their family’s anxiety for them. One Participant was also pregnant, and she had to take the concerns of her unborn child into account.

“So as much as you feel separated from them, you also scared for them. It puts you a bit anxious if you see them getting a bit of symptoms was it you”. (P1)

“They were scared because the healthcare workers were on the frontline. So, they're scared for my life. There was scared that I was going to get infected with COVID. So, they didn't want me to come home because that's going to expose them as well”. (P7)

“Yes, the most difficult part. Unfortunately, I think also COVID took that joy, when you expecting a baby there are things that you would like to do. But I think throughout the pregnancy it was more worrying more than enjoying the actual pregnancy because obviously we didn't want to expose the baby or the mother to COVID. Also, in hospital as well, there were strict instruction from the gynae that my wife shouldn't get and should try and avoid getting COVID because it would also it meant that it made delivery a bit difficult as they were limited theatres that were designated for COVID people”. (P8)

The high work demands on participants took its toll on participants’ family life. Participants had to work extra hard and still try to balance family life. They also had to tend to their children who were embracing online for the first time.

“As they were like waiting at home, waiting for me to come back from work It was a huge stress for them because even the the time when, there was a public opinion, the health care workers must be killed Just to prevent the pandemic in my area, to prevent the pandemic from being spread all over, it was like all the nurses are carrying the pandemic now So they didn't know what to expect. If I'm going to come back alive. What if that Is true. it wasn't good at all”. (P2)

“Yeah, it was. It was a bit difficult. Because even the online thing, it was new to the kids, so it was really hard to make them understand what's going on. So, it was extra work added on for me in healthcare. Wake up because when I go home it was then that I started to look at it”. (P5)

Contact was very limited, and this was difficult for children to understand why their parents (participants) could not make physical contact with them as before. Sometimes they would feel rejected.

“Maybe for me, as an adult, I could understand what was going on, but the child they found it difficult to understand when, for instance, why would daddy? You know when they're coming and they're running towards you and you will almost run the opposite direction. You know, they feel like you sort of rejecting them so it that impacted on them. I know with my wife, would worry. You did mention that we were in the forefront especially the beginning of the pandemic nobody knew, there was less knowledge of the virus as well. So, it almost felt like people looked at you as if you were bringing the virus home”. (P8)

However, for two participants, they felt that they had a reassuring role to their communities as well as to their families. Some family members lost their jobs and hence the stability of healthcare workers kept the family above the breadline.

“I strongly believe that those days were difficult times for all of us, but we had to be strong for our families as well as healthcare workers. To allay anxiety as well Because as I said before that it was something new for all of us, so it it's only the healthcare workers that had to take a stand and make sure that the community or families or in friends were reassured in a way”. (P4)

“It has because my brother and I were affected. My brother lost his job. But luckily, I got mine. We are the breadwinners of the family. Now I'm the breadwinner”. (P9)

4.4.3 Impact of patients or colleagues passing on wellbeing

Participants as healthcare workers were also significantly affected by the passing of their patients/clients.

The most significant negative impact was seeing patients suddenly pass away. Historically, participants were accustomed to the predictable passing of patients due to the health conditions. However, during COVID-19, patients and clients were passing away suddenly due to COVID-19. Participants were hence unprepared and scared not knowing which patient could be next. This further added to their anxieties.

“That was the very scary part because, you know, with this pandemic you’d never say the person is unwell, you know Used to be like a sudden death. You know something that hit you on the head, unaware off.” (P4)

“Especially when the patient was maybe diagnosed by us after maybe two days, three days, the patient is gone. It wasn't easy for us to accept that. It wasn't easy because you know we like families now with the patient. So today you are Dialysing the patient tomorrow you heard that she or he been admitted and now they say she is gone. It wasn't easy to hear that sad news”. (P6)

“For instance, in my case I know I had a patient that phoned in for help one moment, while we were trying to arrange the ambulance. And then I think you just speaking to somebody, 15 minute later from somebody telling you they can't breathe and then 15 minutes later then the family members tell you that the patient is no more. So, it was heart-breaking, and it was nerve wrecking as well because now you didn't know what you were dealing with”. (P8)

“I can say it was a bit different because we like normal. It's normal like the death is normal. It's a natural thing. But during the COVID it was like people were dying like flies. I don't know how to explain it. It was not normal”. (P9)

Relating to the above, participants were always anxious not knowing which patient could succumb to COVID-19 next. They were also concerned if the same could affect their families and friends.

“Yeah, I was very scared. I was very also worried not just about the other patient and the colleagues and myself. I was also very worried about my friends and families because I was away from them. So when I was seeing other patients passing away here, I was worried about my family members, whether they were safe, where they are, whether they will get the virus and things like that. So, I was in Worried and scared, basically”. (P3)

“I was scared, and it was very sad to see one of your patients or colleagues passing.

Because make you think about your own family and think about yourself if it happens to you. So yeah, I was scared all the time”. (P7)

In some cases, the healthiest patients who were never even admitted to hospitals were being lost due to COVID-19.

“Yes, that was the most devastating part because you would lose patients that were healthy, that were never used to even get admitted to hospital. Most of the patients, those who we lost were”. (P5)

The paying of respects to patients and colleagues could also not be done properly due to COVID-19 restrictions on funerals.

“Remember, during the COVID time there was a certain number of people that were expected to attend that gathering, so not all of our colleagues were able to go. So, we are affected about that also”. (P7)

“Even though it may not have been directly, it may not have been COVID, but COVID did impact on in terms of us having to go and pay our last respects in terms of funeral as well, because with the regulation it was a bit difficult. We couldn't interact with the families, or we couldn't get together as a staff just to you know, to have things like memorial services or things that in a normal world would also be an aid to help each other heal, you know, from a loss of a fellow staff member”. (P8)

The feeling of helplessness was evident whereby participants, despite being healthcare professionals did not have the ability to control the fatal outcomes of the pandemic.

“It was stressful because I think with patients passing on, especially being in the profession that we are in. It's just that now with the pandemic, it made you feel helpless with the pandemic, it made you feel as though you were not in control. You couldn't assist your patient. It came out of nowhere, before you could intervene and act (there was time)”. (P1)

One participant felt that the pandemic experience taught them to stop focusing on long term goals and rather enjoy the present/each moment.

“The way I see life changed; I stopped seeing life as a long-term thing. I started seeing life as a like I started starting, not setting long term goals Because I realize that anything can happen in

life, cause the pandemic was not there but all of a sudden, we heard the pandemic, and we started losing people we love”. (P2)

4.4.4 Impact on religion, culture, spirituality

Religion culture and spirituality was also impacted by the COVID-19. This had the following implications for participants.

Due to country-wide regulations, physical services were limited. During peak lockdown, church services and other religious gatherings were not permitted. Even after lockdown was eased, there only limited numbers of people permitted for physical services. This made it difficult for regular church/service goers to carry out physical forms of worship.

“Religion-wise nothing. Nothing was happening. We couldn't meet, the gatherings were stopped, so, I stopped going to church”. (P2)

“I think I'd have because I haven't been to church from the first lockdown. So, that was 2020, so I haven't been to church from that time”. (P5)

“It had to accommodate 50, I think so. How would I have known if I was the 55 people to come in? So, I decided, no, I'm not gone go in case I'd be locked outside because it's already full So that time we decided not to go to church”. (P5)

Considering the above, virtual forms of worship/service had to become the primary means of prayers and spirituality. Hence, online services were held which took some adjustment as well as challenges related to network and cost of data/internet.

“In my case, I was just on my own then with my friends may be over the phone. We never used to have like an online church service”. (P4)

“We also have online services, but it took some time to adjust to that”. (P7)

“Definitely. I prefer the interaction. Eventually we ended up having online services, which also on its own it still with the network problems”. (P8)

“It affected me a lot because we had to stay at home so that I had to use the Internet to fellowship with the others and the data is very expensive because even now we still we still fellowship via Facebook”. (P9)

People also resorted to praying at home with their families. Some found themselves connecting more to God though praying from home.

“I think that was the time was affected but it worked out well because I started Reading my Bible at home. I think it was a blessing in disguise because I learned how to spend time with God In my place, but I also missed going to church and being with the other people”. (P7)

Similarly, some prayed at work with their colleagues and found it to also be a good coping mechanism amidst the pandemic.

“I remember at my place of work after our shift had started, we started to pray in the morning due to what's happening (the pandemic), we all have same beliefs same religion. So, we were like you know what let's just all let's start the day with some prayers so yeah”. (P1)

One participant however felt that it gave them time to reflect alone, and this had positive impact on them. It also helped to build spirituality.

“I also feel like for me it was benefits because when I was living alone, and I had literally nowhere to go So I spent that time or invested that time into understanding more and building myself spiritually”. (P3)

“It impacted me positively. I didn't realize that I actually also needed time to also reflect alone. So it helped me to be alone and actually look into things alone”. (P3)

However, one participant felt a decrease in spirituality and lack of spiritual upliftment. This was due to the lack of spiritual interaction with their peers, friends, and families.

“People kept on losing the interest, yes, so eventually all that was not happening at all. So we like sitting and doing nothing and waiting for the pandemic to Stop. People lost interest because everybody was dealing with the pandemic on their side of the family or friends so interaction in the religious group”. (P2)

“I know for me, no, I wasn't like doing anything. There was no spiritual upliftment, you know, for spiritual upliftment, you need your peers to be around you, you know, and encourage you to do

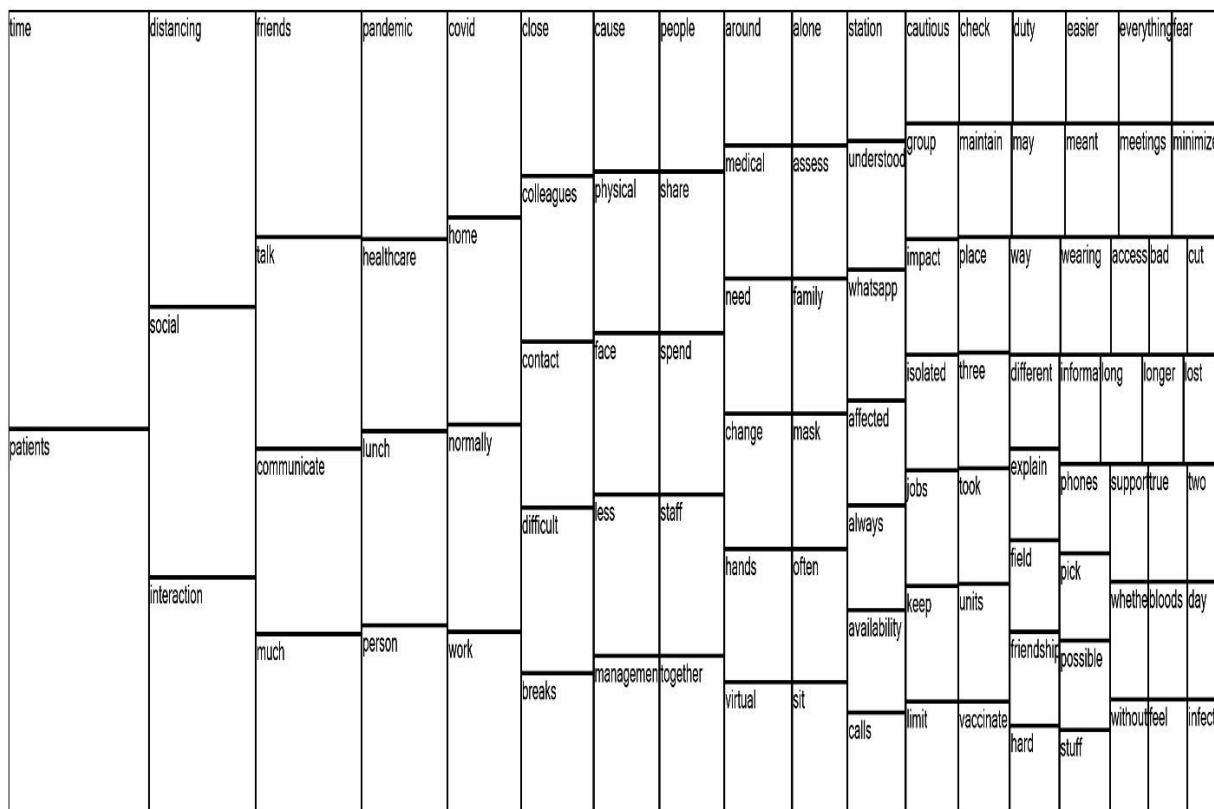


Figure 4-12: Tree map analysis of current study reflecting subtheme “Interaction and communication”.

4.5.1 Interaction with patients or clients

This subtheme examined the interaction with clients who are the patients. Dialysis patients and participants are well known to each other due to ongoing treatment that is required, therefore communication is a critical aspect in their daily interactions and changes will most certainly be noticed and proved challenging to participants. They now had to adopt the new way of communication to keep everyone safe while still trying not to make the patients feel as if they did not care.

Social distance was in adherence to COVID-19 government regulations, and this had to be always adhered to. This impacted on interaction.

“Normally you would go up stand, talk closely to people or your patients”. (P8)

“So, we needed to keep the distance as well, so we try to limit interaction, so it did”. (P8)

“We used to sit close to the patient, to maintain the privacy when giving them their blood results. But not anymore, because we have to maintain that social distancing. So, it's very difficult”. (P9)

The added PPE made it difficult for patients and colleagues to hear and impacted on clinical handover and retrieving important information timeously.

“And also, the face shield, the face mask when interacting with patient sometimes they will not hear what you're trying to say. Same as with colleagues so there were those kinds of discomforts”. (P3)

Participants had to be very cautious especially with patients displaying symptoms even if it was not COVID-19. For example, if someone coughed, it could spark anxiety among staff and more protocols to follow and reallocation of workers to COVID-19 positive patients.

“It has because even though we were cautious before, but it enlightened us, especially when the patient has this persistent cough, you assess them holistically now compared to how we used to do it before so let me just put it that we are more cautious now than before. And we refer them accordingly, like if patient is coughing persistently, you advise them to seek medical help immediately”. (P4)

“It has quite a lot because besides being more cautious now, there are protocols in place now on how to go about in nursing that particular patient. In terms of isolating the patient having one that is going to look after the patient without contact with other patients to prevent cross infection”. (P4)

One participant did mention though that historical precautions and care had to be taken when dealing with patients and not only during COVID-19 pandemic. Thus, to this participant, as long as they viewed it as merely continuing with the same precautions as they were always intended to follow, they did not see any added risks of caring for patients as they felt protected as was it just part of the job.

“Not really with my experience, not really because we used to be reassured that if you are wearing the PPE's and you do the frequent hand washing, after being exposed to the patient to wash your hands regularly, you need to Fully wash your hands accordingly so it didn't have that much impact when it comes to assessing the patient, I used to assess them like how I used to do even before the pandemic So only when the patient is not protected, which was very rare because they used to be on face mask If not ventilated”. (P4)

The lack of interaction had the following negative impact.

The fear of contracting the virus and spreading it was the main reason for the lack of interaction. Due to being in the healthcare profession and on the frontline with patients, the fear of contracting the virus was always there. If the virus was contracted, then the risk of spreading it to family at home was very high.

“The fear of contracting the disease was there all the time. You think about it. Every time you interact with somebody every day”. (P2)

“Somebody who's coming from a different home, from outside there. So, the fear was always there, so to interact with them was something that was not comfortable”. (P2)

Participants had to be less physical with patients and avoid close interactions.

“Yes, yes, it has, because especially in the dialysis units we interact with the same patients. Three times a week, so there's more close interactions that we normally do, whether it's with the direct patients or their families. But now with the pandemic, we have to do social distancing, so it's less physical, there's no physical interactions, there's a lot of distance”. (P1)

The lack of close interactions sometimes could come across as having a less caring attitude to patients.

“A bit of distance with the patients thou it's sometimes may come across as though you care less. We have to take extra precautions”. (P1)

4.5.2 Communication with patients

Communication with patients was also hindered due to lack of interaction.

There was a sense of disconnect with patients due to limited communication. Personal conversations were at a minimal.

“Yes, it did cause during the COVID times we had to minimize the time spent with people. We had to connect the patient, deal with the patient for a minimum time Just to minimize the contact between each other so it did impact”. (P7)

“You would spend some time when we are educating of patients, you would spend you know stand and talk for a while, discuss, try and find out how the patient is, well-being and everything. So now the change, now we needed to protect each other”. (P8)

Communication was restrictive and had to be limited to the dialysis (nature of work) with limited conversations or interaction about anything else.

“So already they feel constricted with the dialysis in their life and getting around, now you've got the pandemic, now you adding to more social distancing, telling them to not see their families telling them not to go to funerals or interact. So, it did kind of pose that shift. And with the patients also it kind of felt as though we are the bad people”. (P1)

“Especially after the bloods, to explain the results of the bloods, when we talk about them. the virus, the Coronavirus, the patient was sceptical and when we talk about social distancing to them that I need to be at this distance then they say we can come closer. We have to explain everything that you do with the patient. So It changed our interaction with the patient so much”. (P6)

It became challenging when trying to contain confidential information from patients, because one ideally should be close to the patient when obtaining such information. Trying to obtain such information from a distance could lead to a breach of confidentiality.

“Yes, yes, it's true because there are some things that you cannot do without. Being in close contact with the patient for confidential and other information, you cannot keep a distance from the patient to get information from a patient so have to be at the same level as the patient. We've got to come close to the patient so you can share the confidential information with the patient and that was not possible with COVID being in place”. (P2)

Physical contact such as touching which was necessary for certain examinations could not be done.

“They (patients) are tested, that require you to be in contact with the person and requires you to touch the patient. Otherwise, except for some assessment you cannot assess the patient properly the way it should be done without being in contact with the patient. So that was all like different”. (P2)

Less personal communication had to be minimised and it was also difficult to talk more whilst wearing masks.

“Yes, it did due to social distancing and wearing of masks, it wasn't easy to have a conversation with patients, so it was mostly the important stuff that you used to talk about. The conversations that we would normally have been a bit difficult to engage with patient”. (P5)

4.5.3 Interaction with friends

Interaction with friends also decreased. However, friends in healthcare seemed more understanding than those not in healthcare. Healthcare friends were knowledgeable about the pandemic and hence conversations were easier to have.

4.5.3.1 Healthcare friends

The healthcare workers could relate with their experiences and understanding of the field and the risks involved. It was easier to share experiences and concerns.

“You had more you could relate more with those in the field who understood the severity even with the loss, the losing of patients and staff, you know”. (P1)

“Yes, yes, I do have friends in medical. It was easier and we were in this together, I remember I was still in some other units doing sessions (part time) there, we found out that three of our colleagues were infected same time. You know it was difficult. That time we were so scared”. (P6)

“I think so, because the ones in healthcare, they understood what you were going through. And we will always talking about COVID, they could relate, where the others, I don't know what happened, but we didn't have anything to talk about”. (P7)

Healthcare workers also understood the value of the vaccines and saw the importance of taking it.

“Yes, that is true because those who are less knowledgeable about the disease wouldn't care, much like in my family, it took them very long to take the vaccination. (didn't take it seriously). Actually, they had to vaccinate because some of them had to apply for jobs and those jobs needed them to vaccinate, otherwise they wouldn't take it as serious as those who are in the healthcare facility”. (P2)

“From the medical side, they took the vaccine seriously whereas the other group of friends, I think because of social media and stuff it took sometimes for them to actually see the importance of it”. (P8)

Healthcare workers were more knowledgeable of the pandemic and therefore more cautious.

“I think they both knew, but obviously for those in healthcare it was I think they were more cautious compared to those that were not in healthcare because those in healthcare they were experiencing it, they had to be there to really understand the severity of the whole thing. So I'll say those in healthcare, knew better than those that were not in healthcare”. (P3)

“They did because they didn't know exactly what was going on, unlike us who were in the in the medical facility where we could see what was going on and the numbers increasing and everything”. (P4)

Healthcare workers also gave their support more easily because they understood the implications of the pandemic.

“I found that it is easier during the time to get support from them rather than the friends that were not in the healthcare”. (P1)

“Yes, because those in the healthcare was easier because we share the same whether it was lack of understanding we share the same thing or understanding or wanting the support wise. That's the only support you can have from the person who's going through the same thing”. (P1)

4.5.3.2 Non-Healthcare friends

Non- healthcare friends, however, were more challenging to deal with and this therefore led to a lack of interaction.

There was an overall lack of interaction due to social distancing. Also, it was a very busy time for health workers and there was no time for interaction.

“But we all understood because of the medical field that we all come from and those few that aren't in the medical field there was no interaction because I think because of the exposure”. (P1)

“Going out or time out was limited during the COVID. So, the number of friends decreased because there wasn't much interaction with people from outside the family”. (P2)

“No, I didn't have friends that time. Yes, it was so bad. I didn't have friends because, you know, because I was trying to protect them from myself”. (P4)

“There was no time to spend with friends because it was lock down and things, there was no time to spend with friends. There was no time to distress”. (P5)

Because we used to see each other, so now that we have to call or WhatsApp each other, we couldn't get to that. So, I think we didn't, we couldn't adjust to that. So yeah, during covid I lost a lot of friendships because there was a lot going on. I couldn't maintain my friendships”. (P7)

“I had to cut friends Rakhee because I had to minimize visit like visitors at home. So I had to cut some of the friends due to social distancing”. (P9)

There were also anxieties as people felt stressed all the time and detached from interaction.

“So it was a bit hard because everyone was stressed about the pandemic and most of them are not in healthcare, yes. So, they were worried about losing their jobs and things like that which also affected me because I was also worried for them. They were also not able to come to see me. So, we can't talk about all these things in person. So, it was a bit hard. We had to rely on social media and calls for communication.” (P3)

“Mostly what we hear was the anxiety from the people, so you avoid Talking to people until such time someone would send you a message that someone had passed away. So, I think during that time, we were, I wouldn't say isolated, but I think closed off because you're trying to shield yourself from whatever bad news that you would get”. (P5)

“They thought we are the one who will infect them”. (P6)

Virtual communication was the primary means of interaction.

“It affected us because a lot of my friends that I live with around here were not able to see me. So, we ended up only communicating through social medias”. (P3)

“I did mention that there was a thing people fear that you bring COVID to them. So, I think even with my friends, we started communicating more via our phones then face to face meeting. Actually, at some point I didn't see my friends for a couple of months”. (P8)

Some friends also had trust issues with participants as they didn't believe in COVID-19 and felt that they were being imposed upon.

“It did. They didn't trust me. I can say that they didn't trust me. they didn't even know or don't believe in COVID things So i had to explain now and again. why are you doing this? Why you are asking for them not to talk to me. If you don't wear your mask, why am I wearing a mask, where does this thing come from? How does it go from person to person”. (P6)

Some friendships were lost due to the inability to keep up with interactions.

“I think it's the same with the family. I couldn't see my friends cause most of them didn't stay around so I couldn't see my friend, actually lost a lot of friendships during the covid times Because we lost contact Couldn't keep up with the WhatsApp and calls”. (P7)

One participant mentioned that they detached from interaction to protect themselves as well as their friends.

“It just worked out, but it was a choice. Also, I felt as well at home also had a pregnant wife and kids and also having to come from work. So, it was something that also between myself and them as well”. (P8)

4.5.4 Interactions with colleagues

When it came to interaction at work with work colleagues, this also took a downward turn. In dialysis facilities, socialising with colleagues is normal due to the long working hours that the dialysis facility operates in which are from 5h30am till 20h30pm. Interactions amongst colleagues during working hours

and after work socialising were impacted because of the new work policies and advice from global experts regarding precautionary measures.

There was an overall lack of socialising at work. This was informed by the following factors.

Lunch breaks used to be a time to socialise with fellow colleagues, but not during COVID-19. Staff had to take breaks separately. This hindered communication. Lunches could not even be shared like before.

“We were not allowed to have lunch breaks together as we had to take out our masks and then that’s not good. You cannot share your social life as you used to be”. (P2)

“It also it did, because at first before the pandemic, usually when we have coffee breaks maybe two or three will go at the same time to have coffee. Now, during the pandemic we had to take turns”. (P3)

“Yes, like you'd have your lunch alone. You can't even share lunch with Colleagues”. (P5)

“The way we handled things come into play like how to go for your lunch, how to go for your tea. You must go one by one so that we observe and adhere with the rules from the management when it comes to Coronavirus”. (P6)

“And going alone to tea, not with anybody, all those. We can't even visit each other during our off days. You know all those things”. (P2)

“Lunch breaks, that was impacted because now we had to. You must go on a lunch alone and didn't have to sit for a long time. Just had to take a short break and then attend the patients as well. So yeah, there was a disruption of our lunch breaks”. (P7)

“During mealtimes, it meant that we couldn't all eat together. So we had to take turns so it would be one person at a time. We spend less and less time Interacting”. (P8)

“Communication. So they we we no longer doing that anymore. We have to cut number of staff, so we know we we normally go maybe two or three staff, but now it's no longer like that. It's one. You go to lunch alone, you finish, you come back, and the other staff goes”. (P9)

There was also a lack of close and personal conversations that staff were accustomed to. This led to a feeling of isolation and lack of collegiality.

“One person has to go and also the social distancing, so it did affect us, we were not as close as we used to be during that time”. (P3)

“OK. It’s because of the lack of communication and the checking up and expressing yourself and talking about the day or your weekend”. (P3)

“Yes, we could. We could communicate and handover and stuff, but it wasn't the same as how it was before the pandemic because with social distancing, we have to be seated apart from each other”. (P5)

“OK, so it was much more like a strict kind of situation where you couldn't even share your feelings or have those little, small talks”. (P5)

“Yes, it made it so difficult because you couldn’t even share the jokes that would normally share”. (P5)

“Yes, because there's no hug, nothing, because we need to have that social distancing, you know”. (P9)

Socialising with work colleague’s afterhours also became redundant.

“And well, some colleagues will go out after work, they still like to spend some time together just to, you know, just to chill and know each other, but you can't do that now”. (P1)

Physical distance had to be imposed even at work.

Workers had to work in designated spaces and could not work together like before.

“Whether it’s how we have our lunch breaks one person at a time. Even in the units, If one person is on the floor, the other person is on the duty station. So, you find that you're not talking as often or interacting with each other as often as we'd like to”. (P1)

“So, we try to minimize as being in the same place as much as possible where we can”. (P1)

“Because, like handover because we used to have a designated duty station, now we would like take handover one on one”. (P2)

“It didn't change our interaction with the colleagues except one thing in our nursing station or where we received handovers now we had to the social distancing thing also coming into play”. (P6)

“It was difficult because even in the working area, by the nurses' station, we have to add more chairs so that we can sit in two separate places just to maintain that social distancing”. (P9)

Even if some were in the same spaces, social distancing protocols needed to be followed.

“Yes, that's true, because again with the social distancing. That's the pandemic has caused, even in in the workplace, we have to social distance as much as we can”. (P1)

“So it's more like the same is with the patient. You don't want to pick anything from anyone and take it back home.” (P2)

“For instance, in the normal cases will sit around at the duty station or when we're going to have meals would go socialize and have meals together in the staff area during the pandemic. It meant us now having to sit, having to create distances between us.” (P8)

There was a feeling of isolation as people could not talk and interact with each other as before. Some had to also take rotational breaks which at times didn't suit them.

“This was impossible and we cannot go on lunch together. So we have to have set times for taking our lunch breaks, even though if that particular time doesn't suit you, but as long as it is allocated for you, you had to take it”. (P2)

“It does make you feel a bit isolated for one, when you with your colleagues and you interacting and you working time goes a bit faster. So now when you are alone most of the time you try and isolate yourself as much as possible. So, you become conscious of time as well. So time tends to drag a bit as well”. (P8)

Whilst online communication and interaction was used, it didn't replace the closeness of physical interaction.

“Now we're not being physical, we more being virtual as much as we can. So it does cause less of interaction”. (P1)

“Yes it did, but not that much. Even with the colleagues, we didn't have much of the time to spend together as groups because we have to keep our distance and also it impacted on us because we couldn't see each other as now the meetings were done online so we couldn't see Our Colleagues”. (P7)

4.5.5 Availability of the company's management

This subtheme was crucial in establishing the interaction between workers and management especially in terms of availability.

There was undoubtedly limited physical interaction with management. This was informed by the following.

There was limited physical availability of management due to restrictions. Managers were coming occasionally and not on an everyday basis.

“But during the pandemic you don't see your management physically, as often as maybe you did before, so now it's more virtual things”. (P1)

“they may pick up on some things that you may have not mentioned when there were around to pop in even with the staff, sometimes they will do those random visits, now you unable to have those. So, it did kind of like restricts the availability, they have to check everyone availability”. (P1)

“yes, we couldn't see them for like months. So, we would depend on the other ways of communication”. (P2)

“Some of the management had to work from home, so we didn't see them as often as we used to because they normally come to our unit and now during the COVID they were working from home. But they did try to be available for us Online, though, so it was different”. (P7)

Relating to the above, contact was hence limited from a physical perspective. Physical interactions were not as long even when they did come into the unit.

“It wasn't. I wouldn't say it was affected because access to most was still the same. We wouldn't see each other that much. It's just that with social distancing, they wouldn't come in as often as they would, but still access to them as they are the same because we would communicate maybe on daily basis”. (P5)

“I don't want to say we saw less of them. Yes we did see them but was more virtually. even when they came in, it was the same thing as what we had with our colleagues you couldn't interact longer with them like how you would normally do”. (P8)

Virtual interaction was the most prominent but did come with it fair number of issues and challenges. The most common virtual platforms included WhatsApp, ZOOM, Teams and email. WhatsApp Groups seemed to be effective and mainly used for continuous contact.

“You know, we on groups we on zoom, so you do get to communicate with them”. (P1)

“Normally our management will come most of the time to check on us and also there will always be in the work environment but during the pandemic we had to communicate with them only through calls and WhatsApp messaging and emails. Things like that which wasn't A big problem also, but it changed in a sense that we didn't have like physical interactions with them”. (P3)

“No, it was addressed like how would normally do, because we had WhatsApp group”. (P5)

“it wasn't difficult because we use electronics now. They were always available when you on the phones or on emails and everything. They come now and then to check on us. It wasn't that much of an issue to get access to them”. (P6)

“We try to use our WhatsApp as a means of communication more than in terms of writing of e-mail, printing out pages and handing out notices”. (P8)

Virtual meetings were also done instead of face-to-face.

“trying to limit contact meant there were some changes where the company management, most of the things instead of communicating via having face to face meetings we started having virtual meetings”. (P8)

However, data was very expensive for ongoing virtual communication/interaction.

“Hey, it was very difficult because we had to use the Internet to get hold of them because they were working from home most of the time. So to limit the staff on duty, it was very expensive. The data is very expensive”. (P9)

There were also technology limitations such as network problems and this will delay feedback.

“Sometimes the technology will fail you and it will delay things that should have been not delayed if there was no pandemic and they were around. It wasn't like you can speak to them like face to face and (query) whatever you require”. (P2)

“They were responding on time, but sometimes the network problem here and there is”. (P9)

Sometimes, key items could be missed or misunderstood during virtual communications. In physical communication, such things can be clarified.

“Because sometimes having to do things virtually rather than physically, sometimes you miss something, whereas if you don't mention something and when you're management comes through and they physically”. (P1)

There were also delays in response times using technology. For example, an email can be sent but the response may take time. Whereas in physical environment, one could go to the office next door for immediate feedback.

“Yeah, I was saying that sometimes we had the big challenges because you will send an e-mail and maybe it will take some time for the management to respond to your concern. So it was better before COVID”. (P7)

“Look at first, I think initially things would be slower because It's obviously changes. I think from being used to going to the next door to the office and talking so it meant not yet used to virtual or to use phones to communicate”. (P8)

4.6 Coping and balance

This subtheme was important is examining how participants resorted to coping and balance during the pandemic. Balancing work and personal life proved to be a challenging task for participants as health workers.

4.6.1 Balance

Participants found it difficult to focus more on their personal lives due to the high demands of their work. As healthcare workers, they could not work from home and had to be on the frontline. Some had to work overtime and even when they got home, they were tired and needed time to recharge rather than enjoy personal time. They were also feeling isolated.

“There was no personal life through this pandemic. There was no personal life. The thing I know, most people that weren't in the health profession, they tried to do things at home, they started baking, and they started doing other. You couldn't in our field was just work, work, work, work, work. So, the personal life had to take a backseat”. (P1)

“Like I was deprived of the privilege of being with my family, my baby. Because of the Overtime So I had to work, it got busy so there was less time spend with my family as compared to when there was no pandemic”. (P2)

“Though there was no personal life at that time. As I told you, I had to see my friends after three months, even my family, I didn't go and see them every week. So my personal life was just me alone”. (P6)

“Relaxing, sitting when I'm off, Not going anywhere, not with anyone, watching movie or on TV looking what is happening, the stats and everything, there no balance, just difficult”. (P6)

It was hard to interact with family and friends due to healthcare workers needing to prevent exposure to others. Due to their line of work, they could be carriers of the virus. In addition, they did not wish to contract the virus elsewhere and spread to their patients.

“Yeah, I think it was a challenge, especially initially as well because you would go to work. And even when you are around home, you also don't want to get too close, interact with your family, knowing that you are coming from work and have been exposed”. (P8)

“Yes, I did. I remember also having too, I think when we had our first case, a patient who tested positive and needed to be dialysed, I had to do that patient. So it was actually the first time that I was that close to somebody that had covid and also while you trying to deal with that you also trying to convince your People, our family, people at home that everything is fine. It meant me trying to convince myself and at the same time Also trying to convince my family members as well that no, everything is fine, everything is going to be OK you know you're using Full PPE, everything”. (P8)

“Yeah, because I had to limit my personal life so that I can be protected. And then there to protect my patients too”. (P9)

Even in their spare time, Participant were always worried about work and communicating with work colleagues and patients.

“It was hard to balance because working under those condition when you get home, it was difficult. There was no time to say I'm off duty now because even in your mind, whatever that's happening at work, you think about it and you find patient communicating more with you, even when you're at home”. (P5)

“Yeah, I don't think we had the personal life during covid. It was only work. Just, just work, work, work. I didn't have much of a personal life. We couldn't plan”. (P7)

Participants had to work extra hours and overtime during the pandemic, thereby minimising personal time.

“Because it did, because now you have to implement more duties and more responsibilities, extra care”. (P1)

“So it does affect your working environments with your colleagues because in the dialysis unit our hours are already so stretched. So now with the pandemic we had to work even extra hours”. (P1)

4.6.2 Coping mechanisms

This theme examined the coping mechanisms used by participants during the pandemic.

Relaxing activities also served to alleviate stress and allow one to cope. Exercise and fitness activities such as walking was good for the body and mind.

“I used to exercise a lot because in my free time I didn't have, like anyone around me. Like I said before, at home I used to isolate myself from the family due to me being a healthcare worker. so what used to help me cope is to keep myself fit, you know, that was the coping mechanism that I used”. (P4)

“I develop a hobby Just to cope with this, the gym”. (P6)

“I started jogging. So I started jogging and taking the walks along the beach Alone, of course”. (P7)

Adequate sleeping was also good for resting the body and the mind.

“Well, usually when I'm off, when I'm not working, I limit my sleep. I don't sleep during the day but during that time, I had to sleep, I had to force myself to sleep”. (P6)

For some, coping revolved around their families and personal efforts. Setting time aside for family was important. This allowed for relaxation and recharge.

“Those precious time so you learn to detach yourself from work. So when you're at home and I think that's what worked, when you at home to spend the time with your family, you with your friends, your kids, your loved ones. Just to spend that time, it helped you relax and separates those emotions that you are feeling at work so that for the next day, I guess it kind of recharges you”. (P1)

Entertainment at home such as watching movies with family and listening to music was a good form of relaxation.

“Mostly entertainment such as watching movies, series, music”. (P3)

“I think there's nothing that beats coming home and seeing your kids. Well, I know one of the things that even though we try to keep our distance and stuff. But then the time

that we got, I think from the lock down we got in the habit of watching movies., So we had special days, Dates like movie night, that's on its own also helped you relax a bit. Take your mind off what is happening. You know outside of work, when you at home with your family and doing all these things". (P8)

Some participants turned to the media to stay informed. It was important to be informed with the correct news and information and obtain updates.

"I think that I coped well with the information that was given. I was only watching the news. I only stick to the news just that with the social media they could be doing something else and then you will see an article of the fake news. So, we end up reading the article, was stressing me though, especially the beginning of the virus because we didn't have much solutions. At that time, only the updates, that's the numbers are increasing. So, it was very stressful". (P7)

Social media was always abuzz, but participants treated information with discretion.

"Social media went both ways for me. So I never stopped reading. it would depend on the information that I'm getting there, it either would put it on the negative or on the positive, whether I take it or I don't take it". (P2)

Health workers did not have to follow queues in terms of shopping and other things. They were given privileges/ "rewards" due to dependency on them and the need for them to be at work and on the frontline.

"At that time everybody was so frustrated. You can't enter the store as you'd like to enter the store, so you'd have to take long queues and as a healthcare profession, they let you through. So those who are standing there are so frustrated that they don't care that you were helping other people. You were helping the sick. They don't care. They want go into a shop and buy. So you'd see the stares from people who are standing in the queues that they're so frustrated and upset with you just allowed through". (P1)

"Yes, it was. When we in the pandemic, especially if you were in uniform. When it comes to shopping, we weren't taking the long queues, they let us through. So that was helpful because while other people are at home, you are working long hours every single day. So, to have to still go and stand in queues would have been frustrating". (P2)

“The other benefit is during lockdown, there were longer lines in shops, in garage and things like that. So, when you wearing scrubs, when they realized that you are healthcare worker, they will actually tell you not to even standing in in the line, you'll automatically go to the store and get whatever you need. So that was for me, the best benefits of them all”. (P3)

“I know like certain shops and things like that allowed the health care worker to go in first, or they gave them like discounts on meals”. (P4)

“Yes, I did. The queues. We would produce (proof of being a healthcare worker) and then cut the ques”. (P5)

“the one at Oxford, the grocery shop, I didn't have to stand in the queue. I think that advantage of also being in the frontline it' also helped you wanting to know more about the virus”. (P8)

Some were also shown appreciation at the place of work and from the public.

“I'll say most of the people, they don't take us as important, as much as the profession is important. But during that (COVID) time, we were recognized, and we were given our position and we were appreciated in the way so that used to make me feel special and be thankful as well”. (P4)

The lockdown did allow for new skills to be learnt. One participant learnt how to bake which was leisurely skill.

“The new skill I'd say I gained skill of being a Baker. I'm a good Baker now, even if I have to say myself. So yeah, I think”. (P5)

Participants also learnt new knowledge about the pandemic and new ways to deal with it even from a medical perspective.

“Yes, absolutely. It's making me feel positive about the whole situation, Learning. Learning and being interacting with the doctors out there”. (P2)

“But as you page through and for some other pages would find that they're promising some cures and they mentioned some big vitamins or stuff that you can take and then that would keep you going that there must be something for this thing that could cure this thing. It's reading a lot in there”. (P2)

The scientific developments did have an impact on wellbeing as affirmed by participants. The lockdown and social distancing were recommendations brought about from scientific research on mitigating the spread of the virus.

“All this intervention I think it’s things that we needed to adapt to. It was changes so it did give a bit of hope. The first incident we had a total shut down. The lockdown. You know everybody Had to isolate”. (P8)

“Mentioned is like social distancing”. (P9)

Masks and PPE ensured protection of healthcare workers. These items were the products of scientific development and research.

“The mask the social distance and things like that also went doing those things, they sort of like make feel safer as compared to when you are not doing them. So, they did make a difference in terms of how we were feeling before they were implemented”. (P3)

“If you wear the mask, if your healthcare workers wear the correct protective gears that used to allay that anxiety because you would know that as much as I’m dealing with the COVID positive people, but I am protected in the way due to the correct protective gears that you are wearing”. (P4)

Vaccines were the most highly ranked when it came to scientific developments. It had the most impact on participants’ wellbeing in the following ways.

It gave participants relief in a way knowing that the vaccine could protect them from contracting the virus. It also made them feel safer for the welfare of their families.

“I think it did impact on us, especially when the vaccination came, there was a sigh of relief. You know, there was that. There’s hope. You know, there’s a way forward. So, it’s did impact on my wellbeing because as soon as the vaccination came out and we got our jabs (vaccination) and then the patients got their jabs. So, with the information and then you’ve got a system in place it does kind of give you that sigh of relief that you know we’ve got this now under control. It’s being managed now”. (P1)

“Yes, I can say yeah, it was because you know, I’m one of the chronic patients, so you have to think about yourself. So I was taking the immune boost every day and I had to stay at home just to protect myself. So going to work and having interaction more freely with, family and patients (after vaccination). The vaccine, I can say it really helped me a lot. (Eased my anxiety) Because you gain that confidence and hope once you vaccinated”. (P9)

The vaccine was seen as an added form of prevention from contracting the virus and gave participants hope that if they did contract the virus, they wouldn’t have severe illness.

“Cause especially for the vaccination. I feel like it did make huge difference when we were vaccinated”. (P3)

“If you do this, this could prevent you from getting the virus if you vaccinate.” (P4)

“But as the time passed by, it’s got better and yes, when the vacs came at first, we weren’t sure if we should take the vaccine or not. But when I was vaccinated, I was at ease, I actually had hope that, since I’ve vaccinated, even if I get the virus, it won’t be that sick. It won’t be worse”. (P7)

“Definitely having something like the things like vaccines being introduced meant that there was a bit of hope. You know it even though it wasn’t a cure as such, but it meant there’s hope you know way there is at least something that’s that. That’s, you know, if you take it, you have a bit of resistance to the virus. It did bring hope”. (P8)

“I wasn’t at ease until after vaccination. That’s when I was fine with everything and to my surprise, I only get infected (with covid) after vaccination. So, I was just hoping and praying that I shouldn’t get infected before the vaccination, so I think those measures play important role to my understanding of this and to everything, to ease that anxiety”. (P6)

The vaccine also minimised fear of the virus for participants whereby they could feel more confident going out in public.

“Having things like vaccination when the vaccinations started early, kind of eliminated the fear in me that at least there’s something that I can do now to prevent myself from getting this thing. Using the mask all the time and I’m still using it, it also was giving me some Courage to face the world that at least I know if I’m on this, I’m not at much risk of getting the disease.

So, it did take some part in eliminating the fear that I had When initially, when the pandemic started". (P2)

For one participant, it was more of a personal journey, and was about using one's own coping mechanisms and giving off one's best.

"I say it as a personal thing that you do on your own, because there's no supports systems that you go through, so you wake up each day saying, you know, we all have our different rituals, I guess, or different routines in my cases, you just wake up and I'm going to do my best". (P1)

It was also a mind-set thing, whereby, a positive and hopeful mind-set could help one get through each day.

"You know, I'm going to do my best. So, every day that you wake up, I'm going to give it my best. I'm going to try implement all that I know, so that even if you come home with some bad results or some sad news, but you know that I tried, and I gave it all that I could. So, you wake up and you're psych yourself". (P1)

Participants also turned to spirituality (which is further discussed in the Religion, culture and spirituality theme). Meditation and prayer allowed for participants to seek spiritual closure and answers (which is further discussed under the Religion, culture and spirituality theme).

"Meditation that alone time like that we talked about. Like our meditate, look more deeply into my spiritual life and all that so There was many". (P3)

"I think that taught me to become my own friend. To depend on myself. And to also see that some of the friendship that I lost there were actually meant to end. So, 2020, taught me a lot. And especially with my spiritual life. Learning to spend more time with God, which was something I didn't know. So in 2020, that's when I had an encounter with God". (P7)

"It was prayer because prayer conquers all". (P9)

4.7.1 Workplace support to assist in managing during pandemic

This subtheme examined the support in the workplace to assist in managing during the pandemic. Considering that the work environment is the most likely and logical way for participants to be infected with the virus, the type of support that was available from management and colleagues during the pandemic was important.

However, a considerable number of employees indicated that there was a lack of support. This indicated that more support was needed. There were more informal mechanisms in place amongst colleagues and management but minimal formal. Providing adequate PPE was also viewed as a means of support.

“Well, I don't think we had that”. (P1)

“I'm trying to think through, if there was anything cause Work was continuing, it was work as usual Except for providing the PPE, additional PPE, but other than that, I cannot think of anything else”. (P2)

“That there was nothing formal to prepare you for this type of thing”. (P5)

“Informal yes. Nothing formal, informal in terms of I think everybody from the management people, even though it was difficult to meet, but over the phone and stuff like that, it was always difficult to talk. communication was there, you know, like they would support. I think we did get support also between colleagues, between ourselves as colleagues would also be able to interact and support each other”. (P8)

Considerable information about the pandemic was circulated which allowed for healthcare workers to stay informed all the time.

“We are also given information like I just stated we were giving enough information, the videos, the training and everything, so the information was the adequate information was there”. (P3)

“You see these things day in and day out so if you're going to need counselling, it means going to need counselling each and every day. So, we were so fortunate, we were so lucky that the management keep on sending us information about this, you know reading, and knowing what is happening and doing what is best for the company, I think it was the best thing because obviously Who's going to give you counselling in terms like that? There was no one who was willing to move to other people, especially to the people like us who are Day in, day out, see these patients that has covid or they might have covid”. (P6)

“They made sure that we have access to the information. We have the groups, the group chats on WhatsApp, so they'll normally send the information when it comes out and they make sure that we have the training maybe once a week about any the new updates”. (P7)

“also, online trainings as well about the COVID. I think those did help”. (P8)

Ample PPE was provided which served a strong protection measure.

“That we were provided the PPE. Enough PPE”. (P3)

“Maybe emotional or This is why I asked you to elaborate what type of support you're talking about, because when it comes to things like protection? Yes, we were given like enough PPE's”. (P5)

“And so in other places they were they have they had two to reuse the PPE due to the global shortage. You remember there was a shortage too so they had to reuse the PPE and the sustainability of the healthcare system it was very difficult”. (P9)

COVID-19 protocols were provided and adhered to, to ensure everyone was protected. Protocols were important and had to be continuously updated as new information about COVID-19 became available, therefore it became a critical aspect in keeping participants and patients safe at work.

“There were interventions, the way there were protocols that were put in place to safeguard all of us. We had to introduce things like temperature checking's, the COVID screenings we have to introduce, Sanitize, you know, like regular, even though you work in a medical setting, you will sensitize more. There was fogging in between sessions”. (P8)

Staff also were able to alternate in their shifts as so everyone could get time to take a break and re-energise.

“You know, people aren't the same and we handle difficulties differently. So you could see when your colleague you know is feeling drained or emotional during that time. So, we used to alternate even in nursing the COVID positive patient, you cannot have one employee nursing the COVID patient like maybe the whole week, So we used to alternate each other and we used to talk, encourage people to talk and share their emotions and everything”. (P4)

“It was arrangement among the staff members”. (P4)

One participant mentioned that transport was provided to patients to minimise the use of public transport which was riskier. Patients were also amongst the higher risks or amongst the most vulnerable to developing severe illness if infected with the virus, hence protecting patients from added exposure to virus also indirectly meant protecting participants.

“The company offered patients a transport so that they stop using the public transport and to protect them from getting affected”. (P9)

4.7.2 Governmental support to assist navigating through the pandemic

Governmental support was available to a certain degree but was mostly lacking. They mainly provided information which was not adequate for the community, and more was needed. Services offered like testing were limited, not effective and poorly managed, like an instance were a participant, being a healthcare worker, was tested for COVID-19 and still did not receive results so there was no consistency regarding healthcare workers being given priority when it came to being tested and obtaining results.

A majority of participants mentioned that governmental support was either non-existent or lacking.

“There aren't any that I know of because even I think at that time the government would just put on WhatsApp number as a group, but there were more I think information And I'm not sure if it was easy for you to get the response as quick as you'd wanted to. At that time that's the only thing that I did know all”. (P1)

“There was nothing from the government side because I remember they once came when they were doing the COVID test for the community like they were testing everyone. They couldn't even give the results back. I was only tested, but I never got the results so from the government side, I don't think there was any Supports that was given or that was accessible”. (P5)

“But that information, I feel it wasn't readily available to the public. It means somebody to go and take a few steps to just find out about it rather than it being readily available”. (P8)

“No, unfortunately, no. We didn't get any kind of support”. (P9)

“Even vaccination, you must do that yourself. I'm sorry I didn't get any (support)”. (P9)

However, some did find the online educational programmes useful as well as the information provided via various channels. There were also phone numbers given to obtain more information.

“No, it was only the educational programs from the websites. Government educational programs. This is the only thing I can think of that government provided me with”. (P2)

“What I did experience from the government in terms of support of help is maybe when you're going for COVID testing in the public sector. You are taken as a first priority if you are a healthcare worker. In terms of information Yes, information mostly from the media”. (P6)

“Oh, I think the only thing that I can remember is just there were telephones numbers that were given that you can phone and ask any questions. If you have questions and even with the information you said and they gave us the numbers you can call if you wanted to ask about anything”. (P7)

Government did initiate the vaccination drive which was acknowledged. Vaccination was perceived as the most effective means of being protected against COVID-19.

“The fact that the vaccination was free. I think that might have been the best support, but I really can't think of anything else”. (P3)

One participant did mention that something called the COVID-19 relief fund did serve as a benefit.

“The token of appreciation they did give us, which they used to call it the COVID Relief Fund, Yes, we did get that”. (P4)

There were some PPE that was provided by government to healthcare workers in the government sector.

“The supports that they offered was the PPE were there. We never had the lack of protective gears (in the private sector at work)”. (P4)

Contact tracing was also being done but it was not publicised enough to make it effective so even if it was available, it was not easily accessible.

“To be quite honest from government I know that the way those contact tracing and stuff like that, but if you notice me trying to think hard, it actually means that I don't think they did enough work. Like sort of advertise that support. I think it was something that you had to find yourself”. (P8)

4.7.3 Medical Aid Support

This subtheme examined the medical aid support aspect which is a paid subscription by members registered. However, support also seemed to lack holistically. Support was primarily in the form of information and updates by means of messaging and social media services that were accessible.

“I am on the medical aid. I was on the medical aid even during that time. And they used to share relevant information which used to help us in a way, which was very helpful. They used to give us something that you can pass on to someone else you know. The medical aid plan and the medical funders did play a huge role during that time. It was available and accessible because they used to forward us on our cell phones”. (P4)

“They always send me the message I’m on discovery. They always send the messages about What is happening around COVID thing, but I never have something that they said they would help me with”. (P6)

“I know My medical aid sent me information as well About the COVID, about the virus and also information about should you require I think assistance with the isolation and all my particular medical aid also offered”. (P8)

The medical aid paid for the relevant vaccinations. Prior to the implementation of COVID-19 vaccination, everyone was advised to take the flu vaccination as a precautionary measure, so the flu vaccinations and COVID-19 vaccination were being promoted to ensure more people take it by making it part of the medical aid service to their members at no extra cost.

“Try to make things easier for us, maybe by saying they're not going charge us to get vaccinated, but nothing with mental health and that's what I'm saying. It was more basically in those aspects, but not necessarily somebody to reach out to or to speak to”. (P1)

“We were able to take the flu vaccine before the Coronavirus vaccine was implemented. So, I think that’s the only support I could recall”. (P3)

“The only thing that they provide was when I went for vaccination”. (P6)

Discounts were offered at certain places in the event that members wanted to self-isolate away from family.

“Also had places where they could give you discounts if needed to isolate yourself”. (P8)

Testing for COVID-19 was covered to a certain degree, however only to a point, before participants had to pay.

“I think the only covered two test and then for the third one you to pay it on your own”. (P7)

“I remember because I was dealing with the other stuff, so now I ended up owing to the labs If they didn't cover my test. Then they only covered 2 because I think I was admitted three times during that time So now I had to do the covid test using my own money. I feel like they should have covered all the test”. (P7)

Some toll-free lines were provided for information and support.

“The web toll free lines the way you could call, and you know to share your experience. Tell them how you feel, give you that support. Yes, especially on medical funders that I was with. It was free”. (P4)

“They did send numbers that you could call for those searching”. (P8)

Some participants did mention that the medical aid did not provide psychological/mental health support. This was therefore lacking.

“Nothing with mental health and get that that's what I'm saying. it was more basically on that end on those aspects, but not necessarily somebody to reach out to or to speak to”. (P1)

“I doubt there is that type of help available. If there was, then I wasn't aware about it”. (P3)

However, one participant made a strong point that the medical aid is a ‘paid’ service and not free. Hence, even testing and vaccination was paid for by medical aid funds which participants had to contribute towards anyway. If they ran out of funds, then one would have to still pay cash.

“Maybe they should have been some sort of support, but there was none because whatever you needed to do on the medical, I still have to pay for that. So if you didn't have funds, it wouldn't have been done. For example, you were only supposed to have a certain number of COVID tests Otherwise, you're supposed to pay cash for its where It could have been free. Maybe on medical

aid that you can have as many as you can if you feel you having a symptom, you can check and they were not supposed to say if you've had two, then the third one you will pay for it". (P5)

4.7.4 Factors preventing the seeking of support for wellbeing

The following were seen as key factors that could prevent participants from seeking necessary support.

The stigma was potentially there in the sense that if/when someone sought support, they could be perceived as being weak.

"You may not want to express exactly how you are feeling or because you're scared of getting into trouble or you're scared to come across that you're not strong enough to perform your duties or you're weak, you know? So, I do think that I'm coming across as being weak a person may feel as though it may put their job in jeopardy to express themselves". (P1)

"The stigma of being a healthcare professional. Well, just like if you going to go out there like you should, like take off your health care professional uniform and be like, anybody like the ordinary person. Because you're being stigmatized for bringing the healthcare professional". (P2)

Working hours were long and hence there was minimal time for self-care and support.

"It's the work hours they would restrict me from getting that online support". (P2)

It was also a monetary factor. Support was not always free and required money.

"For me it's only financial. It will only be finances if I can afford the support then that will only be the thing that stops me from getting it". (P3)

Also, social distancing also meant that some facilities and services could not be effectively accessed.

"Since during the pandemic, remember there was social distancing, so maybe you wouldn't be able to access Those facilities, because we had to social distance ourselves and then the time would also be a problem because you won't have time to go". (P5)

4.7.5 Proactive and Additional Support

This key subtheme examined the aspect of additional support needed and what could be done to be better prepared for similar pandemic occurrences. Additional support was much needed as outlined below in the plethora of factors. Emotional support seemed to rank the highest.

4.7.5.1 Emotional support

Emotional support was the highest ranked additional support needed as this was clearly lacking. The following was seen as crucial emotional support needed.

Counselling was needed for healthcare workers. Healthcare workers were exposed to different traumatic experiences daily, and this required debriefing and counselling.

“I think that we need the counselling sessions because we deal with a lot of things and also sometimes we have to deal with a lot of stuff and work and we are also going through some stuff even at home So we have a lot of things to deal with So I think the counselling is needed in the healthcare profession”. (P7)

“It should be done on the ongoing basis, but especially during COVID time, because we really need to be like someone to talk to us about this thing”. (P9)

“We really need the counselling because when someone has passed on then you go home. Then family members have passed on. So, there is a lot (to deal with). They should give us counselling”. (P9)

The added pressure and stress became overwhelming for healthcare workers. This also caused added anxiety, and emotional support was needed to cope.

“More specifically for healthcare workers in terms of emotional support, not just only for the pandemic, but also for their work as a whole. I feel like they under a lot of pressure they do need that kind of support to be readily available and to be also affordable, if not be free, if it's possible”. (P3)

“On an ongoing basis, we need counselling and the training as well because sometimes it's different. Sometimes they know how to deal with things, or we know how to handle situations, but sometimes it's just a lot So maybe a training Can help us as well on how to deal with the stressful situations, how to keep our calm. They will also need that”. (P7)

“Emotional support, if we if we had access to Maybe psychologist or someone to talk to as we were suffering from anxiety, so someone to offload to, or maybe give it like how you said a number where you can call if you were feeling overwhelmed”. (P5)

There needed to be added and easy platforms to access services through various channels and platforms.

“A channel. I think a channel where you can go, I think online is better because sometimes you know especially in the workplace and a person may not be comfortable to open up like that. Even if it's somebody external”. (P1)

“Anything that will get us mentally aligned with how things are now because the pandemic was something new to us that we had to deal with, so I think maybe if we were given a platform where we could express how we feel, I think that's what would have helped also”. (P5)

Emotional support could allow for healthcare workers to be able to give off their best as their emotional stress would be resolved.

“Do something about one's health and mental state. To feel that we can still enjoy what we do and give our best to our patients”. (P1)

There should be specific programmes implemented at the workplace especially for healthcare workers.

“Yeah, for me i still stand on emotional support. I feel like more programs should be implemented to help them. And, if maybe we find ourselves in the same situation as covid 19 pandemic, we will know how to handle it”. (P3)

4.7.5.2 Financial and resources

There should be financial and resource support for staff. While the focus was on ensuring there were no shortages of certain equipment and tools to manage the pandemic, more support regarding the mental wellbeing of participants was equally important for better patient care. Monetary incentives were also important as asserted by one participant.

“I think it would help. I think it would help just to balance it off because I think we focus more on making sure that especially the workplace will provide you with the necessary tools to fulfill your job, to provide the patients with the best care, equips you with the necessary tools. But I don't think we tap into how the person that has to perform this is”. (P1)

“Firstly, I think government must compensate the healthcare cause during the pandemic like this one for working during the pandemic. This one I think that would have a positive Impact on them and it would encourage them Very much. Yeah, it's money. That's number one”. (P2)

“The COVID-19 pandemic it did expose the healthcare facilities, the shortage of staff in the in the healthcare facilities, the shortage of working equipment, the shortage of nursing staff especially during that crisis situation I would say That's the supports that we may get help within the near future”. (P4)

4.7.5.3 Workplace programmes and trainings

Ongoing workplace programme and trainings were important so staff could stay up to date with relevant information and education.

“Trainings are regarding that pandemic that they're facing at that particular time With updates on what is going on as far as the pandemic Is concerned”. (P2)

“It would be much better if the training is very specific, cause as much as you got training from tertiary institution but the specific one for the particular disease that is being faced at that time would do much better compared to If you don't get anything, you just rely on information that you got from tertiary. You know the refresher trainings are always good”. (P2)

“I think they should be Programs that should be implemented in workplace and in also territory levels and also the government”. (P3)

“Provide training, give them access to therapy, the immune boosters that People were educated to use, I think that should have been Given free to all health care workers. Everyone that works for government or everyone that is a healthcare worker, I think maybe that's one thing that government should have offered everyone because Lots of people lost their lives in the government sector Because maybe if they had been given the immune boosters, it would have been better”. (P5)

4.7.5.4 Freedom of expression

One participant argued that staff should be allowed their ‘freedom of expression’, especially when they were feeling vulnerable due to the circumstance facing them as health-workers and being on the frontline.

“I think it's just being comfortable to express themselves or to be vulnerable. I think that is that is why I'm saying sometimes having an external somebody external to come and check on you, to come and speak to you individually or something like that”. (P1)

4.7.5.5 Government support

Government support was much needed in terms of vaccines and PPE. More PPE should also be provided as some participants mentioned that colleagues in the Government sector had to use the same masks on multiple days.

“It was because I think If workplace could be improved mostly in government because I know of the facilities where they had to go to work and there was not enough PPE. They had to use the mask For a few days, one mask , like the KN95, you can't discard it at the end of the day, if of the end of day you had to come back tomorrow and still use the same mask. So if those things should have been provided like how I said in my workplace, I felt safe. But I know of the healthcare facilities where they were, they didn't even feel safe because even the PPE was not provided”. (P5)

“I think the protective clothes are a bit expensive. Maybe if government can support the private companies with their protective clothes, maybe it would be better”. (P9)

“I can say that government must please protect the healthcare (workers) and Like I was saying before Give us the vaccine as soon as they hear something just to protect us and the PPE”. (P9)

“Everyone that works for government or everyone that works in a healthcare worker, I think maybe that's one thing that government should have offered everyone Because Lots of people lost their lives in the government sector Because maybe if they had been given the immune boosters, it's would have been better”. (P5)

Free testing should also be done, and this should not be paid for by healthcare workers. If testing was free, more people would test.

“The fact that we had to pay to get a Coronavirus test, I feel like it wasn't supposed to be like that. I feel like it's supposed to be free. It was supposed to be free”. (P3)

“I think healthcare should be allowed to test for the virus, for free. They shouldn't have to pay to be tested for the virus, it was very expensive”. (P3)

Transportation of healthcare workers was pertinent, and more transport should be provided from home to work and vice-versa. Public transport was risky both from a pandemic perspective and when working late hours. Public transport meant more interaction with the public, more exposure to the virus and more chances of infecting their family. The perception from people that healthcare workers were spreading the virus exposed them to death treats which made using public transport an added risk.

“And then I think it's providing for things like transport to work during the pandemic instead of using public transport because sometimes it was not safe for the healthcare professionals with those rumours that she should be finished off (killed). Provide things like transport during those times. It's transports, it's training and then it's compensation”. (P2)

“Yes, I think so. I think so. It was going to be beneficial if maybe there was a company transport that take us to work and take us back because most of our colleagues are using public transport and just to minimize all those interaction with the passengers and all those with the people, a lot of people, I think it will be easier if management provided them with transport because we heard some other companies, they even take their staff to the hotel to stay there Just to make them know from where you go and sleep, that you not going to interact with the outside people more until this pandemic has eased”. (P6)

“From work, you go home, you interact with a lot of people, especially if even if you do have your own transport, you know, I think they were supposed to separate them from the public. And then from my management Also, I think the transportation thing It was needed”. (P6)

4.7.6 Factors for being better prepared for the pandemic

This subtheme is on the key factors necessary for being better prepared for the pandemic.

4.7.6.1 Formal education - training from higher education

It was important to establish if formalised education or training was enough to be prepared for such a pandemic.

Even though enough theory was covered at tertiary level and various trainings, which entailed detailed textbook learnings, however, theory versus reality was very different. The textbook knowledge did not cater for every scenario and neither did it mentally prepare healthcare workers for dealing with such a pandemic. Most learnings dealt with predictable diseases, but the COVID-19 was unpredictable, easily spread, and difficult to contain.

“Like I was saying, you've got textbook theory and then when you put to practical practice it (it's easier). So, it prepares you should something especially in the dialysis field you know you go through in service training so that you know you cover things to prepare you for the future so with this if it was covered then I think we would have been better prepared mentally and equipment wise. I think the transition would have been smoother if it was there”. (P1)

“But I don't think something of this nature we were educated on, or we received training on because I think this was different from what we learned. it wasn't something that was worldwide because If I can make an example with maybe cholera, it would be something that would be in a certain area, so you'd know that you're safe. Those are the communicable diseases that we were educated on, not something that you, even healthcare worker, you would feel not safe”. (P5)

“Theoretically, we were told, but not prepared. I wasn't prepared. They taught us what happened when there is pandemic but now it's not always on the mind because we never experienced it. We never see it before. Even if they really taught us well about the pandemic, but now it changes when it comes to what kind of pandemic it is. Who was ready for Coronavirus? Maybe we would be ready if there maybe all pandemic like chicken pox, like polio Maybe all those. But this one it took us by surprise”. (P6)

“I think we just learn more about diseases and stuff, but not something as practical. I don't think there was something that prepared us for something like this”. (P8)

Relating to the above, Knowledge from trainings and tertiary did cover infectious diseases but was limited and not entirely applicable in case of COVID-19.

“I don't think so. I think they did provide a bit of information, but it wasn't as much. So, it was still sort of a shock when we're experiencing it because we're not aware that certain things like this could ever happen”. (P3)

“Not specifically COVID, but we used to be taught on how to manage the pandemics. Because there are different types of pandemics, but they weren't specific because we didn't know about Covid then, so we're quite aware that they are pandemics and there are structures on hand on how to go about in managing that pandemic”. (P4)

“Infectious diseases were covered during my higher education studies. But however, I was not expecting it to be like a pandemic thing. How are you going to safeguard yourself from getting infectious diseases? So, it was the same principle that you have to apply during the pandemic. So, I think it's what's kept me going because there are some guards against the disease that you can use to prevent yourself from getting it, so I can say, I was prepared”. (P2)

More test scenarios for this nature of pandemic are needed at tertiary levels and at trainings.

“A patient suddenly now go through such a case. So, when it comes to in different forms, you know the foundation and the basis of a patient not crashing (unconscious /unresponsive). This is what I do, so we needed something like that exclusively because you're in a healthcare profession. Even in dialysis, if something close (similar), you know as a healthcare profession should something like this ever happened, this is what you would need”. (P1)

4.7.6.2 Emotional support

Emotional support ranked highly, and this correlated to the theme above. Emotional support must become a key pillar for healthcare workers so they can become more prepared to handle the demands of such a pandemic. Even during the pandemic, there is a need to talk to someone to express themselves fully without any reservations as there are so many emotions and changes that are felt and participants felt isolated and alone.

“If that's like my only worry and OK, I'm not sure. And also, I feel like there was not adequate emotional support for healthcare professionals”. (P3)

“But emotional support which I feel is like the most important one, was not provided enough”.
(P3)

“Emotional support, if we had access to maybe psychologist or someone to talk to as we were suffering from anxiety, so someone to offload to, or maybe give it like how you said a number where you can call if you were feeling overwhelmed”. (P5)

“Yes, I think so. I think that will help us a lot and it will also save us time, because now we won't have to do the training when we are experiencing the disaster, so it's better to be on a training program. So, when the disaster comes, we know How to deal with it”. (P7)

“It is. So that's also have to come in terms of more knowledge educating people. So where they aware of what's happening. Support. We did mention earlier that We felt at some point isolated, So I think we know one thing about the change, about being isolated is that you tend to think too much, think a lot as well. That could also stress you out a bit. So, you do need some sort of Emotional or some sort of intervention”. (P8)

4.7.6.3 Specific trainings and knowledge

There should be specific trainings and specialised knowledge dissemination regarding the pandemic, and this should be done proactively so healthcare workers are well informed on the implications. This can also lead to proactive precautions like lessons learnt from even the existing pandemic from other countries since South Africa was not amongst the first few countries to be impacted by the COVID-19; the expectation is that they will be better prepared. There is also the need to be better prepared by being equipped with adequate knowledge and the tools needed on all potential pandemics like the monkey pox which was a concern.

“As the pandemic it was known way before it invaded our country. So, if maybe during that time when we knew that it has been identified in our in other countries, the knowledge was collected and Trainings were supplied and provided which are specific to that pandemic that we find ourselves facing that I think, that would have made things much easier”. (P2)

“It is needed. Most people lost loved ones during that times and they haven't recovered from that and that's still affecting them even today. And also, in healthcare practice we still need to be equipped with a knowledge even if it's not about covid, but we still need to be constantly equipped with the information that can help us in the future in terms of how we can handle the pandemics like COVID like right now, uh, there's this pandemic that is coming, which is a monkey pox, they say. So, we need to be fully aware on what to do and what to expect as the healthcare workers and how we can go about in managing that our pandemic”. (P4)

“Yeah, I think the knowledge. Really knowledge was needed even if there was no recent pandemic like this one before. Before it, before the coverage, I think the knowledge was supposed to be constantly on, on the syllabus or on top with the health profession”. (P6)

“Yes, maybe if we were taught during our varsity times that would have helped us to cope with the situation. Maybe they need to implement that”. (P7)

4.7.6.4 Technology skills

The current pandemic created a sudden shift to the online world, and everyone had to adapt suddenly. Hence this has demonstrated that it is important for healthcare workers to have technology skills to be ready for the same in the future.

“I think tertiary I suppose more, more education and also there is things we are all not Computer literate. These things that you know, like the pandemic, meant that people had to conduct ourselves or communicate via Other forms of like virtual Technology So maybe also introducing more people, more exposure to technology that's available so things like that. So that it prepares you. In terms of when you need to isolate yourself, but that also at the same time having to be able to live life as normal, like working virtually”. (P8)

“We have people that are used to going to shops, you know, like when you want to buy things we used to just go to a shop and come back. So maybe also introducing things like more of the Online shopping as well, I think that should actually prevent people from gatherings And also I think from the government side as well, I felt there are things like people that get grants, people are so used to have this mentality that to get grant meant that they had to stand in front of long queues For them to get their money, cash So I felt that they also needed to introduce things like technology there as well, where people Use more Internet, more technology wise where they can”. (P8)

4.7.6.5 Unanticipated

Two Participants felt that there is nothing that can/could be done to be prepare them because the pandemic was something out of the ordinary and nobody could anticipate it.

“I'll say nothing. You know why? Because it was the first time, we were experiencing this, like all of us, so you cannot say. I would have expected someone to do this for me. I would have expected because it was the First time that we are experiencing COVID, so maybe in future I could answer this question better because we have experienced the pandemic and now, we are aware on what to

do. Even our superiors are aware on what to do now but now I cannot say I wish someone would have done this for me". (P4)

"I don't think anything was going to prepare me like I've said, this virus thing was new to all of us so, I don't think there was anything that could have been done". (P7)

4.8 Summary

This chapter presented the findings collected based on the interviews conducted. It provides insight in the challenges (both at work and personal life) faced by the frontline workers of the clinical dialysis healthcare workers and how these impacted on their wellbeing during COVID-19. It further provided the coping mechanisms adapted by participants and additional support that they felt was lacking. The next chapter provides the discussion on the key findings of the current study.

CHAPTER FIVE: DISCUSSION OF RESULTS

5.1 Introduction

Stemming from the previous chapter where the analysis and results were presented, this chapter presents a discussion of the results. The aim of the study was to explore the impact of the Coronavirus (COVID-19) pandemic on the wellbeing of clinical healthcare workers in a haemodialysis facility in KwaZulu-Natal. The gap thereof was due to the lack of attention to the wellbeing of dialysis healthcare workers, thus creating a need for such focus. The thematic analysis involving themes and sub-themes in Chapter Four revolved around the research questions. In this chapter, the discussion of results will be aligned to the research questions of the study. The discussion begins with the participants' biographical data.

5.2 Biographical data

The study population group consisted of all Africans of the female gender made up the majority (seven of nine participants), which represents employment equity and female equality. The high female complement represented in the company's population is also representative of findings that 70% of the global healthcare population is made of the female gender. COVID-19 impacted negatively on the wellbeing of females by means of higher infection rates, fear, anxiety, suicide numbers, poor sleep quality, and the responsibility for family life (Ghouaibi, 2021; Lai, 2020; De Kock *et al.*, 2021; Duarte *et al.*, 2020). The participants indicate similar data relating to family responsibilities where all females with children provided care and financial support, and five of the six participants had adult dependants.

Most of the participants were experienced in this field with more than five years' experience, which may have also been a contributing factor to their ability to cope as studies have linked experience to coping better and a greater ability to manage anxiety and stress (De Kock *et al.*, 2021; Gavin *et al.*, 2020; Marton *et al.*, 2020). Most participants (78%) had children younger than 10 years old. Additional factors such as personal burnout factors were identified by having children younger than 12 years of age (Duarte *et al.*, 2020). Eight of the nine participants were on a medical aid fund and thus considered to have access to healthcare. According to the WHO, people with pre-existing comorbidities and the elderly were at increased risk of severe illness caused by COVID-19, so extra care in protecting them had to be taken. (WHO, 2022). Participants were not at a higher risk of severe illnesses due to COVID-19 as only one had pre-existing conditions. The support that was provided to the elderly age group by participants was mostly financial only, indicating that they were not a vulnerable population group regarding severe illness.

5.3 Challenges experienced

The first research question of the study that this section aimed to answer pertained to the challenges that clinical healthcare workers faced in a haemodialysis facility with respect to their wellbeing during the Coronavirus pandemic. Results show that due to the nature of the job, healthcare workers faced many challenges during COVID-19 which impacted on their wellbeing. The challenges faced by participants relating to the profession will be discussed in relation to the Existence Relatability Growth needs theory as most of the participants displayed these needs. A similar study was conducted by Yin and Zeng (2020) where 80% of nurses showed signs of ERG. *Existence* is participants wanted to feel physically and mentally protected, impacting of physical and mental wellbeing. These factors are discussed under the sub-themes ‘Physical Health and PPE’ and ‘Impact of mental wellbeing’. *Relatability* is the ‘interaction and communication (interrelationships)’ that participants experienced, and *Growth* is related to wanting to know more about the virus and being resilient due to a sense of achievement, as reflected under the ‘profession versus pandemic’ theme.

5.3.1 Physical health and PPE

The “Existence” needs from the ERG theory as described by Yin (2020) were evident in the current study and focused on physical wellbeing and PPE. The clinical dialysis healthcare workers must be considered amongst the high-risk population of contracting the virus, as evident in the study, since participants had direct contact with COVID-19 positive patients. The PPE protects healthcare workers from the virus against person-to-person contact, droplet spread and airborne transmission. The WHO recommends the use of medical masks, gloves, gowns and safety eye-wear for those treating patients confirmed or suspected to have COVID-19 (WHO, 2022). The work environment of the participants was compliant with these PPE recommendations as they mentioned they used ‘KN95 masks’ which is a medical mask, ‘gloves’, ‘safety glasses’, and additionally shoe and hair over-covers. Participants’ physical safety with regard to PPE were adequate and they were ‘grateful’ that they were provided with this protection.

However, the extra PPE was new and wearing it for such long hours did create discomfort. Participants expressed feelings of ‘discomfort’, ‘hot’, ‘uncomfortable’, ‘skin allergies’ and ‘difficult to work’ when using these PPE. Similar findings existed amongst healthcare workers who also expressed discomfort and fatigue due to the extra PPE, thereby adversely impacting on physical wellbeing (Sun *et al.*, 2020; Cao *et al.*, 2020). Despite the obvious discomfort associated with the changes to their work attire expressed in the study, the positive of being protected and feeling safe outweighs the discomfort felt. In this study, since PPE was adequate, it is considered as a protective factor (Cao *et al.*, 2020). Studies have shown that a lack of PPE was adversely related to mental wellbeing (O’Brien *et al.*, 2022).

While participants who were working in the private sector were not directly impacted by the shortage of PPE, they did acknowledge the shortage of PPE amongst local hospitals and showed concern over their colleagues working in the public sector. Hence the reality of this shortage was a concern. Similar findings were evident in Brazil, a fellow developing country where physicians and dentists had more PPE because they were in the private sector and bought it themselves, while nurses were mostly in the public sector and had an inadequate supply of PPE (Cotrin, 2020). This indicates the inequity amongst the private and public healthcare systems in South Africa where having a medical aid becomes a necessity, rather than a luxury. Interestingly, one participant expressed being uncomfortable using the mask due to an inability to wear makeup. This is supported by Maslow's aesthetic need of beauty, highlighting the individuality of people (McLeod, 2020).

5.3.2 Impact of the pandemic affecting mental wellbeing

The "Existence" needs from ERG theory focussing on the mental wellbeing and emotions aspect was displayed amongst participants. Mental wellbeing has positive and negative dimensions (Nene, 2020). The emotions discussed in this section are linked to the nature of the job. Participants indicated mainly negative emotions as identified Table 4.1, suggesting that COVID-19 did have an adverse impact to their mental health. Family safety was the primary concern amongst all participants and similar findings amongst Italian healthcare workers found that the emotional reaction due to the COVID-19 pandemic showed the highest level of fear for family members, followed by fear for their patients and then fear for themselves (Marton *et al.*, 2020; Cao *et al.*, 2020). Similar findings were evident in the past SARS pandemic where concern for others were higher, along with fear that they may infect their loved ones (Billing, 2021). This indicates that similarities existed from past pandemics and reiterates what studies have emphasised about lessons learnt, which will help in managing future pandemics. Healthcare workers were on the frontline; hence this is naturally a highly ranked emotion. The second highest ranked emotion amongst participants was anxiety, which is related to fear. Anxiety was caused by not knowing what the day brought. Anger was also highly ranked, especially when participants witnessed people losing their jobs, professional loss (loss of patients) and personal loss (loss of close family and friends).

Dialysis patients are well known to the workers due to dialysis being a chronic treatment and patients receiving treatment for years in the same facility. Hence the loss is expected to be more intense, as was expressed by participants who were shocked at the very sudden deaths of previously healthy patients who were even working. Sadness was expressed by participants as they were not able to show the usual type of physical compassion during times of bereavement. Similar to studies by De Kock *et al* (2021), there was a lack of planning for the future as revealed by participant due to the rate of deaths. Moreover, people getting infected by the virus globally gave the impression that no one was safe. Having no future planning implies the presence of demotivation amongst participants. Another major concern was the

helplessness that participants felt in being a healthcare worker and not being able to help patients and make them better. They also felt that all the years of studying was wasted as it did not help during the pandemic. Studies refer to this as Pathologic Secondary Traumatic Stress (STS) or compassion fatigue, which is associated with the stress that healthcare workers have because of helping people that are suffering, or being traumatized as seen during COVID-19, with a decrease in personal accomplishment due to feelings of helplessness (Orrù, 2021; Duarte *et al.*, 2020). Participants also experienced tiredness and exhaustion due to work overload.

Due to being in direct contact with COVID-19 patients, many participants expressed feelings of stigmatisation as people perceived them as being carriers of the virus and blamed them for spreading it. Stigmatisation was also expressed by the participants from family, friends and the community, even going as far as receiving death threats as they were perceived as spreading the virus. This is supported by studies where healthcare workers were perceived to be spreading the virus due to the nature of their job. There were similar findings in past studies by Cairns (2021), De Kock *et al* (2021), Lai (2020) and Lizana (1995), showing that participants in the current study faced poor sleep, exhaustion and psychological impacts presented by anxiety, depression and distress, fear and stigmatization. There appears to be similarities relating to emotions with past pandemics, as found in studies by Duarte (202), and what participants experienced. Interestingly, unlike any known literature, participants also indicated being stigmatised for having a job and were ‘looked down on’ merely for having job security. This is also an indication of the struggles of poverty that South Africans face as many people were left without jobs during this period or faced a decline in salary. Participants also expressed family members belittling their profession and their jobs as they could not understand how they would go into what was perceived as a dangerous environment. This might not necessarily be a form of stigmatisation but more of concern for their safety. However, disrespecting their jobs created a lack of emotional support for participants.

5.3.3 Interactions and communications/Interrelationships

The “Relatedness” needs from the ERG theory, where Relatedness is the need to have interpersonal relationships, need for concerns of the community and the need for affection, were evident in the current study. During difficult times, people seek support from people in their lives, which mostly involves physical interaction and affectionate gestures. This was not the case during the COVID-19 pandemic. Social distancing and the use of masks was precautionary as advised by medical experts and Government regulations to minimize the spread of the virus (Santarone *et al*, 2020). Participants agreed that these precautionary measures were implemented in the workplace and the participants followed similar precautions at home. People are social beings by nature, so it is not surprising that these precautionary measures would have a negative impact on their wellbeing. This is particularly true for healthcare workers during the pandemic as they had to take extra precautions to not spread the virus,

which affected their interactions and communication with family, friends, colleagues, management, and the community.

Social distancing deprives healthcare workers of social support and emotional support (Gupta and Soahoo, 2020). The impact of social distancing was linked to isolation and loneliness, which was associated with an increase in mental disorders (Balanzá-Martínez, *et al.*, 2020) and participants shared the same feelings. The main reason for participants wanting to maintain social distancing was due to the nature of their work and the fear of infecting others. This was supported by studies where healthcare workers' highest level of fear was family members or people that they live with being infected, followed by fear for their patients and then fear for themselves (Marton *et al.*, 2020; Sun *et al.*, 2020; Kumar, 2020).

Participants wanted face-to-face contact with patients, colleagues, managers, and friends and due to the lack of interaction, they felt "isolated" and "alone". "Loneliness" is linked to a higher level of mental distress. Findings amongst participants in this study were supported by studies where interrelationships focused on healthcare workers wanting to have face-to-face communication with colleagues and friends. The need of community concern is that healthcare workers need help, care and support from managers, department managers and the external world (Yin and Zeng, 2020). Overall, physical distance did impact on the way participants interacted with everyone, whereby participants felt disconnected in relationships at all levels which impacted negatively on how they performed their duties. Additionally, their mental wellbeing was challenged due to this isolation.

5.3.3.1 Interaction with patients

Participants had less physical interaction with patients due to fear and changes included that a full clinical assessment and maintaining confidentiality was compromised. Unlike most other professionals, these are patients that attend treatment on an ongoing basis, so they are well known to participants. As noted by participants, they considered them family so maintaining a distance was a challenge as participants revealed that it gave an impression of not caring. The wearing of masks made it difficult for patients and colleagues to hear each other, thus making communicating a challenge. These views by participants were similar to a study conducted by Gupta (2020). Since the participants were the ones educating the clients regarding physical distancing even amongst family regarding not attending functions and such, they were perceived as the ones adding to their already challenging lives of having to attend chronic dialysis. The added fear from participants was the fear associated with keeping everyone safe. This is supported by studies where, in the dialysis facility, multiple patients receive repeated treatment at the same time in a common area, increasing the risk of spreading the virus and participants (Weiner and Watnick, 2020).

5.3.3.2 Interactions with colleagues

Although participants were going to work and physically in the same place as their colleagues, they had to still maintain a social distance from each other due to protocols set in the workplace to minimise the spread of the virus. This impacted negatively on their wellbeing as they expressed feeling isolated and not having colleagues to talk to since break time was limited to one person. Moreover, this extended to the clinical area as well, where they could not sit together at the duty station. Similar findings in a study by De Kock *et al* (2021) were reported, where interactions with colleagues were also limited due to social distancing, as reported by healthcare workers who previously valued lunch time interactions with colleagues. However, this was not possible during COVID-19, and they felt isolated.

This social distancing from colleagues was also extended outside of work as participants indicated that their usual social interactions also had to stop. This suggests that participants were deprived of social support from colleagues at work and outside the work environment (Gupta, 2020). One participant expressed feeling scared when three colleagues in one place contracted the virus at the same time and expressed that they were not safe. This highlights that in a dialysis facility, the risk of contracting the virus is high. It also shows how rapidly it can spread. As in a study by Lessells *et al* (2020) where a dialysis facility in KwaZulu-Natal had to close to manage the spread of the virus. The most likely reason is that the shared space is used to treat multiple patients, and that these are outpatients implying that they are coming from home for treatment only, thereby having more exposure to other people by means of the home environment and transport on a regular basis.

5.3.3.3 Interactions with management

Participants felt that interactions with management were not lacking but was now more online. Furthermore, WhatsApp was the most used for communication regarding updates, changes to policies and clinical handovers. This correlates with studies by Shoib (2021), Pou *et al* (2022), Prazeres (2021) and Kubheka *et al* (2020) where the use of online interactions with WhatsApp has been the most popular in South Africa. Kubheka *et al* (2020) highlights the inequality facing South Africans regarding inaccessibility to social media platforms due to the high cost of data. In this study, participants also expressed the cost of data as one of the challenges. Other online challenges faced were network problems, missing vital information, and delays in response. The ongoing loadshedding in South Africa also added to the challenge with accessing social media. Although participants preferred physical interaction, they felt that online communication did serve its purpose. This highlights that face-to-face interaction is still important even in the dialysis work environment, and that participants would not want online communication as a long-term use.

5.3.3.4 Interactions with family

The need for affection and the need for family affection was stronger during these times, as posited by Yin and Zeng (2020). This need was shared by participants. Participants were deprived of emotional support from families as many healthcare workers also chose to self-isolate and limit physical contact due to the fear of infecting family and having to experience the guilt of being responsible for spreading the virus. This was the experience amongst most of the participants. They revealed the precautionary measures that they took before having any contact with family- some did not even visit family and even if they lived in the same household, they stayed in a separate room isolating. One participant also expressed that COVID-19 and social distancing took away the enjoyment of the pregnancy moments as he was not able to be there for his wife due to the risk of infecting her and their unborn baby, as well as the lack of resources available in the maternity ward should she get infected with the virus.

5.3.3.5 Interactions with the community

Participants felt that they were in the best position to reassure the community, family and friends as they had the best knowledge about COVID-19 due to the nature of their job. Hence, they were able to disseminate this information. This is supported by studies that encourage organisations to provide this expertise in communities that lack expertise and resources in health and safety (Burton, 2010). The need by workers for community interaction is important to their wellbeing, as was seen by participants that used their knowledge to reassure those around them and made them have a sense of purpose.

5.3.3.6 Interactions with friends

Participants felt more of a relatable connection to friends that were in the healthcare system. Due to the lack of interaction based on social distancing, adjusting to social media communication and people having their own challenges like the loss of jobs, and the demands of the job for the participants, keeping connected with friends was challenging and friendships were even lost. Interaction was reduced drastically, and in a world where humans are social beings by nature, this was already challenging. The added impact of being in the centre of a pandemic and being alone affected the participants. Non-healthcare workers were also afraid of being in contact with participants due to the nature of their job. Participants also displayed signs of using an avoidance strategy as a means of “shielding” themselves by not wanting to communicate with friends to avoid unpleasant conversations regarding fear and anxiety about the pandemic (Sehularo *et al.*, 2021).

5.3.3.7 Impact on religion, spirituality and culture

Due to lockdowns and restrictions in the number of people in gatherings, religious places were closed, and participants had to find other means to meet this need. Some participants did not look for alternate ways and just stopped while others used online services and praying from home (either in groups on their own). Some participants that were using online had to stop due to internet issues, costs of data and

focus shifting more onto the pandemic. One participant even felt more connected to God by praying on their own at home, while most preferred physical contact with people in a Church more beneficial. This highlights that being connected to God does not always require being physically at a religious place of worship.

5.3.4 Profession versus perception

Linked to mental wellbeing emotions, positive emotions towards participants' profession were also linked to them wanting to remain in the profession. Evident in this study was the Existence, Relatedness and Growth theory, "Growth" needs where participants wanted to learn and demonstrated resilience (Yin & Zeng, 2020).

The resilience of participants was demonstrated by most participants feeling that that they will remain "loyal" to the profession as it was more than a job to them, it was a "calling". One participant also viewed COVID-19 as a learning experience and was "excited" at the opportunity to grow and be better prepared should they face another pandemic in the future, indicating the growth need of wanting to learn and gain knowledge (McLeod, 2020). Participants were knowledgeable about new scientific developments in the management of the pandemic by indicating vaccination and safety measures (wearing of mask, social distancing) compliance and disseminating this knowledge to family, patients and the community. The knowledge on the virus, preventative and control measures is suggestive of the Growth need in the ERG theory (Yin & Zeng, 2020). This was supported by studies where the stress levels of healthcare workers were similar to the general community incidence past outbreak showing the resilience of healthcare workers (Lancee *et al.*, 2008).

Although participants admitted to having moments of doubt of the chosen dialysis healthcare profession, almost all revealed that they will remain in the profession. Doubts on wanting to remain in the profession were from participants of the younger age group, those with less work experience and those that had young children (De Kock *et al.*, 2021; Duarte *et al.*, 2020). While participants did express witnessing existing healthcare workers leaving this field due to the pressure and fear that came with COVID-19, there were also indications as mentioned above of people wanting to get into the healthcare profession due to what they perceived as job security and more opportunity, suggesting that long-term, there may be an increase in healthcare workers. Participants also felt that the cautionary measures like wearing of mask by patients and healthcare workers must continue even after COVID-19 as this group of patients are immuno-compromised, and this acts as a protective measure and opportunity for more virtual education with patients. One participant also expressed that there might be less acute/in-hospital dialysis work for them as during COVID-19, most dialysis cases were limited to in-hospital dialysis facilitates.

5.4 Coping mechanisms

The second research question that this section aims to answer pertains to the coping mechanisms used by clinical healthcare workers in a haemodialysis facility to assist them with their wellbeing during the Coronavirus pandemic. Participants found it difficult to balance work and personal life due to the increased work demands where even while at home, they expressed a need to “recharge” and rest, and that work even went home with them whereby patients would call after normal working hours, so they felt that they had no personal life. Coping mechanisms were viewed as a protective factor and participants have indicated coping mechanisms, they used in trying to maintain some semblance of a balance life during these challenging times. The use of Maslow’s Hierarchy of Needs theory can be used to describe participants’ coping mechanisms, similar to studies by Sehularo (2020).

5.4.1 Physiological and Biological needs

The importance of exercise as a coping mechanism was evident in studies where at the peak levels of the pandemic, increased levels of stress were seen amongst workers that were less physically active (Stubbs, 2021). Similarly, participants made use of exercise (jogging or going to the gym) as a coping mechanism when some even started to exercise for the first time. Insomnia or difficulty sleeping were experienced amongst healthcare workers, even though they were exhausted (Cao *et al.*, 2020). Participants in the study had to “force” themselves to sleep as they knew the importance of sleep during these challenging times because good health and wellbeing can be assisted by adequate sleep.

5.4.2 Safety needs

Most participants felt a sense of relief and were “grateful” for job security. Within the healthcare industry, salary reductions were also experienced amongst certain professionals. A study in Brazil revealed that healthcare workers’ (included in the study were physicians, dentists and nurses) salary/income was significantly reduced during the initial stages of the pandemic (Cotrin, 2020). In South Africa, elective surgery and non-emergency surgery were also put on hold during the pandemic causing a decrease income amongst many healthcare professionals and hospitals (Luke, 2021). Financial security and physical safety form part of the safety needs according to Maslow’s theory, and states that if this deficiency need is not met, then it is difficult for a person to move on to the next level and in its absence (as evident during disasters like pandemics), workers may re-experience post-traumatic stress disorder (Osemeke & Adegboyega, 2017). Personal burnout factors from past studies suggest that a decrease in salary was linked to increased burnout, so receiving a salary meant not increasing burnout amongst workers (Duarte *et al.*, 2020). The fact that participants felt that they were financially stable helped with their wellbeing. The workplace did protect the workers by supplying adequate amounts of PPE and infection control protocols which made them feel safe while working and eased their stress level. This is supported by studies indicating that when PPE is adequate, it is a protective factor (Cao *et al.*, 2020).

5.4.3 Belonging and social needs

Participants' coping mechanism was mostly by spending time with their loved ones (Family and friends) especially amongst those that lived with family with children. Limiting contact was not possible as children did not understand the seriousness of the pandemic and needed contact. Support from friends, colleagues, peers and family has been associated with assisting individuals in sustaining emotional balance during these times (Labrague, 2020). This was evident amongst participants as family time outside of homes was restrictive due to physical distance, so entertainment time amongst participants' family (mainly with those that had younger children) meant movie time spent together.

Social media was used for information and to keep updated on COVID-19 by participants who used reliable social media platforms. Supportive studies have demonstrated that credible social media was associated as a possible mitigation factor to assist healthcare workers' mental wellbeing, which provided them with valuable updated information, thus giving them more confidence and reducing stress of the unknown (Gavin *et al.*, 2020; Sehularo, *et al.*, 2021). Participants were aware of fake news that created fear and panic, which was also reinforced in studies. Lack of teamwork was a concern in a study by Pou *et al* (2022) were healthcare workers working in the COVID ward felt unsupported by colleagues working in non-COVID wards. However, in this study, participants demonstrated teamwork in the workplace as they decided amongst themselves to take shifts to treat COVID-19 patients.

5.4.4 Esteem

The need by workers for recognition and appreciation was highlighted by participants where they felt important and appreciated by little acts of kindness, like bypassing the long lines at shopping centres, and discounts for being a healthcare worker. These acts of kindness can be referred to as short term mood boosters, as studies have indicated (Sovold, 2021). This is supported by Maslow's fourth level of esteem, the workers had need for not just self-esteem but also recognition and respect from others (Osemeke & Adegboyega, 2017). Participants also played a role in social wellbeing by means of educating the public where people looked towards them for advice and information on the virus, giving them a 'feel good' emotion that they had the knowledge and were able to provide clarity and help the community in providing information.

5.4.5 Self-actualization

Self-care is critical during uncertain times like the pandemic by self-reflecting on one's emotions and stress levels and mitigating the negative impacts, which was evident amongst participants making a conscious decision to have a positive mindset (Sovold, 2021).

In light of this, participants felt more at ease from reading and learning and it gave them more insight and they were hopeful about a cure. Supported studies have suggested that learning has been helpful in

reducing stress (Yin & Zeng, 2020). In the case of some of the participants in the study, learning and reading was not just based on learning more about COVID-19, but also learning and developing new skills to be better prepared for another pandemic and by taking up new hobbies (baking and exercising).

5.4.6 Transcendence needs

Since most religious places were closed due to restrictions limiting gatherings, participants turned towards spirituality meditating and praying. This is supported by studies that show religion as a means of prayer, spiritual support by means of meditation and relaxation as evident amongst participants was linked with a decrease in depression and anxiety, and an improvement in psychological wellbeing (Prazeres, 2021).

5.5 Support required by clinical healthcare workers in a haemodialysis facility to facilitate their wellbeing during a crisis such the Coronavirus pandemic

The third research question that the study aims to answer pertains to the type of additional support mechanisms required by clinical healthcare workers to facilitate their wellbeing during a crisis such as the Coronavirus pandemic. This is discussed in this section.

5.5.1 In the workplace

At the workplace, there were no formal programmes or support to assist healthcare workers with their psychological wellbeing. However, indirect measures serving to protect them were evident and showed signs of assisting in their mental wellbeing. When referring to support for wellbeing, participants automatically only focused on physical safety and not on any emotional support, which is indicative that mental wellbeing has not been given any importance and there is a feeling that there is a lack of expectations as well. This is also evident in a study amongst healthcare workers in the public sector in South Africa where mental health support was neglected due to local health needs of Human Deficiency Virus (HIV) and tuberculosis (TB) that had to be prioritized (Dawood *et al.*, 2022). Adequate amounts of information were provided to participants by managers, mainly by means of new protocols and disseminated via WhatsApp communication for quick updates. Supportive studies have indicated that disseminating information/knowledge by seniors was helpful in reducing stress (Yin & Zeng, 2020).

Dialysis patients' repeated treatment puts them at added risk due to exposure during transportation and in the dialysis facility, where a group of patients are dialyzed at the same time in a common space, thus increasing the risk of infection for both patients and dialysis healthcare workers (Verma *et al.*, 2020). They also suggested that the company should have provided them (the workers) with transport to and from work as many were using public transport and increased their exposure to the virus. Participants reported that transport was provided by the workplace to patients, thereby reducing the risk of infection for patients (which also means reducing risk for the workers) who normally had to use public transport.

Study by Burton (2020) suggested that providing transport in the workplace and healthcare assistance protects workers and patients by minimizing contact due to public transport use, decreasing the added pressure by healthcare workers. Teamwork amongst participants were also expressed by alternating shift work in treating patients that were COVID positive and ‘encouraging’ each other to ‘talk and share their emotions’. This is supported by studies for assisting in wellbeing were healthcare workers’ knowledge, adequate resources, work policies and implementation of healthy shift work have been linked with better sleep and less stress (Burton, 2010).

Participants expressed various types of emotional support that were needed and felt that this will help them to enjoy what they do and to offer a better quality of care to their patients. The channels of support needed emphasized by participants were counselling during times of feeling overwhelmed, set programs within the workplace on an ongoing basis and not just during a crisis like COVID-19, due to being under ‘a lot of pressure’ that is associated with the nature of their work. External or online support was also suggested due to being uncomfortable in talking freely within the work environment platform. The consensus amongst participants is that there is a definite need for emotional wellbeing support but expressed different channels, like other studies which have suggested that a variety of psychological support must be made available to allow individuals to choose the best option for themselves (Santarone *et al.*, 2020).

5.5.2 Support from Government

Participants did not have confidence in the government due to perceived poor managing of the pandemic, inadequate PPE in the public sector; delays in the implementation of precautionary measures considering other countries were first impacted by COVID-19 prior to South Africa; COVID testing and delays in vaccination rollout. Lack of confidence in the government’s ability to implement strong preventative and control measures were linked to negative emotions by healthcare workers (Sun *et al.*, 2020). Good leadership was evident in China, where the Chinese government employed more medical and nursing staff, implemented strict infection protocols, offered practical guidance, and provided personal protective equipment to reduce the burden on healthcare workers and protect mental health (Kang *et al.*, 2020).

Providing vaccinations was the only support that was revealed by one participant, although another participant expressed that they still paid for it since it was from their medical aid and they did not feel that it was provided by Government. They were aware of online information platforms and contact numbers that were available but indicated that this is not easily accessible. This is supported by a study amongst KwaZulu-Natal public healthcare workers where there was poorly perceived support received in the Government workplace by two-thirds to three-quarters of participants (Dawood *et al.*, 2022). While vaccinations and testing for COVID-19 was available, this is more a responsibility for the

Government and global recommendations by World Health Organisation as healthcare workers were needed to save lives, so may be seen as not necessarily a personal benefit for healthcare workers from local Government. COVID-19 testing, although available, had delays in obtaining results, adding to stress of the healthcare workers who were putting their lives at risk daily, as argued by participants.

Financial compensation from Government was highlighted by participants as acknowledgment of their efforts during the crisis. This is supported by Herzberg's motivational model, where workers will continue to do their work, but in the presence of motivating factors (in this case emotional support and financial rewards), it will lead to job satisfaction with higher performance (Rai, 2021; Doleo, 2005). Workers need to be rewarded in terms of incentives as this was linked indirectly to better sleep by reducing anxiety and stress and promoting self-efficiency (Orrù, 2021; Al Awar, 2022). Herraiz-Recuenco *et al.* (2022) also found that physicians with higher satisfaction had incentive payments (Corono funding) that proved to be statistically significant in reducing stress. This translates to a lack of incentives and recognition, which is associated with dissatisfaction amongst workers and negative feelings impacting adversely on wellbeing, which participants did experience although just one participant did mention that she received a COVID relief fund. This also demonstrates a lack of awareness by healthcare workers of the types of support that are available, making it difficult to access if they are not aware of it.

The lack of resources related to the pandemic exposing the dire lack of resources (equipment and workers) in healthcare facilities. This is supported by studies emphasizing the importance of having the tools and resources to do their job so that workers can offer the best patient care. There was a shortage of staff globally, even in South Africa, and there was a call for healthcare workers that resigned to help in the fight against the pandemic (De Wet, 2020). Explicit support initiatives are specifically created to assist staff with mental wellbeing, like setting up a support call hotline or providing resources like mindfulness videos (O'Brien, 2022). Early intervention has been linked to promoting wellbeing as shown by a study in China at the initial stages of the pandemic where a hotline service was set up by the psychological department daily between 9am till 9pm to talk to healthcare workers about their feelings, provide support and psychological resources (Cao *et al.*, 2020).

5.5.3 Support from Medical aid funders

Medical aid funders are a private medical aid that is not accessible and affordable to everyone. Access to healthcare is considered a protective factor against negative mental health. Like the work environment and government, perceived support was limited from medical aid funders. Information about COVID-19 was similarly also available and disseminated. Discounts to hotels if isolation was required and access to vaccinations were not considered free by participants as they paid a monthly membership fee. Many participants felt that COVID-19 testing for them should not have been limited

considering the job that that they are doing and putting their lives at risk. This should have been covered in full by the medical aid funders, at nil out of pocket payment. The Council of Medical Schemes added COVID-19 as a prescribed minimum benefit and was obligated to pay for screening, testing, management and vaccination, and additionally, medical aid paid for an extra dose of vaccination to cover the cost of non-medical patients (CMC, 2021). As expressed by participants, this is not the actual reality as they were limited to the numbers of testing, and out of pocket payments had to be made by them. This added the financial expense of testing while putting their lives at risk daily, which was a demotivating factor of being a healthcare worker.

The participants in the study are from the private sector and a majority (89%) were on medical aid. This highlights the inadequacy and shortcomings of access to healthcare where it does not cover essential testing and members must pay cash for this. It also demonstrates that healthcare workers were not being assisted or supported by the medical aid funders, adding to stress. The lack of, and the need of emotional support was highest rated amongst participants, which is consistent with other studies. More mental support is needed at all levels from all decision-makers (workplace, government and higher education) to assist the healthcare workers on an ongoing basis.

5.5.4 Knowledge versus training

Most participants felt that more formal practical training was needed at a higher education level and training on an ongoing basis to better prepare them for such crises. While they had the theory, the reality of the crisis did not adequately prepare them, especially on a psychological wellbeing level. Two participants, however, felt that nothing could have better prepared them and that one had to experience such a crisis to be better prepared in the future. These supported studies using Alderfer's Existence, Relatedness and Growth (ERG), where growth is the need for knowledge about the virus, the preventative and control measures by authoritative reports (Yin & Zeng, 2020).

Better preparedness of healthcare workers and better ways in managing the pandemic will help in their physical and mental health. This was supported by a study where nurses felt that the pandemic would have a positive impact due to them gaining more experience, which will serve them well in their profession and be better prepared for the next one (Cotrin, 2020). A study in a hospital that treated COVID-19 patients had the healthcare workers go through three stages of training (pre work training, training in general and training in the negative pressure rooms) before treating COVID-19 patients and found that there were increases in confidence and self-prevention and control by the healthcare workers (Sun *et al.*, 2020). A study amongst South African healthcare workers in the public sector of KwaZulu-Natal found that the perception of preparedness was linked to less stress (Dawood *et al.*, 2022). Technical training was also linked to better preparedness and studies show pre pandemic computer

training was associated with an increase in healthcare workers' confidence and pandemic self-efficiency (Gavin *et al.*, 2020).

5.5.5 Barriers in seeking support

Barriers that prevented participants from seeking help included being stigmatised as they viewed it as a sign of weakness and lack of performing their duties; financial constraints if they had to pay for this service; working hours; and social distancing. Studies where doctors were not willing to consult with a psychologist to reduce stress due to the stigma associated and some that preferred to deal with the stress themselves supported this (Cao *et al.*, 2020). Supportive studies also indicated that healthcare workers preferred being self-reliant and did not seek external health due to the workload, working away from their normal work environment, and the nature of the COVID-19 pandemic (Dawood *et al.*, 2022). The nature of the pandemic, where physical distance was a government regulation and a choice by healthcare workers to reduce the spread, made it difficult to even consider extra help.

5.6 Summary

Dialysis healthcare workers shared similar challenges to other healthcare professionals, centred around wanting to keep everyone safe and not infect anyone since their jobs entailed being exposed to the virus. The experiences of participants relating to the profession were discussed in relation to the Existence Relatability Growth Needs Theory as most of the participants displayed these needs. Existence was where participants need to be physically and mentally protected. Their physical needs of having adequate PPE were established, but mental wellbeing was not met. Little to no formal means of emotional support was provided to participants at the workplace by the Government level and medical funders. Participants demonstrated feelings of isolation, fear, anxiety, and lack of sleep, which all affected their wellbeing negatively. Therefore, the need for support regarding their mental wellbeing is important, not just during a crisis but on an ongoing basis, as expressed by the participants. Relatability is the need for interrelationships and participants expressed that this need was not fulfilled due to social distancing and being deprived of social and emotional support. Growth is related to wanting to know more about the virus and being resilient due to a sense of achievement, which was also evident amongst participants and highlights that despite the adversity faced, this group of participants demonstrated resilience, evident through their use of coping mechanisms.

Maslow's Hierarchy of Needs model was used to discuss the coping mechanisms used by participants. There was evidence from the use of Maslow's model that participants did try to mitigate the challenges faced during COVID-19 by finding alternatives to somewhat meet each of the model levels, but this does not translate to them being satisfied. Moreover, most participants were not motivated to reach their full potential. Better preparedness during crisis situations is needed. Furthermore, mental support from

leaders was lacking drastically from all levels of decision- makers. The next chapter will provide recommendations and the conclusion of the study.

CHAPTER 6: CONCLUSION AND RECOMMENDATIONS

6.1 Introduction

The previous Chapter presented a detailed discussion on the results from the current study in relation to the objectives and noted findings from past relevant studies. This chapter highlights key findings from the results. This Chapter will also show that the objectives and research questions have been met. Finally, it will include recommendations and future research suggestions.

Humans thrive on interaction and COVID-19 has taken that away where social distancing was seen as showing that one cares care. While everyone's lives have been impacted by the pandemic and more attention to mental /psychological wellbeing is expected to be needed overall for all people, this study was important to show the impact that COVID-19 had on the clinical haemodialysis healthcare workers' wellbeing. They had to show up to work daily and often neglected themselves and their own wellbeing as they try to save lives and reassure patients, family and the community. Situations in the workplace can be work stressors as they relate to the psychological and social conditions of the workplace, and management has a responsibility to address these work stressors. Mental health is not just the absence of illness, but a state of complete wellbeing where a person becomes aware of their individual abilities can cope with the day-to-day stresses of life, are able to be productive at work and contribute to the community. While many businesses have focused on the physical safety wellbeing of healthcare workers to prevent workplace injury, psychological or mental wellbeing have not been given much attention. This is probably due to the legal implications associated with injury on duty, and no such law on mental wellbeing exists.

This study was especially important to provide insight into the impact of COVID-19 on the wellbeing of healthcare workers from a South African prospective and with clinical haemodialysis healthcare workers in a dialysis outpatient facility. There is a lack of studies from South Africa with clinical haemodialysis healthcare professionals and in outpatient facilities. While a majority of chronic treatment for patients could be delivered to their home or consults done online during COVID-19 to avoid physical contact, chronic haemodialysis treatment still required face-to-face contact in a dialysis facility where the risk of being infected increased due to shared spaces and exposure during transport.

This study used a qualitative approach and a review of literature presented from consulting international and local studies and textbooks. The study focused on literature around healthcare workers during COVID-19 based on past pandemics, wellbeing, risk factors, protective factors, motivational theories of ERG theory, Maslow's Hierarchy of Needs and Herzberg's Two-Factor Theory, lessons learnt and South Africa's preparedness. Data was collected for the study from nine in-depth online semi-structured interviews with clinical haemodialysis healthcare workers in a private dialysis facility in KwaZulu-

Natal, South Africa who shared their experiences in the workplace and personal life during COVID-19. Data was analyzed using thematic analysis and deriving common themes so that results, conclusions and recommendations could be presented.

6.2 Research objectives

The research objectives of the study were:

- To determine the challenges that clinical healthcare workers in a haemodialysis facility experienced with respect of their wellbeing during the Coronavirus pandemic;
- To identify the coping mechanisms used by clinical healthcare workers in a haemodialysis facility in assisting them with their wellbeing during the Coronavirus pandemic; and
- To assess what additional support mechanisms are required by clinical healthcare workers in a haemodialysis facility to facilitate their wellbeing during a crisis such the Coronavirus pandemic.

6.3 Research questions

The research questions on the study included:

- What challenges did clinical healthcare workers in a haemodialysis facility experience with respect to their wellbeing during the Coronavirus pandemic?
- What coping mechanisms were used by clinical healthcare workers in a haemodialysis facility to assist them with their wellbeing during the Coronavirus pandemic?
- What additional support mechanisms are required by clinical healthcare workers to facilitate their wellbeing during a crisis such as the Coronavirus pandemic?

6.4 Answering the research questions

In this section, key finding in relation to the research questions are highlighted.

6.4.1 Challenges experienced by haemodialysis clinical healthcare workers with respect to their wellbeing

Insight into the experiences from the perspectives of clinical healthcare workers in a haemodialysis facility during the COVID-19 pandemic was obtained from semi-structured interviews. Participants shared similar challenges in most instances, and it appears to be similar to findings from past studies. Research with healthcare workers specifically in the dialysis facility is very limited, thus past studies mostly refer to healthcare workers in general. Results on the challenges faced from the current study related more to past studies making use of the ERG (Existence, Relatedness, Growth) theory as described in Section 2.5.11. Results were therefore discussed in relation to the ERG theory and presented in Section 5.3. The highlights are as follows:

“Existence” needs included both physical and mental wellbeing. Physical wellbeing focused on PPE, which was the focus amongst participants, and understandably so since it served as the most crucial aspect as protection for participants against the COVID-19 virus. While globally there was a shortage of PPE, participants had an adequate supply of this, but the challenges were mainly in the discomfort experienced when using this additional PPE for long hours. Participants also highlighted the inequality in the healthcare system where their friends that were working in public health facilities faced shortages of PPE. Although mental wellbeing includes both positive and negative emotions experienced from participants as per Table 4.1, challenges faced were associated with negative emotions experienced by participants. The dominant emotion was fear and anxiety that was attributed to not getting the virus and passing it to their family, patients, and friends.

“Relatedness” in the ERG model focused on the impact of COVID-19 on the interpersonal relationships of participants, which was impacted mainly due to the precautionary measures of isolation and wearing of masks. This had a negative impact on participant’ wellbeing as participants were deprived of social and emotional support. Overall, physical distance did impact on the way participants interacted with patients, colleagues, management, family, friends, and spirituality. Participants felt a disconnect in relationships at all levels which impacted negatively on how they performed their duties, and their mental wellbeing was challenged due to this isolation. Due to isolation, feelings of loneliness were expressed. Although the Government regulation was to practice social distancing, participants also chose to physically distance themselves as much as possible due to fear of infecting others with the virus.

“Growth” in the EFG model relates to the resilience shown by participants. Participants displayed loyalty to the profession and felt it was a calling and not merely a job. Interest in wanting to learn and gain knowledge was also important to them, and this was demonstrated by feelings of excitement. Logically they would have experienced doubts about their chosen profession, especially as was seen amongst those that had children and the younger age group. The overall finding was that they would not leave as they were needed to help people.

6.4.2 Coping mechanisms used by haemodialysis clinical healthcare workers with respect to wellbeing

Coping mechanisms were viewed as a protective factor and participants have indicated the coping mechanisms used in trying to maintain somewhat of a balanced life during these challenging times to counteract the negative effects on their wellbeing. The use of Maslow’s Hierarchy of Needs theory can be used to describe participants’ coping mechanisms.

Physiological and biological needs included exercising and having to force themselves to sleep or rest, which was a protective measure to coping. Safety needs when PPE was adequate, which was the case in this study, was a protective factor. Amongst many people losing their jobs, participants were grateful for financial security and having an income. Belonging and social needs were displayed with participants trying to bridge the gap between social distancing and being of support to their family. Entertainment included movie nights at home. Participants made use of credible social media for updated information and knowledge. Teamwork amongst participants was also evident in the workplace with rotating shifts for treating COVID patients. Esteem needs were participants needing to receive temporary boosters from the community when given priority to shopping and not having to follow long lines. Participants were also seen as a means of information by everyone, and they thus felt a sense of importance.

Self-acquisition needs were displayed by participants choosing to have a positive mindset. Learning new skills meant learning and developing new skills to be prepared for future pandemics and baking. Transcendence needs were evident as participants turned towards more spirituality, meditating, praying and relaxation.

6.4.3 Additional Support is needed to facilitate their wellbeing during a crisis

Past pandemics are meant to be learning experiences to better prepare for future pandemics. There were similar findings in past pandemics regarding the need for mental support for healthcare workers, yet it appears that still not much is done. The lack of, and the need for emotional support was highest rated amongst participants, which is consistent with other studies. More mental support is needed at all levels from all decision-makers (workplace, government and higher education) to assist the healthcare workers on an ongoing basis.

In the workplace, participants expressed the need for management to provide transport for workers to protect them and limit their exposure to the virus as many were using public transport. The consensus amongst participants is that there is a definite need for ongoing emotional wellbeing support, but they expressed different channels to meet the needs of preferences of participants. The channels of support emphasized by participants were counselling during times of feeling overwhelmed, set programs within the workplace on an ongoing basis, and not just during a crisis like COVID-19 due to being under 'a lot of pressure' associated with the nature of their work. External or online support was also suggested due to being uncomfortable with talking freely within the work environment platform.

There was a lack of confidence amongst participants in the South African Government due to perceived poor managing of the pandemic, inadequate PPE in the public sector, delays in the implementation of precautionary measures considering other countries were first impacted by COVID-19 prior to South Africa, COVID testing (with delay in results) and delays in vaccination rollout. Financial compensation

as appreciation for risking their lives during a crisis such as the pandemic; explicit support initiatives specifically created to assist workers with mental wellbeing like setting up a support call hotline; or providing resources like mindfulness video that is easily available and accessible were support that participant felt were needed. The adequate supply of resources like PPE, healthcare workers, equipment and more training were also needed. Participants felt that they were not mentally and physically prepared for a pandemic, even though they did have the theory knowledge from tertiary institutions.

6.5 Limitations of the study

The scope of the study was only from one private (non-Government) dialysis organisation and one province in South Africa. Allocating times for interviews was a limitation as it required rescheduling of appointments due to the nature of participants' work and changes to their work schedules. Online interviews had to be conducted instead of the preferred face-to-face interviews were not possible due to precautionary measures of limiting contact as the pandemic still current at the time of interviews. Qualitative studies use limited interviews; thus, the findings cannot be generalized.

6.6 Recommendations made for the study

This study is important for decision-makers at all levels to start prioritizing the wellbeing of dialysis healthcare workers. The following are the recommendations:

- Government needs to implement and promote mental wellbeing by setting up policies and by working with those directly involved like dialysis healthcare workers in the working environment so that the implementation of policies will be practical, achievable, and beneficial.
- More awareness, educational and support programs need to be created on wellbeing, specifically on mental health, so that healthcare workers are made to feel comfortable about seeking help when needed, which must be easily accessible. Workplace can provide more internal support programs, Government to provide 24-hours functioning call center support and a one-on-one session with qualified professionals if needed.
- More effort from Government is needed to bridge the gap between private and government healthcare sectors. Resources should be purchased together and shared across all healthcare facilities to ensure an adequate supply of PPE or workers, or more local manufacturing by developing skills within South Africa.
- Government also needs to make the basic needs like water and electricity available to dialysis facilities as this is needed for dialysis, which is life-sustaining treatment.
- Companies should provide good healthcare for their workers, usually in the form of access to medical aid. Since psychological support requires qualified professionals, practically it may not be possible for companies that lack resources to provide such

skilled services, so by financially paying towards healthcare workers' medical aid, they are indirectly contributing to this service.

- Medical aid funders should provide mental or psychologist support, all fully funded by them for members. As part of the initiative of wellness programs which medical aid funders have like gym membership, healthy eating discounts from shops, psychological support should be included and rewarded if members make use of this facility.
- Government and medical aid funders need to cover all costs for healthcare workers with regard to testing for infectious diseases.
- Workplace and higher education need to revise the curriculum and training and include more crisis management and psychological programs to be prepare healthcare workers for any future crisis. This must be on a continuous basis.
- More technology training is needed with current and future healthcare workers as this was the main means of communication (work and personal lives) and living (online shopping, etc.) during the pandemic.

6.7 Direction for future research

More research is needed on dialysis healthcare workers' wellbeing from South Africa's perspectives as studies are limited. Research must include a larger sample size and both private and public sectors as experiences seem to differ, as expressed during this study where the private company had adequate PPE but there appeared to be a shortage in the public sector. The focused group in the current study were only the clinical haemodialysis workers in the outpatient haemodialysis and does not include the entire complement of workers, like non-clinical workers (general assistants/cleaners, administration staff) and students. More research is needed that includes all provinces, healthcare workers from the government sector and all workers in the dialysis facility (qualified clinical staff, cleaners, general assistants, students, and administrated staff). Workers performing acute dialysis in-hospital are also not included in this study and it will be interesting to know the experiences of COVID-19 on their wellbeing as they attend to emergency dialysis cases in a hospital environment.

6.8 Summary

COVID-19 has certainly changed the way people live. COVID-19 continues to evolve, placing the healthcare system under unprecedented strain as the world faces the third wave of the pandemic. No known research has been done exploring the impact of Covid-19 on the wellbeing of healthcare workers specifically working in the outpatient haemodialysis facility and in South Africa. This study is important as the dialysis healthcare workers are specially trained in the dialysis field and patients with kidney failure rely on their expertise in providing this life-sustaining treatment. With the growing number of kidney failure people, the wellbeing of these professionals is essential to the survival of patients and the facility. A direct relationship between the wellbeing of healthcare workers and productivity exists and

businesses have a moral and ethical obligation to take care of their workers' wellbeing. Businesses need to take this opportunity to address shortcomings regarding healthcare workers' wellbeing, especially mental wellbeing and readiness in dealing with current and future crises.

The study aimed to understand the impact of the Coronavirus on the wellbeing of dialysis healthcare workers, their coping mechanisms during such a crisis and the support that was still needed. From the research, it was clear that even though the dialysis clinical healthcare workers work in an outpatient facility, the need for more mental wellbeing focus exist as they expressed many negative emotions during the pandemic and struggled to cope with its impact. They share an increased risk of exposure to infectious disease similar to other frontline workers in the healthcare industry. More focus has historically been on preventing physical harm to workers in the workplace, most likely due to the legal implications associated with that, but not much on the psychological wellbeing of healthcare workers, which is needed for them to be motivated to reach their full potential and offer better patient care. Decision-makers need to make wellbeing a priority as a matter of urgency as it has still been neglected and the likelihood of people leaving the profession or not wanting to join is a reality.

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APPENDIX 1: GATEKEEPER'S LETTER



DIALYSIS CENTRES:

Durdoc Renal Unit, Durdoc Medical centre, 460 Anton Lembede Road, 8th floor, suite 804, 031-3012532
KwaZulu Natal Renal Unit: Medcare Medical Centre, 175 Nyala Road, L Section, KwaMashu, 031-1710041
66 Kings Road, Pinetown, 3610, 013-7014014
10 Malcolm Road, Essen Medical Centre, Ladysmith, 036-0870993

PO Box 56810
Chatsworth
4080

Prof Cecile Gerwel Proches
Graduate School of Business and Leadership
University Of KwaZulu-Natal
Westville Campus
Durban
3630

17 March 2022

Dear Prof Cecile Gerwel Proches

RE: PERMISSION TO CONDUCT RESEARCH, "IMPACT OF THE CORONAVIRUS PANDEMIC ON WELLBEING OF HEALTHCARE WORKERS IN A HAEMODIALYSIS FACILITY, KWAZULU-NATAL"

This letter serves to confirm that I, Sipehelele Simo Nkala, Director of Renal Care Team, hereby acknowledge and approve the research of Rakhee Ramnarain within the Company for the completion of her MBA degree.

Should you have any queries, please contact me.

Thank you.

Sincerely,

SSK Nkala (B. Tech Clinical Technology -Nephrology)
Director
Renal Care Team Inc.

APPENDIX 2: INFORMED CONSENT

UKZN HUMANITIES AND SOCIAL SCIENCES RESEARCH ETHICS COMMITTEE (HSSREC)

APPLICATION FOR ETHICS APPROVAL For research with human participants

INFORMED CONSENT

Researcher Name: Rakhee Ramnarain contact number: [REDACTED]
Email address: 9802340@stu.ukzn.ac.za
Supervisor: Professor Cecile Gerwel Proches contact number: 0312608318
Institution: University of KwaZulu-Natal Contact number: 031-2601615
Address: Graduate School of Business & Leadership, University of KwaZulu-Natal, Westville Campus.

Research title: Impact of the Coronavirus pandemic on wellbeing of healthcare workers in a haemodialysis facility, KwaZulu-Natal

Information Sheet and Consent to Participate in Research

Date:

Dear Healthcare worker

My name is Rakhee Ramnarain, and I am studying towards the qualification of a Master of Business Administration (MBA) through the University of KwaZulu-Natal, College of Law & Management Studies, Graduate school of Business & Leadership.

You are invited to participate in a study that involves research titled, "*Impact of the Coronavirus pandemic on wellbeing of healthcare workers in a haemodialysis facility, KwaZulu-Natal*"

The aim and purpose of this research is to determine the impact that the pandemic, COVID-19 to you, as a dialysis clinical healthcare worker. The study is expected to enroll only clinical staff in the outpatient dialysis facility and will require recruitment of at least 10 participants. Data will be collected from interviews. The duration of your participation if you choose to enroll and remain in the study is expected to be just for the duration of the interview of 1-1.5hrs.

The study involves no physical risks and/or discomforts. We hope that the study will create more focus and preparedness to the wellbeing of the dialysis workers during uncertain times just as a pandemic.

This study has been ethically reviewed and approved by the UKZN Humanities and Social Sciences Research Ethics Committee (approval number HSSREC/00004137/2022).

If I have any questions or concerns about my rights as a study participant, or if I am concerned about an aspect of the study or the researchers then I may contact:

HUMANITIES & SOCIAL SCIENCES RESEARCH ETHICS ADMINISTRATION

Research Office, Westville Campus

Govan Mbeki Building
Private Bag X 54001
Durban
4000
KwaZulu-Natal, SOUTH AFRICA
Tel: 27 31 2604557- Fax: 27 31 2604609
Email: HSSREC@ukzn.ac.za

Participation in this research is voluntary and participants may withdraw participation at any point with no penalty or loss of treatment or other benefit to which they are normally entitled.

Your personal information will remain confidential.

CONSENT (Edit as required)

I, _____ (Name) have been informed about the study entitled “Impact of the Coronavirus pandemic on wellbeing of healthcare workers in a haemodialysis facility, KwaZulu-Natal” by Rakhee Ramnarain.

I understand the purpose and procedures of the study.

I have been given an opportunity to answer questions about the study and have had answers to my satisfaction.

I declare that my participation in this study is entirely voluntary and that I may withdraw at any time without affecting any of the benefits that I usually am entitled to.

If I have any further questions/concerns or queries related to the study, I understand that I may contact the researcher on the contact details listed above.

If I have any questions or concerns about my rights as a study participant, or if I am concerned about an aspect of the study or the researchers then I may contact:

HUMANITIES & SOCIAL SCIENCES RESEARCH ETHICS ADMINISTRATION
Research Office, Westville Campus

Govan Mbeki Building
Private Bag X 54001
Durban
4000
KwaZulu-Natal, SOUTH AFRICA
Tel: 27 31 2604557 - Fax: 27 31 2604609
Email: HSSREC@ukzn.ac.za

I hereby provide consent to:

Audio-record my interview YES / NO

Signature of Participant

Date

Signature of Witness

Date

APPENDIX 3: INTERVIEW QUESTIONS

INTERVIEW QUESTIONS

Impact of the Coronavirus pandemic on wellbeing of healthcare workers in a haemodialysis facility, KwaZulu-Natal

The pandemic is still ongoing and the responses from participants will be based on the onset of the pandemic till time of interview.

Demographics of participant:

Age (Years)	20-24	25-29	30-34	35-39	40-44	45-49	>50	
Sex	Male	Female	Other					
Race	Black African	White	Indian	Coloured	Other			
Marital status	Single	Married	Cohabiting	Divorced	Widowed	Other		
Qualification	Clinical Technologist (Diploma)	Clinical Technologist (B. Tech Degree)	Clinical Technologist (BSc Degree)	Nurse (Enrolled nurse)	Nurse (Registered Nurse)	Other		
Experience in the dialysis field (years)	Less than 5	5-10	10 -15	More than 15				
Distance from home to work (Km)	Less than 20	20-30	More than 30					
Are you at risk of severe illness from COVID-19?	No	Yes Specify:						
Number of breadwinners	1	2	More than 2					
Number of people living in your household	1	2	3	More than 3				
Number of Dependents	1	2	3	More than 3				
Age of children dependents (years)	0-4	5-9	10-17	18-29	30-39	40-49	5-59	60 and over
Type of dependency for children	Financial	Care	Special care - full time care required	Other				
Age of adult dependents	18-29	30-39	40-49	5-59	60 and over			
Type of dependance	Financial	Care	Special care - full time care required	Other				

Interview questions

What challenges did employees in a haemodialysis facility experience with respect of their wellbeing during the pandemic?

1. In the work environment
 - 1.1 What impact did the changes to your work dress attire have on you?
 - 1.2 Has the pandemic changed your interaction with patients/clients? Please elaborate.
 - 1.3 Has the pandemic changed your interaction with colleagues? Please elaborate.
 - 1.4 How has the pandemic impacted on access to / availability of company management?
 - 1.5 What impact has the passing of patients or colleagues had on your wellbeing?
 - 1.6 Has the pandemic changed your opinion of the profession? Please elaborate.
2. Healthcare workers during the pandemic were considered essential services and played an important role in saving lives. To minimize the spread of the virus, Government implemented lockdowns and many businesses had to adopt a work from home policy whereas healthcare professionals had to be at the forefront of the pandemic.
 - 2.1 How has being a clinical dialysis healthcare worker impacted on your family life during the pandemic?
 - 2.2 How has being a clinical dialysis healthcare worker impacted on your interaction with friends?
 - 2.3 As a clinical dialysis healthcare worker during the pandemic, what impact did it have on your religion/culture or spirituality?
 - 2.4 As a clinical dialysis healthcare worker during the pandemic, did you feel stigmatized by people due to your job? Please elaborate.
 - 2.5 Did you experience any benefits due to being a healthcare worker during these uncertain times of the pandemic? Please elaborate.
3. Did you find it difficult balancing work and personal life? Please elaborate.

What coping mechanisms were used by employees in a haemodialysis facility to assist them with their wellbeing during the Coronavirus pandemic?

4. What feelings did you experience during the pandemic?
5. Which coping mechanisms did you use to get through the challenges caused by the pandemic?
6. Scientists and experts had to work under extraordinary circumstances to manage to pandemic in record time. How have recent developments in terms of managing the pandemic impacting on your wellness?

What additional support mechanisms are required to facilitate the wellbeing of employees in a haemodialysis facility?

7. Did you receive any formal education/formal training during your Higher Education studies that would have prepared you for a crisis such as a pandemic? Please elaborate.
8. What forms of support were offered at your workplace to assist you in managing or navigating through the pandemic?
9. What forms of support were offered/are available from Government to assist you in managing or navigating through the pandemic and is it easily available and accessible?
10. If you are on a medical aid plan, what forms of support did you receive/are available from your medical funders and was it easily accessible, available, and affordable?
11. Did you find the support valuable? Are other types of support needed? Please elaborate.
12. What factors would possibly prevent you from seeking support to assist you to manage your wellbeing during the pandemic?
13. What do you feel could have been done to better prepare you for the pandemic?
14. What are the thoughts on how healthcare professionals can be supported to help them with their wellbeing during crisis situations such as the COVID-19 pandemic?
15. Having experienced the COVID-19 pandemic and the impact it had on your wellbeing, what are your views on the long-term impact and the future of the clinical dialysis healthcare professional?
16. Is there anything else that you would like to add?

APPENDIX 4: ETHICAL CLEARANCE



08 June 2022

Rakhee Ramnarain (9802340)
Grad School Of Bus & Leadership
Westville Campus

Dear R Ramnarain,

Protocol reference number: HSSREC/00004137/2022

Project title: Impact of the coronavirus pandemic on wellbeing of healthcare workers in a haemodialysis facility, KwaZulu-Natal

Degree: Masters

Approval Notification – Expedited Application

This letter serves to notify you that your application received on 25 April 2022 in connection with the above, was reviewed by the Humanities and Social Sciences Research Ethics Committee (HSSREC) and the protocol has been granted **FULL APPROVAL**.

Any alteration/s to the approved research protocol i.e. Questionnaire/Interview Schedule, Informed Consent Form, Title of the Project, Location of the Study, Research Approach and Methods must be reviewed and approved through the amendment/modification prior to its implementation. In case you have further queries, please quote the above reference number. PLEASE NOTE: Research data should be securely stored in the discipline/department for a period of 5 years.

This approval is valid until 08 June 2023.

To ensure uninterrupted approval of this study beyond the approval expiry date, a progress report must be submitted to the Research Office on the appropriate form 2 - 3 months before the expiry date. A close-out report to be submitted when study is finished.

All research conducted during the COVID-19 period must adhere to the national and UKZN guidelines.

HSSREC is registered with the South African National Research Ethics Council (REC-040414-040).

Yours sincerely,



Professor Dipane Hlalele (Chair)

/dd

Humanities and Social Sciences Research Ethics Committee

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