Psychosocial support guidelines for nurses caring for patients diagnosed with COVID-19 infection in the North West Province

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Thesis accepted for the degree Doctor of Philosophy in Health Sciences with Nursing Science at the North-West University

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DECLARATION

I, Joan Mologadi Dikobe, declare that the thesis titled, **"Psychosocial support guidelines for nurses caring for patients diagnosed with COVID-19 infection in the North West Province"**, submitted for the degree of Doctor of Philosophy (PhD) in the School of Nursing Science, Faculty of Health Sciences at the Mafikeng Campus of the North-West University, is my own work and it has not been submitted previously for a degree at this or any other institutions. All the sources that have been quoted have been indicated and acknowledged by means of references in the text and bibliography.

Signature: Date: 20 March 2023

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The thesis titled **"Psychosocial support guidelines for nurses caring for patients diagnosed with COVID-19 infection in the North West Province"**, has been approved for submission in article format at the Mafikeng Campus of the North-West University.

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ACKNOWLEDGEMENTS

Firstly, I would like to thank God Almighty for the strength and guidance throughout my studies. My help comes from the Lord, the maker of heaven and earth (Psalm 121:2).

Secondly, I would also like to acknowledge my promoter, Professor Miriam Mmamphamo Moagi, and my co-promoter, Professor Leepile Alfred Sehularo, for the significant role they have played in the conception and execution of this study. It would not have been possible to complete this thesis without their guidance and support.

I would like to express my sincere gratitude to all nurses who voluntarily participated in phase 2 of this study. I thank them for their time and willingness to share their experiences and the support they needed when caring for COVID-19 patients.

I would also like to extend my heartfelt gratitude to all the members of the e-Delphi panel that contributed toward the success of phase 4 of this study. Today, I can proudly say that we have "the psychosocial support guidelines for nurses caring for patients diagnosed with COVID-19 infection".

I thank the North West University Health Research Ethics Committee, the North West Department of Health and the management of the hospitals for granting permission to conduct the study.

I am grateful to the North-West University, for the financial support received during my studies.

I would also like to thank Professor A.E. van der Wath for co-coding qualitative data.

I am sincerely grateful to Mrs Joyce Musi for editing this thesis.

I extend special gratitude to my husband, Dr Ntlhopeng Dikobe, thanks for your unconditional love, support and encouragement throughout my studies. Your motivational words always inspired me.

I am sincerely thankful for my supervisor at the North West College of Nursing, Mrs. Ntshediseng Mkhokheli for the support during this journey.

I wish to express sincere gratitude to my sons, Ketumile and Tumisang Dikobe, your patience and understanding during my studies is highly appreciated.

I would also like to thank my parents, Flora and William Kgarabjang, for their support and prayers.

I would also like to thank my in-laws, Emily and Daniel Dikobe, for their understanding and patience.

Lastly I would like to thank my colleagues who were supportive throughout the study.

DEDICATION

I dedicate my thesis to the nurses caring for patients diagnosed with the COVID-19 infection. As a nurse and a researcher, I continue to learn about the difficulties that the nurses are experiencing when fighting against COVID-19 and the support that they needed when caring for COVID-19 patients. You have put your lives at risk and experienced the challenges of working with a contagious disease. I salute you for the commitment towards your work.



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LIST OF ABBREVIATIONS AND ACRONYMS		
NWP	NORTH WEST PROVINCE	

WHO	WORLD HEALTH ORGANIZATION
NWDoH	NORTH WEST DEPARTMENT OF HEALTH
NWU-HREC	NORTH WEST UNIVERSITY HEALTH RESEARCH ETHICS COMMITTEE
SA	SOUTH AFRICA
ICN	INTERNATIONAL COUNCIL OF NURSES
SANC	SOUTH AFRICAN NURSING COUNCIL
NWU	NORTH WEST UNIVERSITY
ILR	INTEGRATIVE LITERATURE REVIEW
COVID-19	CORONAVIRUS DISEASE 2019
JHNEBP	JOHNS HOPKINS EVIDENCE-BASED PRACTICE
FGDs	FOCUS GROUP DISCUSSIONS
HCW	HEALTHCARE WORKER
USA	UNITED STATES OF AMERICA
OFGs	ONLINE FOCUS GROUPS
HPCSA	HEALTH PROFESSIONS COUNCIL OF SOUTH AFRICA
SACSSP	SOUTH AFRICAN COUNCIL FOR SOCIAL SERVICE PROFESSIONS
SONS	SCHOOL OF NURSING SCIENCE
EAP	EMPLOYEE ASSISTANCE PROGRAMME
POPIA	PROTECTION OF PERSONAL INFORMATION ACT

CEOs	CHIEF EXECUTIVE OFFICERS
OM	OPERATIONAL MANAGER
OHS	OCCUPATIONAL HEALTH AND SAFETY
PPE	PERSONAL PROTECTIVE EQUIPMENT
EHWP	EMPLOYEE HEALTH WELLNESS PROGRAMME
ICU	INTENSIVE CARE UNIT
NUMIQ	NURSING AND MIDWIFERY QUALITY CARE
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STRUCTURE OF THE STUDY

This study on the psychosocial support guidelines for nurses caring for patients diagnosed with a COVID-19 infection in North West Province is presented in article format and comprises three sections: Section 1A presents the overview of the study, Section 1B presents the literature review, Section 2A provides the manuscripts/articles, Section 2B presents the development and validation of the psychosocial support guidelines and Section 3 presents the conclusion, limitations and recommendations of the study. The study was conducted under the supervision of Professor M.M. Moagi and Professor L.A. Sehularo.

Section One A: Overview of the study

This section presents the introduction and background, problem statement, research questions, objectives of this study, paradigmatic perspective, research methodology, an overview of the study phases, measures to ensure trustworthiness, ethical considerations, structure of the study and conclusion.

Section One B: Literature review

This section presents the introduction, scope of the literature review, methodology, the list of sites from which the information on psychosocial support for nurses caring for COVID-19 patients was obtained, inclusion and exclusion criteria, discussions of findings from the literature and conclusion.

Section Two A: Manuscripts

Manuscript One: Psychosocial support for nurses caring for patients diagnosed with COVID-19 disease: An integrated literature review, was published in *Gender & Behaviour Journal*, June 2023.

Manuscript Two: The live experiences of nurses caring for patients diagnosed with COVID-19 infection in the North West Province, was published at *The Open Public Health Journal,* January 2023.

Manuscript Three: The psychosocial support needed by nurses caring for patients diagnosed with COVID-19 infection in the North West Province, South Africa, was published in *Gender & Behaviour Journal*, December 2022.

Manuscript Four: Conceptual framework for the psychosocial support of nurses caring for patients diagnosed with COVID-19 infection in North West Province, South Africa, was published in *International Journal of Environmental Research and Public Health*, March 2023.

Manuscript Five: Psychosocial support guidelines of nurses caring for patients diagnosed with COVID-19 infection in North West Province, South Africa, submitted to *Qualitative Health Research Journal,* February 2023.

Section Two B: Development and validation of psychosocial support guidelines.

This section presents the introduction, biographical data of experts, three rounds of e-Delphi responses as well as comments of experts, an instrument used to refine guidelines, summary of the ratings of e-Delphi rounds and the psychosocial support guidelines for nurses caring for patients diagnosed with COVID-19 infection in North West Province.

Section Three: Conclusion, Recommendation and Thesis Limitations

This last section presents conclusions from this study, makes vital recommendations and presents the limitations, taking into consideration all that is presented in the sections and is informed by the whole research process.

ABSTRACT

Background: Literature has shown that nurses, as frontliners caring for the patients diagnosed with COVID-19 infection, are psychologically affected by the consequences of the pandemic. Therefore, nurses need psychosocial support guidelines when caring for the patients diagnosed with COVID-19 infection. Data collected in the four public hospitals in the North West Province of South Africa suggests that there are no psychosocial support guidelines for nurses caring for patients diagnosed with COVID-19 infection, thus justifying the need to develop the psychosocial support guidelines for nurses caring for COVID-19 patients.

Aim: The aim of this study was to develop and validate guidelines for the psychosocial support of nurses caring for patients diagnosed with COVID-19 in the North West Province. This was achieved through five manuscripts detailed in the structure of the study.

Method: A qualitative, descriptive phenomenological and contextual design was employed to achieve the aim and objectives of the study. The study was conducted in four phases, which are phase 1: Integrative literature review, phase 2: Empirical phase, phase 3: Development phase and phase 4: Validation phase. The integrative literature review was conducted and two themes emerged, namely: psychological support and social support and subsequently, the article was published at *Gender and Behaviour Journal*. The empirical phase had two steps. Two themes emerged from the first step, namely: Nurses' knowledge of COVID-19 and Nurses' experiences of caring for patients diagnosed with COVID-19 infection and the manuscript was published at *The Open Public Health Journal*. Two themes also arose from the second step of the empirical phase, namely: nurses' challenges when caring for patients diagnosed with COVID-19 infection and psychosocial support needed by nurses caring for patients diagnosed with COVID-19 and the manuscript was published at *Gender and Behaviour Journal*.

Phase 3 had 2 steps. Step 1 focused on the development of the conceptual framework and it was facilitated by answering the six crucial questions according to Dickoff *et al.* (1968) and the manuscript was published at *The International Journal of Environmental Research and Public Health* for publication. The psychosocial support guidelines of nurses caring for COVID-19 patients were developed and validated and the manuscript was submitted to the *Qualitative*

Research Journal for publication. Section three provides the conclusions, limitations and recommendations of the study.

Four virtual focus group discussions, n=26, were conducted with nurses caring for patients diagnosed with COVID-19 until data saturation. Fifteen experts participated in the validation of the developed guidelines. Trustworthiness was ensured through credibility, dependability, transferability, confirmability and authenticity. The ethical considerations namely: beneficence, respect for human dignity and justice were considered throughout the study.

Results: The study showed that nurses caring for COVID-19 patients are physically, psychologically and socially affected by the pandemic. The results also indicated that it was difficult for nurses to care for COVID-19 patients because it is a new disease and they needed support from their managers. There is no specific treatment for COVID-19 and many patients who were diagnosed with COVID-19 died. A shortage of human and medical resources to care for COVID-19 patients was reported by nurses and they are at a risk of being infected.

Conclusion: The study findings from the integrative literature review and the empirical phase were used to develop a conceptual framework for the psychosocial support of nurses caring for patients diagnosed with COVID-19 infection in North West Province. The framework of Dickoff *et al*. (1968) was used to develop the conceptual framework which was used to guide the development of the psychosocial support guidelines. Donabedian's (1966) model was used to develop the proposed guidelines. An e-Delphi technique was used to validate the developed guidelines. A Likert scale was used by experts to rate the guidelines, as well as open ended comments. Three rounds of group of experts were conducted until consensus was reached. The psychosocial support guidelines were developed to support nurses caring for patients diagnosed with COVID-19 infection in North West Province of South Africa.

Keywords: COVID-19 infection, Patient, Nurse, Experiences, Caring, Psychosocial support, Guidelines

SECTION ONE A:

OVERVIEW OF THE STUDY

1.1 INTRODUCTION AND BACKGROUND

Nurses are the 'backbone of health-care systems' and the key for the detection, treatment, and prevention of infectious diseases in the world, therefore, during the COVID-19 pandemic, they were the frontline workers in the fight against the infection (Baltzell, McLemore, Shattell, & Rankin, 2017:765). The COVID-19 pandemic was first reported in Wuhan, China and has since spread globally and was declared a global pandemic by the World Health Organisation (WHO) on March 11, 2020. The routes of transmission have been widened by the WHO to include close contact with infected persons or contaminated materials, respiratory droplets, airborne, blood borne, mother to child and animal to animal transmission (Bazaid *et al.*, 2020:1).

Working as a 'frontline' health care professional during a global disease pandemic, like COVID-19, can be very stressful. Evidence shows that during the COVID-19 pandemic, nurses developed negative psychosocial effects (Tomlin *et al.*, 2020:2). These negative psychological effects can lead to mental health challenges, like anxiety and depression that may affect the nurses' families and social relationships, as well as their work performance. Psychosocial support guidelines are regarded as a tool that will provide the nurses with the direction to cope with psychological and social wellbeing when providing care to the patients diagnosed with COVID-19 infection. Nurses caring for patients diagnosed with COVID-19 were adversely affected, both psychologically and socially by the pandemic, and they need psychosocial support (Kackin *et al.*, 2021:158).

The World Health Organisation (WHO) stated the following psychosocial support guidelines for nurses caring for patients diagnosed with COVID-19 infection: managing mental health and psychosocial well-being during this time is as important as managing physical health, trying to use helpful coping strategies, such as ensuring sufficient rest, know how to provide support to people who are affected by the COVID-19 infection and know how to link them with available resources as this is important for those who require psychosocial support (World Health Organisation, 2020:3). In addition, there is emerging evidence from the frontline workers that

nurses are experiencing significant emotional distress as a result of providing direct patient care during the COVID-19 pandemic.

In the United States of America (USA), Tomlin *et al.* (2020:2) stated that long term psychological distress resulted from the challenges experienced by nurses caring for patients diagnosed with COVID-19 infection. These authors further state that nurses are exposed to a variety of mental health burdens, such as stigmatisation. The COVID-19 pandemic in the United States (US) has led to an increase in mental health difficulties, mental illness and decreased psychosocial well-being for nurses (Ivbijaro *et al.*, 2020:396).

In Mexico, the majority of documented deaths have occurred within hospitals, leading to the psychological impact on nurses (Cortés-Álvarez *et al.*, 2020:1). It has been identified that when nurses are exposed to working environments with high job demands and low resources, higher job stress and greater physical and psychological stress symptoms may adversely affect health and psychosocial wellbeing (Cortés-Álvarez *et al.*, 2020:415). A large proportion of the nurses developed symptoms of depression, anxiety, insomnia and distress in Europe as they provided care to patients diagnosed with COVID-19 infection (Epstein *et al.*, 2020:2). Santabárbara *et al.* (2021:1) are of the opinion that frontline nurses may be experiencing the highest levels of anxiety because they are usually responsible for the care of patients with COVID-19. The authors further revealed that the lack of specific treatment guidelines or adequate support overwhelm nurses mentally.

In Switzerland, COVID-19 pandemic poses a unique psychosocial challenge to nurses, as the treatment course is often yet unknown. Nurses do not only fear for the safety of their patients, but also for their own health and that of their close family members (Crowe *et al*., 2021:7). Nurses caring for patients diagnosed with COVID-19 infection are suddenly required to carry out unfamiliar tasks in an unfamiliar area of care, such as high-risk, high-intensity units, all of which are likely to be associated with elevated levels of psychological distress. These characteristics of an outbreak reduce the availability of social support, including support from their colleagues and their family, which is known to buffer the negative impact of stress (Stuijfzand *et al.*, 2020:2).

Studies have shown that, in Italy, frontline nurses may be experiencing the highest levels of anxiety because they were responsible for the care of patients with COVID-19, and were mentally overwhelmed by the lack of specific treatment guidelines or adequate support (Santabárbara *et al.*, 2021:1). According to Simonetti *et al.* (2021:1360), the percentage of nurses experiencing anxiety when caring for patients diagnosed with COVID-19 is 71,4%. The

increased workload, fear of infection, frustration, and physical exhaustion has a substantial impact on the mental health of nurses, with nurses caring for COVID-19 patients having both acute or post-traumatic stress and psychological distress (Lasalvia *et al.*, 2021:2). The psychological impact has been reported to be especially high in nurses caring for patients diagnosed with COVID-19 infection. The emotional distress experienced by nurses during the COVID-19 pandemic has been significantly associated with depression, stress and anxiety (Santabárbara *et al.*, 2021:1).

In Turkey, the first COVID-19 cases were reported on 10 March 2020 (Kackin *et al.*, 2021:159). Nurses were exposed to a range of psychosocial stressors because of the increasing numbers of COVID-19 cases. The increased workload, the limited availability of personal protective equipment, the lack of specific medication and increased positive cases and deaths, contributed to the lack of psychosocial support for nurses caring for patients diagnosed with COVID-19 (Kackin *et al.*, 2021:1). Counselling and support programmes should be established as psychosocial support guidelines, for nurses to develop strategies for coping with the psychosocial problems they experience in situations that require working under difficult conditions, such as the COVID-19 pandemic (Muz & Erdoğan Yüce, 2021:9). The above information justifies the need for the current study.

Nurses have experienced depression, anxiety, stress, burnout, and even work related bullying in their day-to-day battle against the COVID-19 infection in the Philippines (Sadang, 2021:154). With more nurses becoming ill and dying due to COVID-19, the shortage of nurses is increasing (Sadang, 2021:154). The same author further revealed that there is inadequate financial and logistical support coming from the government, especially the lack of personal protective equipment (PPE), putting them at risk of exposure to infection. This has created uncertainty, fear, and panic among nurses caring for patients diagnosed with COVID-19. Mental health and psychosocial support training has been conducted, targeting nurses and health workers, to make provision for health workers to overcome psychosocial problems that arise due to COVID-19 infection. One of the efforts implemented in overcoming psychosocial issues due to COVID-19 pandemic is to provide practical guidance through online access (Windarwati *et al.*, 2020:2).

In Sub-Saharan Africa, sustaining safe and quality care in the COVID-19 pandemic hinges on the health and mental wellbeing of nurses caring for patients diagnosed with COVID-19 (Chersich *et al.*, 2020:2). Nurses face exhaustion, difficult triage decisions, separation from families, stigma and the pain of losing patients' and colleagues, in addition to their own risks

of infection. While many countries in Africa are stepping up their preparedness for COVID-19, assessments by WHO point to substantial limitations in response capacity, in particular there are shortages of human resources and laboratory capacity (Chersich *et al.*, 2020:2).

In Nigeria, on the other hand, with restrictions on face-to-face clinical consultations and the risk of occupational exposure for nurses delivering patient care, the COVID-19 infection has catalysed the use of telehealth in improving timely clinical care, education and healthcare at a low cost and extensive coverage (Manyati & Mutsau, 2021:342). Telehealth, a term sometimes used interchangeably with telemedicine means "healing at a distance". It utilises technological solutions, such as e-mail, messaging systems, smartphones, tablets, wireless monitors, teleconferencing. A growing body of evidence suggested that the care delivered through telehealth allows patients to be efficiently screened, is both patient-centred and conducive to self-quarantine and it protects patients and nurses from exposure to COVID-19 (Manyati & Mutsau, 2021:342). Mobile applications in South Africa were also noted as effective in providing psychological support to nurses attending to patients (Manyati & Mutsau, 2021:342).

South Africa was the first country on the African continent to impose a lockdown from midnight on 26 March 2020 due to the fear of COVID-19 cases increasing (Zanker & Moyo, 2020:101). The disease has led to stigmatisation and discrimination towards nurses. Catton (2020:158) states that nurses have been heroic in their attempts to provide care and save lives. Many nurses have worked long shifts for weeks on end without a day off, however, many have faced the possibility of contracting the infection and sadly, many have died (Catton, 2020:158).

The nurses that are most affected by stigma include those who are caring for patients affected by COVID-19 and people who have recovered from COVID-19 (Schmidt *et al.*, 2020:2). As part of psychosocial interventions, employers need to provide counselling to all nurses, whether they are infected with COVID-19 or not, as the pandemic affects the mental health of nurses (Lecocq *et al.*, 2021:39).

According to the study conducted by Robertson *et al.* (2020:1010), in Gauteng Province, nurses are the important resources in the COVID-19 response and their motivation and empathy are critical to effective and compassionate healthcare. Nurses' mental health conditions may compromise work performance and increase the risk of burnout, absenteeism and resignation. Fatigue, emotional exhaustion or poor concentration are likely to increase clinical errors, including breaches in infection control, impacting on patient care and staff infections (Robertson *et al.*, 2020:1010). The author further added that protecting the mental health and wellbeing of nurses is therefore of paramount importance during an infectious

disease outbreak. COVID-19 pandemics cause high levels of psychosocial stress, related to uncertainty regarding the risk of infection and prognosis, loss of loved ones, and the social impact of measures instituted to contain the spread of the disease (Robertson *et al.*, 2020:1010).

In KwaZulu-Natal province, Jarvis *et al.* (2021:1) stated that there is an emergence of the adverse psychosocial impact of working as nurses on the COVID-19 frontline. Similarly Chersich *et al.* (2020:2) stated that nurses caring for COVID-19 patients face mental stress, physical exhaustion, separation from families, stigma and the pain of losing patients' and colleagues. Essential PPE, such as masks and goggles, hide facial expressions which are important tools for displaying empathy when caring for patients diagnosed with COVID-19 (Jarvis *et al.*, 2021:1).

It is therefore, clear from the literature that there are no psychosocial support guidelines for nurses caring for patients diagnosed with COVID-19 in the North West Province (NWP) of South Africa (SA), thus justifying the need for the current study.

1.2 Problem statement

The COVID-19 infection spread rapidly, globally, and was considered a public health emergency by the World Health Organisation (WHO)(Spoorthy *et al.*, 2020:1). The psychosocial wellbeing and support of nurses caring for patients diagnosed with the COVID-19 disease were a concern globally, as well as South Africa (Torales *et al.*, 2020:319), and the North West Province is not an exception. Globally, according to the study conducted by Tomlin *et al.* (2020:2), 50,4% of nurses caring for patients diagnosed with COVID-19 infection had symptoms of depression, 44,6% had anxiety and 71,5% had general psychological distress. According to the International Council of Nurses (ICN), about 90 000 or 6% of all confirmed cases of COVID-19 worldwide are nurses (Labrague & De los Santos, 2020:3).

This statistics led the researcher to conduct this study in the North West Province. The researcher, as a nurse, has identified the problem in the North West Province and has observed that nurses are hopeless and depressed, hence they needed the support.

According to the study conducted by Serapelwane and Manyedi (2021:91), in the North West Province, there is a shortage of nursing staff. Nurses lack essential equipment in order to provide quality care (Serapelwane & Manyedi, 2021:85).

Nurses' roles in caring for patients with COVID-19 involve triaging patients and detecting suspected cases with infections; providing essential care in an emergency and dealing with suspected patients with precautions (Al Thobaity & Alshammari, 2020:88). Nurses are the frontline workers who are vulnerable to be infected by COVID-19 and the situation becomes worse in the rural areas compounded by a shortage of resources. Therefore, the psychosocial support guidelines should be in place to protect nurses from disease transmission, including COVID-19 infection (LoGiudice & Bartos, 2021:15).

According to Wu *et al.* (2020:1), nurses spend more time caring for COVID-19 patients and this makes them vulnerable, as such, they experience stigma, as they are perceived by the society as potentially infected (Maben & Bridges, 2020:7). Nurses all over the world have played a significant role during disaster and emergency situations, including disease outbreaks (Labrague & De los Santos, 2020:2). In North West Province, the total number of nurses tested positive for COVID-19 is 2735 (NWDoH, 2021).

In a study conducted by LoGiudice and Bartos (2021:15), it was pointed out that the increased number of infections, lack of specific medications and the lack of support may increase the psychological challenges of nurses, and the NWP is not an exception. In the context of these rapid changes and the promotion of practices that were once unheard of, it is therefore clear that nurses will face the potential of not only physical but also psychological and social distress. In NWP of South Africa, the number of nurses tested positive for COVID-19 is 2735 (NWDoH, 2021). In a study conducted by Zerbini *et al.* (2020:7), nurses expressed the need for more information about the COVID-19 infection, clear psychosocial support guidelines and improved communication from the heads of hospitals. In the North West Province nurses were at the forefront of caring for COVID-19 infected patients with limited personal protective equipment, no debriefing related to increased death of patients under their care. In spite of the above challenges, there are no psychosocial support guidelines for nurses caring for patients diagnosed with COVID-19 in the North West Province (NWP) of South Africa (SA), thus justifying the need for the current study.

1.3 RESEARCH QUESTIONS

Based on the problem statement above, the following research questions were formulated in phases:

1.3.1 Phase 1: Integrative literature review

What factors need to be taken into account when developing psychosocial support guidelines for nurses caring for COVID-19 patients, according to available literature?

1.3.2 Phase 2: Empirical phase

Step 1: What are the lived experiences of the nurses caring for patients diagnosed with the COVID-19 infection in the NWP?

Step 2: What is the psychosocial support needed for the nurses caring for patients diagnosed with the COVID-19 infection in the NWP?

1.3.3 Phase 3: Development Phase

Step 1: How should a conceptual framework to guide the development of psychosocial support guidelines for the nurses caring for patients diagnosed with COVID-19 infection be developed in NWP?

Step 2: How should the psychosocial support guidelines for the nurses caring for patients diagnosed with COVID-19 infection be developed in NWP?

1.3.4 Phase 4: Validation Phase

How should the psychosocial support guidelines for the nurses caring for patients diagnosed with COVID-19 infection be validated in NWP?

1.4 RESEARCH AIM AND OBJECTIVES

The aim and objectives of the study are given below:

1.4.1 RESEARCH AIM

The aim of this study was to develop and validate psychosocial support guidelines for nurses caring for patients diagnosed with the COVID-19 infection in the NWP.

1.4.2 RESEARCH OBJECTIVES

To achieve the aims of the study, the objectives were addressed in four phases. The specific objectives of this study were the following:

Phase 1: Integrative literature review phase

- Step 1: To take factors into account when developing psychosocial support guidelines for nurses caring for COVID-19 patients, according to available literature

Phase 2: Empirical phase

- Step 1: To explore and describe the lived experiences of the nurses caring for patients diagnosed with COVID-19 infection in the NWP
- Step 2: To explore and describe the psychosocial support needed for the nurses caring for patients diagnosed with COVID-19 infection in the NWP

Phase 3: Development Phase

- Step 1: To develop a conceptual framework to guide the development of psychosocial support for the nurses caring for patients diagnosed with COVID-19 infection in NWP using Dickoff *et al.'s* (1968) framework
- Step 2: To develop the psychosocial support guidelines for the nurses caring for patients diagnosed with COVID-19 infection in NWP using Donabedian's (1966) model

Phase 4: Validation Phase

- To validate the psychosocial support guidelines for the nurses caring for patients diagnosed with the COVID-19 infection in NWP using an e-Delphi technique.

1.5 SIGNIFICANCE OF THE STUDY

This is the first study of its kind to be conducted in NWP. Therefore, the findings of this study may assist in contributing towards the body of existing knowledge and understanding in the field of nurses caring for patients diagnosed with the COVID-19 infection, particularly in the NWP. Knowledge obtained from this study might assist nurses in improving care for patients diagnosed with COVID-19 infection in nursing practice, education and research. The guidelines which are developed and validated from the study findings, with the incorporation of existing research and literature related to this area of concern may assist nurses in caring for patients diagnosed with COVID-19 in the NWP.

1.6 PARADIGMATIC PERSPECTIVE

1.6.1 PARADIGM

Paradigm is defined as “a worldview that includes different set of philosophical assumptions and that guides one’s approach to enquiry” (Polit & Beck, 2017:738). The constructivist paradigm was used in this study. The constructivist worldview believes that “the goal of research is to understand how individuals construct reality within their context” (Polit & Beck, 2017:723). According to social constructivists, individuals seek to understand the environment or world in which they live and work (Creswell & Creswell, 2018:8). The researcher was interested in understanding the psychosocial support that is received by nurses working as frontliners during this time of the COVID-19 pandemic. The paradigmatic approach is discussed in terms of the following philosophical assumptions, ontological, epistemological and methodological assumptions.

1.6.1.1 PHILOSOPHICAL ASSUMPTIONS

The researcher adopted a descriptive phenomenology as a philosophical framework in conducting the study as it was a suitable qualitative research approach which focuses on learning and constructing the meaning of human experience through intensive dialogue with persons who were living the experience. The goal of the researcher is to understand the lived experience of the participants (Polit & Beck, 2021:477).

Descriptive phenomenologists insist on the careful description of ordinary conscious experience of everyday life, a description of things as people experience them. These things include hearing, seeing, believing, feeling, remembering, deciding, evaluating and acting (Polit & Beck, 2021:478).

1.6.1.2 ONTOLOGICAL ASSUMPTIONS

Ontological assumption is defined as beliefs about “the nature of reality and its characteristics” (Creswell & Poth, 2016:16).The ontology of phenomenology is to help in understanding the experiences of a specific situation or life event.

In this study, the researcher sought to understand the lived experiences of the nurses caring for patients diagnosed with the COVID-19 infection in the North West Province. Virtual focus

group discussions were conducted with nurses caring for patients diagnosed with COVID-19 to gain an in–depth and detailed description of their life-world experiences.

1.6.1.3 EPISTEMOLOGICAL ASSUMPTIONS

In the qualitative study, epistemological assumption means that "the researchers try to get as close as possible to the participants being studied" (Creswell & Poth, 2016:18). Phenomenological researchers carry out their studies in the participants' residential or work environment (Creswell & Poth, 2016:18). The same authors explained that these are important settings to assist the researcher to understand clearly, what the participants say.

In this study, the researcher and the nurses were active co-participants, with the researcher facilitating the research process by applying communication techniques enabling the nurses to verbalise their lived experiences of caring for patients diagnosed with COVID-19 in the North West Province. This enabled the researcher to gain in-depth knowledge and a rich description of the experiences of nurses caring for patients diagnosed with COVID-19. As a result, the findings of this study were the creation of the interactive process between the researcher and the nurses.

1.6.1.4 METHODOLOGICAL ASSUMPTIONS

Phenomenological researchers have several choices about methods that are related to their specific philosophical views on phenomenology. Empirical phenomenology was used in this study to explore and describe the lived experiences of nurses caring for patients diagnosed with COVID-19 infection. Phenomenologists believe that lived experience gives meaning to each person's perception of a phenomenon (Polit & Beck, 2021:477).

In this study, virtual focus group discussions were conducted to explore the human experiences through the descriptions provided by the nurses caring for patients diagnosed with COVID-19. The descriptions of the phenomenon were obtained from the participants (nurses) by the researcher.

6.1.5 CONCEPTUAL DEFINITIONS

Conceptual definitions of patient, nurse, COVID-19, experiences, guidelines and e-Delphi are provided below as used in the study.

- **Patient**

Patient is a person who is ill or undergoing treatment for a health care problem (Kaushik, 2019:310). In this study, a patient is a person who is diagnosed with a COVID-19 infection and is being taken care of by the nurses.

- **Nurse**

Nurse means a person registered in a category under section 31(1) in order to practise nursing or midwifery (South African Nursing Council, 2005:6). In this study, a nurse refers to a person who is registered with the South African Nursing Council (SANC) and is caring for patients diagnosed with the COVID-19 infection in the North West Province.

- **COVID-19**

COVID-19 is a large family of viruses that causes illness ranging from the common cold to more severe diseases, such as Middle East Respiratory Syndrome and Severe Acute Respiratory Syndrome (Organisation, 2020:1). In this study, COVID-19 refers to a virus that is causing a severe acute respiratory syndrome in patients admitted at the hospitals in NWP.

- **Experience**

Experience is defined as the quality and worth of all interactions, direct or indirect, clinical and non-clinical, over the course of working in a certain context (Wolf *et al*., 2014:9). In this study, experience is a practical knowledge or skill that is derived from nurses having contact or observation when caring for patients diagnosed with COVID-19 in NWP.

- **Guidelines**

Guidelines are systematically developed standards, statements or recommendations by a panel or team of experts, with an aim to provide practitioners with the best information for making clinical decisions in practice (Grove *et al*., 2021:39). In this study, guidelines refer to the rules about the best way to provide psychosocial support to the nurses caring for patients diagnosed with a COVID-19 infection in the NWP.

- **Caring**

Caring is defined as the moral ideal of nursing whereby the end is protection, enhancement, and preservation of human dignity (Blasdell, 2017:1). In this study caring refers to the manner in which the nurse shows kindness and concern to patients diagnosed with a COVID-19 infection in NWP.

- **Psychosocial support**

Psychosocial support refers to the actions that address both psychological and social needs of individuals, families and communities (Hansen, 2009:25). In this study, psychosocial support refers to the support given to help meet the mental, emotional, social, and spiritual needs of nurses caring for patients diagnosed with COVID-19 infection.

- **e-Delphi**

E-Delphi is an online technique for obtaining judgements from an expert panel about an issue of concern (Polit & Beck, 2021:783). Experts are questioned individually in several rounds, with a summary of the panel's views circulated between rounds, to achieve some consensus (Polit & Beck, 2021:783).

In this study, e-Delphi was used to enable a panel of 10-20 experts to participate in an asynchronous and anonymous manner. The researcher collaborated with the North-West University (NWU), to set-up the e-Delphi online platform by means of discussion forums. The experts were identified and recruited virtually by the researcher to participate in the study, based on their knowledge and expertise. The participants were experts such as psychiatrists, psychologists, social workers, psychiatric nurses from national and international hospitals who are knowledgeable about the psychosocial support for nurses caring for patients diagnosed with COVID-19.

1.7 RESEARCH DESIGN

Research design is the overall plan for addressing a research question, including specifications for enhancing the study's integrity (Polit & Beck, 2021:801). Research design provides a blueprint for maximising control over factors that could interfere with a study's desired outcome (Grove *et al*., 2021:58). A qualitative, descriptive phenomenological, contextual design is employed in this study.

1.7.1 Qualitative design

According to Burns and Grove (2017: 46), a qualitative design is a systematic, subjective approach used to describe life experiences and give them meaning in order to understand them. A qualitative design follows real-life experiences and seemed to be a more effective method of exploring emotional responses, as it focuses on understanding the whole that is consistent with the holistic philosophy of nursing (Grove *et al*., 2015:20; Creswell 2014:185; LoBiondo-Wood & Haber 2014:8). Qualitative research provides an in-depth exploration and description of a phenomenon that is inductive in nature (Toles & Barroso, 2014:96). A phenomenological inquiry is inherently qualitative in nature and does not reduce human beings

or experiences to parts that require separate investigation (Munhall, 2012:169). For this study, the experiences of nurses caring for patients diagnosed with the COVID-19 infection and the psychosocial support needed by nurses caring for patients diagnosed with COVID-19 were explored and described.

1.7.2 Exploratory-descriptive design

Exploratory-descriptive qualitative research is conducted to address an issue or problem in need of a solution and understanding (Grove *et al.*, 2021:35). The researcher explored an issue or problem area using varied qualitative techniques with the intention of describing the topic of interest and promoting understanding (Grove *et al.*, 2021:35). An exploratory design provided more details on the meaning attached to the psychosocial support received by nurses caring for patients diagnosed with COVID-19 in NWP. According to Brink *et al.* (2018:96), descriptive designs describe the variables in order to answer the research question. Descriptive research design involved observing and describing the experiences of nurses caring for patients diagnosed with COVID-19.This research design assisted the researcher in uncovering new facts and meaning.

1.7.3 Contextual design

In a contextual design, the researcher has a preference for understanding events, actions and processes in a specific concrete and natural context where the research phenomenon occurs (Polit & Beck, 2021:180). The contextual design produced a richer understanding of the social phenomenon of the psychosocial support needed by nurses caring for patients diagnosed with the COVID-19 virus (Babbie, 2014:326). The context of this study was North West Province.

1.8 RESEARCH METHODOLOGY

Four phases were followed to achieve the aim and objectives of the study, namely: integrative literature review, empirical, development and validation phases. These phases are explained in the following sections:

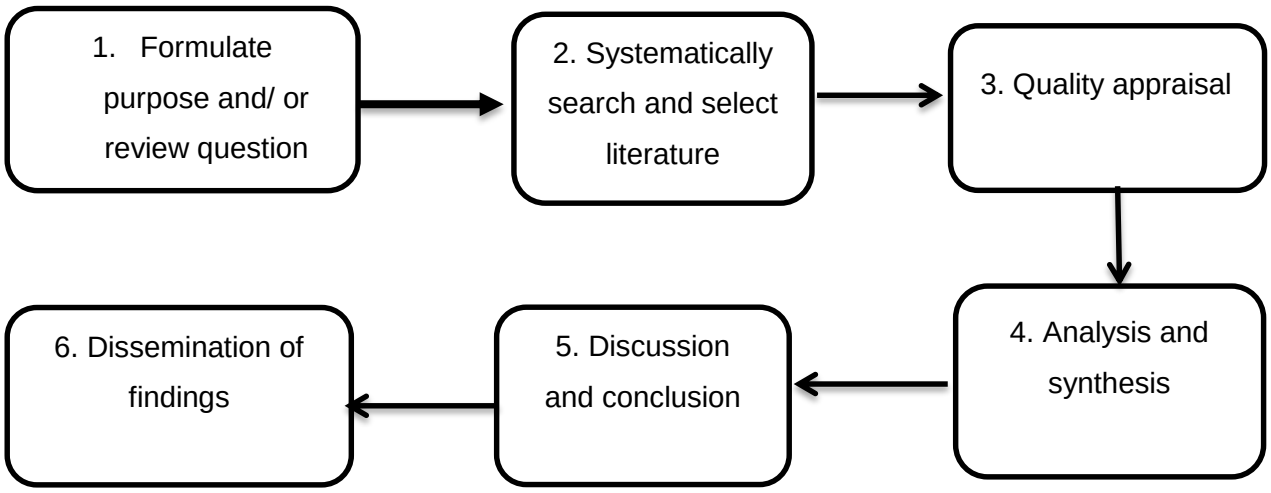
1.8.1 PHASE 1: INTEGRATIVE LITERATURE REVIEW PHASE

An integrative literature review is used to achieve first objective of the study. An integrative literature review (ILR) allows researchers to go beyond an analysis and synthesis of primary research findings and provides new insights and summarised knowledge about a specific topic, allowing for a broader understanding of a particular phenomenon (Lubbe *et al.*,

2020:308). By using the ILR method, researchers explore published evidence regarding a certain phenomenon, thereby identifying potential research gaps that need to be addressed during subsequent research (Lubbe *et al.*, 2020:308). In this study, the researcher explored published articles regarding psychosocial support guidelines for the nurses caring for patients diagnosed with a COVID-19 infection.

The following six steps of the integrative literature review are used in this study, as suggested by Toronto and Remington (2020).

Figure 1: Six steps of integrative literature review



Step1: Formulate purpose and/or review question(s)

- The purpose of the integrated literature review in this study is to conduct an integrated literature review related to the psychosocial support guidelines for nurses caring for COVID-19 patients. The review question of this study is:
- What factors need to be taken into account when developing psychosocial support guidelines for nurses caring for COVID-19 patients, according to available literature?

Step 2: Systematically search and select literature

The databases that formed part of the inclusion criteria are those that were related to the psychosocial support guidelines for nurses caring for patients diagnosed with COVID-19

infection. Databases that were consulted include Google Scholar, Science Direct, EBSCOhost, Medline, Emerald, Scopus, articles published from 2019-2022 in order to improve the credibility of the review. Documents or articles that did not answer the research question were excluded from the study. The researcher searched and selected literature considering the population, intervention, comparison, outcomes, time, setting (PICOT). Keywords that were included in the final search strategy are corona, COVID-19, nurses, care, caring, experiences and psychosocial support.

Population of interest (P): Nurses caring for patients diagnosed with a COVID-19 infection

Intervention (I): Psychosocial support guidelines

Comparison (C): No comparison in this ILR

Outcome (O) Increased support for nurses caring for patients diagnosed with a COVID-19 infection

Timeframe of the intervention (T): 2019–2022 (since COVID-19 only started

In 2019)

Inclusion and exclusion criteria

Articles or documents that are considered for the review were those that focus on the psychosocial support guidelines for nurses caring for patients diagnosed with a COVID-19 infection. The articles are written in English and published between 2019 and 2022 because COVID-19 started in 2019. Documents or articles that do not answer the research question are excluded from the study. Duplicated publications are excluded.

Step 3: Quality appraisal

This is the third step in the ILR process and it entails an in-depth appraisal of the relevant documents identified during the search. The researcher and an independent reviewer assessed the quality of the studies selected. An appraisal was conducted with the help of Johns Hopkins Nursing Evidence- Based Practice Appraisal (JHNEBP) tool consisting of an appraisal of all nursing research methods (Poe & White, 2010:11).There are three quality rating based on quality appraisal A, B and C.

A is a high quality study, it is consistent, has generalisable results with sufficient sample size for the study design, adequate control, definitive conclusions and consistent recommendations based on a comprehensive literature review that included thorough reference to scientific evidence. B is a good quality study, reasonably consistent results, sufficient sample size for the study design, some control and fairly definitive conclusions, reasonably consistent recommendations based on fairly comprehensive literature review that included some reference to scientific evidence, C is low quality or major flaws studies, little evidence with inconsistent results, insufficient sample size for the study design, conclusions cannot be drawn.

The appraisal was used as a way in which a reviewer attempts to mitigate bias in studies being selected. The quality appraisal of all the relevant documents were documented and excluded documents were added to the 'exclusion' list.

Step 4: Analysis and synthesis

Content analysis was used to classify the words in a text into categories. The researcher looked for repeated ideas. The researcher used content analysis and integration of a large amount of existing data to generate a new perspective on the psychosocial support needed for the nurses caring for patients diagnosed with COVID-19 infection. The researcher extracted data into tables and analysed these for similarities and differences in relation to the stated review purpose or questions. The table included authors, year, country, design and method, population and sampling, purpose and quality appraisal. The reviewers moved from mere facts related on a problem to a conceptual level of knowledge related to their inquiry.

Step 5: Discussion and conclusion

The discussion section of ILR is where researchers write about their review findings of the study. In this study, comparisons and contrasts of the findings of the review with background literature, and the work of others were made. Recommendations and implications for research, practice, education and policy about the psychosocial support guidelines for the nurses caring for patients diagnosed with a COVID-19 infection were made. Researchers made comments on methodological limitations of the review. The conclusion included a concise summary of the major findings and key contributions to the state of science.

Step 6: Dissemination of findings

Dissemination of findings is the final step of ILR. Dissemination occurs when a reviewer communicates their synthesis of research. The findings of this ILR were used to guide step 1 and 2 of the empirical phase, published in an accredited journal and also presented at a national or international conference. The article format was followed in this integrative literature review. A manuscript was submitted to a journal accredited by the Department of Higher Education.

1.8.2 PHASE 2: EMPIRICAL PHASE

Steps 1 and 2 of the empirical phase

Qualitative research methods were used in steps 1 and 2 of the empirical phase as follows:

In this section, the study population, sampling, research setting, data collection and data analysis were discussed.

Table 1: Summary of research methods for step 1 and 2 of empirical phase

Phase 2: Research Method for Step 1 and 2	
Population	Nurses caring for patients diagnosed with a COVID-19 infection in NWP, including registered professional nurses, enrolled nursing auxiliaries and enrolled nurses
Sampling approach **Sampling technique** **Sampling size**	Non-probability sampling approach Purposive sampling technique Each focus group discussion (FGD) had five to 10 participants. The researcher conducted all FGDs until saturation was reached.
Research setting	Four selected public hospitals caring for patients diagnosed with a COVID-19 infection in the North West Province.
Inclusion criteria	▪ Registration with the South African Nursing Council (SANC) as a registered professional nurse, enrolled nursing assistant and enrolled nurse during data collection

	▪ More than one month experience in caring for patients diagnosed with a COVID-19 infection in NWP ▪ Currently employed at COVID-19 sites in NWP ▪ Ability to communicate in English ▪ Willingness to voluntarily participate in the study ▪ Availability of a smart phone for data collection ▪ Willingness to be recorded
Exclusion criteria	Nurses who were on leave during the time of data collection
Data collection	Virtual Focus Group Discussions (FGDs) through Google meet
Data analysis	Descriptive phenomenological data analysis

1.8.2 Study population and sampling

1.8.2.1 Population

Population is defined as the entire set of individuals or objects having some common characteristics (Polit & Beck, 2021:797). The study population in step 1 and 2 of the empirical phase included all nurses caring for patients diagnosed with a COVID-19 infection and who were working at one of the four hospitals stated in the inclusion criteria in the North West Province.

The World Health Organisation estimates that up to 14% of COVID-19 cases are nurses and Amnesty International has reported >7000 nurses' deaths worldwide (Reese *et al.*, 2021:309). In June 2021, the international Council of Nurses (ICN) reported that more than 1097 nurses had died from COVID-19 (Keles *et al.*, 2021:2). In the USA, 19% of COVID-19 cases whose occupational status was known were HCWs (9 282/49 000), and >90 000 HCW COVID-19 infections were documented in 30 countries, with 260 deaths in nurses, by early May 2020. COVID-19 poses an arguably greater threat to African nurses than any other infectious agent to date. Data from countries with established epidemics show that nurses experience high rates of COVID-19 infection, morbidity and mortality (Dramowski *et al.*, 2020:1). The countries with the most reported nurse death were as follows: the USA (365/1518), South Africa (240/1518), Mexico (212/1518) and Russia (189/1518) (Keles *et al.*, 2021:2).

In South Africa (SA), on 6 May 2020, Minister Zweli Mkhize reported that 511 HCWs had tested positive for COVID-19, with nurses accounting for 53% of total HCW cases (Dramowski

et al., 2020:1). Nurses were found to be the most infected, accounting for 53% of all cases involving health care workers (Ntshalintshali & Mnqwazi, 2020:1). The researcher focused specifically on the North West Province because the total number of nurses who tested positive for COVID-19 was 2735 with 35 deaths in nurses (NWDoH, 2021).

1.8.2.2 Sampling

Sampling is defined as the process of selecting a portion of the population to represent the entire population (Polit & Beck, 2021:802). The process of selecting the participants is explained under sampling approach, technique, size, inclusion and exclusion criteria below:

1.8.2.2.1 Sampling approach

A non-probability sampling approach was used in this study in order to select participants who were well informed about the phenomenon. These participants articulated and explained their experiences in caring for patients diagnosed with a COVID-19 infection and described the psychosocial support needed in caring for patients diagnosed with the COVID-19 virus in the NWP.

1.8.2.2.2 Sampling technique

A purposive sampling technique was used in this study to select nurses caring for patients diagnosed with the COVID-19 infection in the NWP. Purposive sampling is a non-probability sampling method in which the researcher selects participants based on a judgement about which ones will be most informative (Polit & Beck, 2021:799). Purposive sampling allows the researcher to select the sample based on the knowledge of the phenomena being studied (Brink *et al.*, 2018:126). Purposive sampling provide researchers with the justification to make generalisations from the sample that is being studied (Sharma, 2017:751). Participants who met the inclusion criteria from all four hospitals around the North West Province were selected purposively, based on the selection criteria. A purposive sampling technique was used to recruit eligible participants (Sehularo *et al.*, 2020:4).

In this study, the researcher used a homogeneous purposive sampling strategy to select participants. Homogeneous sampling deliberately reduces variation and permits a more focused inquiry (Polit & Beck, 2021:500). Homogeneous sampling is a purposive sampling approach used by qualitative researchers involving the deliberate selection of cases with limited variation (Polit & Beck, 2017:730).

This sampling technique was used to select participants who could provide the information needed for the study. Participants were selected, based on the selection criteria mentioned in the study, and for the purpose of sharing their knowledge and experiences with the researcher. The main goal of purposive sampling in this study is to focus on the experiences of nurses caring for patients diagnosed with a COVID-19 infection and the psychosocial support needed by the nurses caring for patients diagnosed with a COVID-19 infection in order to answer the stated research questions.

Participants were approached by the researcher after written approval from nursing and midwifery quality care (NuMIQ) Focus Research Area, North-West University Health Research Ethics Committee (NWU-HREC), NWP Department of Health. The invitation was sent to the Chief Executive Officers (CEOs) of the selected hospitals in NWP. The researcher wrote a letter to the nursing service managers for them to act as the mediators. The researcher sent recruitment material to the nursing service managers via email so that he/she could share it with the nurses through their notice boards, WhatsApp messages. The researcher communicated with nursing service managers via email and informed them about the project, indicating the inclusion and exclusion criteria. Following this, the nurse managers e-mailed the advertisement to the most appropriate participants.

Participants interested in taking part in the study, gave their names and contact details to the nursing service manager (mediator) to share with the researcher, so that the researcher could contact the participants telephonically and also email them an individual letter of invitation in order to negotiate and gain their co-operation to participate in the study. An appointment was then made with the participants to be interviewed virtually using a focus group discussion (FGD) at the time that was convenient for them, mainly after work, from their homes or workplaces based on the appointment date and time set with the researcher.

1.8.2.2.3 Sampling size

Each FGD had five to 10 participants. The researcher conducted all FGDs until data saturation was reached. Data saturation in this study was the point at which new data about the experiences of nurses and the psychosocial support needed by nurses caring for patients diagnosed with a COVID-19 infection no longer emerged during data collection process (Brink *et al.*, 2018:126).

1.8.2.2.4 Inclusion criteria

Participants who were selected for inclusion in the study were chosen, based on the following sampling criteria:

- Registration with the South African Nursing Council (SANC) during data collection;
- Possession of more than one month's experience in caring for patients diagnosed with a COVID-19 infection
- Currently employed in COVID-19 sites in NWP
- Ability to communicate in English
- Willingness to voluntarily participate in the study
- Availability of a phone for data collection
- Willingness to be recorded

1.8.2.2.5 Exclusion criteria

Nurses who were on leave during the time of data collection

1.8.2.3 Study setting

Setting refers to the physical location at which data collection takes place in a study (Polit & Beck, 2021:803). Qualitative researchers are especially likely to engage in fieldwork in natural settings because they are interested in the contexts of people's experiences (Polit & Beck, 2021:42). In this study, the setting was four selected public hospitals caring for patients diagnosed with a COVID-19 infection in the North West Province. All-inclusive sampling techniques were used to select the four hospitals where this study was conducted (Polit & Beck, 2021:710). Four public hospitals in the North West Province were selected because they were actively admitting and caring for patients diagnosed with COVID-19 infections. Two of the hospitals were regional hospitals (level 2) while the other two were tertiary hospitals (level 3).

Level two hospitals are the second level of health care, they receive referrals from and provide specialist support to district hospitals. Level three hospitals is the third level of health care, they receive referral from and provide sub-specialist support to regional hospitals. North West Province has four regional hospitals and two tertiary hospitals. The four selected hospitals are the appropriate sites because they are the main public hospitals in the North West Province.

Natural setting is a real environment and involves data collection through online (Grove *et al.*, 2021:439). The researcher requested potential participants to ensure that the setting provides privacy and seating arrangements that encourage participation and interaction.

1.8.2.4 Data collection

Data collection is the precise, systematic, gathering of information relevant to the research purpose and the specific objectives, questions, or hypotheses of a study (Grove *et al.*, 2021:808). The data collection method that was used in this study is FGDs through Google meet. The researcher established a rapport with the participants in order to gain information from nurses on their experiences of caring for patients diagnosed with a COVID-19 infection and on the psychosocial support needed by nurses caring for patients diagnosed with a COVID-19 infection. The researcher was competent to collect data because she had a master's degree. Interview is a data collection method in which an interviewer asks questions of a respondent (Polit & Beck, 2021:790).

1.8.2.4.1 Interview schedule

Unstructured virtual focus group discussions via Google meet was the data collection method. The researcher sought to develop and validate a psychosocial support guideline for nurses caring for patients diagnosed with a COVID-19 infection in the NWP. Broad questions asked to start the interview were as follows: What are your experiences in caring for patients diagnosed with a COVID-19 infection? And what type of support do you need when you care for patients diagnosed with COVID-19 in the NWP?

In focus group discussion, rich and diverse data was generated by taking advantage of the group dynamics and participants may feel more comfortable to share opinions in a group than one-on-one (De Vos *et al.*, 2021:361). This allowed the nurses to elaborate on how psychosocial support guidelines for nurses caring for patients diagnosed with the COVID-19 infection in the North West Province could be developed and validated.

In this study, the researcher conducted the unstructured virtual focus group discussion with consenting nurses and the process of data collection was conducted in English. The following aspects were taken into considerations:

- **Time frame**

Focus group discussions last for one hour per group interaction (De Vos *et al.*, 2021:361). In this study, the researcher collected data from participants until data saturation was reached (Polit & Beck, 2021:783).

The following aspects were taken into consideration to facilitate the interview process

- **Establishment of rapport and trust**

The researcher greeted the participants, introduced herself and allowed the participants the opportunity to introduce themselves in order to establish rapport and trust. The researcher established group rules with the participants, such as respecting one another, not sharing what they did not feel comfortable about sharing, participants spoke one at a time and maintained the confidentiality of what is said in the group. Participant observers often find that, for their own comfort level and for that of participants, it is best to have a brief, simple explanation about their presence (Polit & Beck, 2021:523). The researcher gave a brief explanation about their presence, the process of research was explained and the researcher asked participants the permission to record the interview using a voice recorder. The participants were informed that the recorded discussion would be transcribed verbatim and the transcripts would be used for research purpose.

Selecting participants who are similar to one another in experiences is believed to facilitate open discussion and interaction (Grove *et al.*, 2021:336). To participate in online FGDs participants needed a stable internet connection, physical access to a technological device (e.g., computer, tablet, or smartphone) and access to a quiet place to minimise interruptions and outside noise. Participants joined the online FGDs mainly after work from their homes or workplaces using Google meet, based on the appointment date and time set with the researcher.

- **Core considerations for focus group discussions**

The following core considerations for focus group discussions were used by the researcher, as described by De Vos *et al.* (2021:369), in order to encourage nurses to explain and articulate their experiences and the support needed, freely and in a relaxed manner.

- Types of questions: questions were asked during the interview to promote interaction, to explore a topic in greater detail, to source in-depth information and clarify content

- Grand tour or grand open question: The grand tour is an open question with the distinct aim of opening the discussion and allowed the participants to start where and how they felt comfortable
- Follow-up questions: follow-up questions are typically the kind of questions posed to seek clarification such as “Can you explain what you meant when you say…”
- Specifying questions: Through this type of question the researcher explored and described the specifics of what was shared. For example, “Amongst others, you mentioned you experienced anger as a result of caring for patients diagnosed with COVID-19, Please explain how you experienced anger”.
- Direct questions: this was reserved for the conclusion of the interview. For example, “You mentioned that your partner reacted with shock following the COVID-19 diagnosis - I am wondering, did you experience shock as a reaction to the COVID-19 diagnosis?”
- Indirect questions: the researcher probed participants with a general reference, allowed projection without putting them on the spot for a direct disclosure.

- **Information session**

An Information session was held online with the group of participants in order to inform them about the process of the study before the interview. During that session, the researcher introduced herself to the participants to build rapport. Participants were reassured about the credibility of the researcher. The participants were informed that the researcher would follow ethical procedures.

1.8.2.5 Data analysis

Data analysis is the reduction and organisation of information obtained in the data collection phase (Grove *et al.*, 2012:63). Descriptive phenomenological data analysis was used in this study. Descriptive data analysis is about understanding phenomena and finding their precise meaning (Dahlberg *et al*., 2008:231). The analysis often requires that the “phenomenal meaning’’ be related to the “objective meaning’’ to obtain clarity. However, the focus is on the meaning of the phenomenon precisely as given (Giorgi, 1997:236).

After the researcher has collected data, all FGDs were transcribed verbatim. In this study, the researcher sent the transcribed FGDs to the independent co-coder through email. This was done to minimise the spread of COVID-19 infection. The researcher ensured that the information was secured by emailing the PDF format to the co-coder. The researcher called

the co-coder and informed her telephonically of the password. The researcher and an independent coder analysed the transcribed interviews before discussing them in terms of the available literature. An independent co-coder also sent the analysed data back to the researcher through an e-mail. This means that there were no face-to-face meeting between the researcher and an independent co-coder. The assumption of the eidetic reduction was the first step that guided the process of data analysis. Thereafter the five steps of Giorgi's descriptive phenomenological method of data analysis, as described in Oshodi *et al.* (2019:4), that were used in the study are discussed as follow:

a) Assumption of the eidetic reduction

Eidetic reduction is the process to rid the phenomenon from its surface appearance to reveal the "core" which means the "essence" of things. It involves a process of going beyond, behind or underneath the conventional patterns of thoughts and action in order to expose the meaning structure (Lin, 2017:471). The aim is to discover the inherent characteristics of the phenomenon being studied, taking into consideration that if the imaginative elimination of an aspect causes the phenomenon to collapse, the aspect is essential.

In the first step, the researcher repeatedly read the transcripts to gain a sense of the whole situated description. Prior to reading the data, the researcher had an understanding of putting aside any preconceptions, a situation described as bracketing.

b) Reading to search for sense of the whole

The transcribed FGDs were read through entirely within the phenomenological scientific reduction to comprehend the general sense of the entire description. This "reading'' enabled the researcher to have a clear comprehension of the experience of the participant from the consciousness and the standpoint of the participant (De Castro, 2003:47).

In the second step, the objects that emerged within the description were taken to be the phenomena comprising the whole experience.

c) Re-reading the description and demarcating spontaneous shifts in meaning

The researcher went back to the beginning of the description and reread to make sense of the whole. The researcher made note of thoughts that came to mind while reading and writing these down. The ultimate goal of the task was to grasp a sense of the whole meaning of the experience (Giorgi, 2009: 245).

d) Generation and determination of natural meaning units

The researcher reread the entire transcript and made an appropriate mark in the data every time she experienced a significant shift in meaning (process of constituting parts). This process is aided by the method of free imaginative variation searching for essences. At this stage, the researcher managed units and began to understand the data more deeply, consistent with the scientific discipline (Giorgi, 2009:131).

e) Synthesising the reflections and insights into a consistent statement

At this stage, the researcher focused on the intentionality of the experience. The researcher went back to the beginning of the description and the reflections and insights were summarised into a consistent statement that expressed the participants' experiences. Thus, the researcher asked the questions: what is the essential structure of the phenomenon or experience? And how does that phenomenon or experience take place? With the help of free imaginative variation, the researcher described the essential structure of the concrete, lived experience (Giorgi, 2008: 2).

In step five, the transformed meaning unit expressions were used as the basis for describing the psychosocial support i.e. themes. This were done by reviewing all of the transformations written to determine the themes. These was then used to clarify and interpret the raw data (Oshodi *et al.*, 2019:4).

1.8.3 PHASE 3: DEVELOPMENT PHASE

In phase 3, the results of the integrated literature review and the FGDs were used to develop the conceptual framework using framework of Dickoff *et al.* (1968:103). There were two steps in this phase, namely, development of a conceptual framework and development of the proposed guidelines. These steps are explained in the following sections:

Step 1: Development of a conceptual framework for nurses caring for patients diagnosed with a COVID-19 infection in North West Province

In this step, the researcher used Dickoff *et al.* (1968:103) to formulate the conceptual framework to guide the development of psychosocial support for the nurses caring for patients diagnosed with a COVID-19 infection in NWP. The survey list of Dickoff *et al.* (1968) included the agent, recipient, context, procedure, dynamics, and terminus. These concepts were used as the basis for the formulation of the conceptual framework.

Agent: According to Dickoff *et al.* (1968), an agent is a propelling force that moves the practice towards a goal, and is either a person or thing that produces an effect and takes an active part, or the person who does the actual work (Ndempavali & Justus, 2016:103). In this study, the agent is the person who moves the practice towards a goal by ensuring effective psychosocial support for nurses caring for patients diagnosed with a COVID-19 infection in NWP. The list of agents in this study included: hospital management, psychologists, social workers, nurses working in non-COVID wards and family members.

Recipient: The recipient refers to a person who receives the activity (Ndempavali & Justus, 2016:105). In this study, the recipients are the people who receive the conceptual framework from the agents. In this study, recipients were the nurses who are caring for patients who are diagnosed with a COVID-19 infection in NWP.

Context: Context, according to Dickoff *et al.* (1968), refers to the setting in which activity takes place (Ndempavali & Justus, 2016:106). In this study, contexts were the four public hospitals caring for patients diagnosed with a COVID-19 infection in the NWP.

Procedure: According to Dickoff *et al.* (1968), the procedure comprises the protocols and devices that enables an agent to attain a set of goals (Ndempavali & Justus, 2016:109). In this study, procedure refers to the steps or processes that were followed to ensure the success of the development of the psychosocial support guidelines for the nurses caring for patients diagnosed with a COVID-19 infection in NWP.

Dynamics: Dickoff *et al.* (1968) describe dynamics as the motivating factors that enable an individual to become successful (Ndempavali & Justus, 2016:108). In this study, dynamics refer to the motivating factors or activities that ensured the success of the developed conceptual framework for the psychosocial support of nurses caring for patients diagnosed with a COVID-19 infection in NWP.

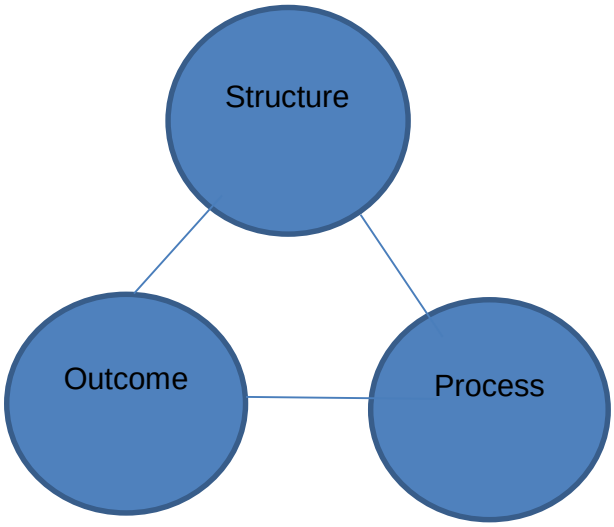
Terminus: According to Dickoff *et al.* (1968), terminus refers to the last stage, the end, or the finishing point (Ndempavali & Justus, 2016:109). In this study, terminus refers to the end product or the outcome of the newly developed conceptual framework. The endpoint or the outcome of the newly developed framework is to support the nurses caring for patients diagnosed with a COVID-19 infection in NWP.

Step 2: Development of the psychosocial support guidelines for the nurses caring for patients diagnosed with a COVID-19 infection

Psychosocial support guidelines for the nurses caring for patients diagnosed with a COVID-19 infection in NWP were developed using Donabedian's model. According to Donabedian (1966:2), the quality of health care was assessed by three components that are relevant for organisation

1. Structure (requirements of the organisation)
2. Process (action to be taken)
3. Outcome (end results)

Figure 2: Donabedian's structure-process-outcome model (1966)



Structure According to Donabedian's model, structure is defined as the setting in which health care is provided (e.g. facilities, equipment, number and qualification of personnel) (Tossaint-Schoenmakers *et al.*, 2021:2). In this study, structure refers to the context and environment where nurses are caring for patients diagnosed with a COVID-19 infection in the NWP.

Process is defined as what is actually done in giving and receiving care (e.g. patient and nurse activities, nurse-patient communication) (Tossaint-Schoenmakers *et al.*, 2021:2). In this study, process refers to the interactions or activities that were used when implementing the developed guidelines for nurses caring for patients diagnosed with a COVID-19 infection in NWP.

Outcome is defined as the consequences of the provided health care (e.g. health status, satisfaction and costs (Tossaint-Schoenmakers *et al.*, 2021:2). In this study, outcome refers to the psychosocial support received by nurses caring for patients diagnosed with a COVID-19 infection in the NWP.

1.8.4 Phase 4: Validation of psychosocial support guidelines for the nurses caring for patients diagnosed with a Covid-19 infection

1.8.4.1 E-Delphi technique

The e-Delphi technique was used to validate psychosocial support guidelines for the nurses caring for patients diagnosed with a COVID-19 infection in NWP. The e-Delphi technique aims to gain consensus among "experts," as defined within the specific context of investigation through a series of survey-style rounds. Typically, survey rounds assess expert opinions through a ranking or rating approach, with controlled feedback between rounds allowing participants the opportunity to change their ratings, should they wish to, informed by the responses of other participants, until consensus is reached (Mete *et al.*, 2021:2).

1.8.4.2 Methods

Method were discussed under the following headings: population, sampling, data collection and data analysis.

1.8.4.2.1 Population

Population is defined as the set of all members of a defined group that serves as the focus of a study (Grove *et al.*, 2021:60). The population, in this phase, were the experts, who are competent and knowledgeable regarding psychosocial support for the nurses caring for patients diagnosed with a COVID-19 infection. The most important aspect of the e-Delphi technique is choosing an appropriate group of experts who are qualified and knowledgeable to answer the questions and give relevant inputs (Polit & Beck, 2021:265).The study was explained to all participants personally using Google meet and they were all oriented about their responsibilities considering the e-Delphi rounds. The population were experts, such as psychiatrists, psychologists, social workers, psychiatric nurses, from national and international environments who are knowledgeable about the psychosocial support for the nurses caring for patients diagnosed with a COVID-19 infection.

The e-Delphi technique allows a wide variety of experts to express opinions and provide feedback, nationally and internationally, without meeting together (Polit & Beck, 2021:511). In this study, the researcher included qualified experts such as psychiatrists, advanced psychiatric nurses, psychologists and social workers.

1.8.4.2.2 Sampling

Sampling is defined as the subset of the accessible population that the researcher selects for participation in a study (Grove *et al.*, 2021:60).The process of selecting the participants is explained under sampling approach, sampling technique, sampling criteria and sample size.

1.8.4.2.2.1 Sampling approach

Non-probability sampling approach was used in this phase in order to select and compile a list of prospective participants based on their expertise for the purpose of making decisions and assessing priorities.

1.8.4.2.2.2 Sampling technique

Snowball sampling and expert sampling techniques were used in this phase. The researcher selected experts who are knowledgeable about the psychosocial support guidelines for the nurses caring for patients diagnosed with a COVID-19 infection.

1.8.4.2.2.3 Inclusion criteria

- Registration with the professional body such as Health Professions Council of South Africa (HPCSA), South African Nursing Council (SANC), South African Council for Social Service Professions (SACSSP), etc.
- Experts who were willing to participate voluntarily in the study
- Qualified experts from academia, private, government and non-government organisations in the area of qualitative research, policy and or guideline development, healthcare
- Participants needed to have had at least three years' experience in an area of specialisation.

The researcher included academics, such as researchers who are skilled and experienced in qualitative research, policy and guideline development, advanced psychiatric nurses, psychiatrists, psychologists, and social workers with experience in the field of psychosocial support guidelines for the nurses caring for patients diagnosed with a COVID-19 infection.

1.8.4.2.2.4 Exclusion criteria

Experts who were on leave during the time of data collection

1.8.4.2.2.5 Sampling size

Three rounds of group of experts were conducted, until consensus was reached. 10 to 20 participants were invited to participate in the study.

1.8.4.3 Data collection

Data collection is the precise, systematic gathering of information relevant to the research purpose of a study (Grove *et al.*, 2021:62). The process of data collection was conducted until the data reflected consensus among the panelists. The researcher facilitated the process of data collection in each round while the respondents remained anonymous to each other (Grove *et al.*, 2021:512). The researcher sent the developed psychosocial support guidelines to the experts through email and when they were done with their responses, they sent them back to the researcher through email. Each participating expert was given a period of about two weeks to respond to the validation of the preliminary guidelines formulated and adapted after each round. This is another way of ensuring trustworthiness of the study. Using an e-Delphi technique allows a wide variety of experts to express opinions and provide feedback nationally and internationally, without meeting together (Grove *et al.*, 2021:511) as only emails were used.

First, the researcher drafted the preliminary guidelines based on the empirical data and the results of the drafted conceptual framework. Each of the expert participants sent an e-mail of the drafted guidelines with an instrument to evaluate the validity of the guidelines, according to a Likert scale, as well as open-ended comments. After the analysis of the data by the researcher after each round, the guidelines were refined and adapted, based on the feedback received from participants and the same experts were given the refined guidelines. The feedback process that was given in each round allowed and encouraged the e-Delphi participants to reassess their initial judgements. Comments and evaluation after each round occurred until members of the panel came to a consensus (Polit & Beck, 2021: 783).

In this study, the e-Delphi technique was used to validate and finalise the guidelines to support the psychosocial wellbeing of nurses taking care of COVID-19 infected patients in NWP. The advantage of using an e-Delphi technique is to ensure the anonymity and confidentiality of experts' participation, reduce influence from dominant participants, ease administration of

questionnaires through electronic media. The researcher facilitated the process of data collection in each round (Grove *et al.*, 2021:511).

1.8.4.4 Data analysis

Data analysis is the systematic organisation and synthesis of research data (Polit & Beck, 2021:783). In the e-Delphi process, data analysis involved both qualitative data in the form of open-ended comments made by respondents and quantitative data in the form of a Likert scale rating from 1-4 (Dahlberg *et al*., 2008:231). Decisions were ruled and established to assemble and organise the judgements and insights provided by the e-Delphi participants (Hsu & Sandford, 2007:4). The researcher collated the consensus rate from the responses and the Likert scale was used to indicate agreement and a quantitative analysis was used where statistical analysis and percentages were used to determine consensus rates.

The Likert scale ratings were used, whereby, rating 1 was strongly agrees with the guideline; rating 2 was agree to some extent; rating 3 was disagree to some extent and rating 4 was strongly disagreed with the guideline.

The ratings were based on the following attributes, such as valid, relevant, comprehensive, applicable, effective, flexible and acceptable for nurses caring for patients diagnosed with COVID-19 (Agree Collaboration 2010).

1.9 MEASURES TO ENSURE TRUSTWORTHINESS OF THE STUDY

Trustworthiness of this study was ensured by using criteria of credibility, dependability, confirmability, transferability and authenticity, as described by Lincoln and Guba in Polit and Beck (2021:569).

1.9.1 Credibility

Credibility refers to confidence in the truth of the data and interpretations (Polit & Beck, 2021:568). The researcher ensured credibility by ongoing iteration and feedback given by experts. The credibility of the findings of this study was ensured through the following strategies:

- **Prolonged engagement**

Prolonged engagement is essential for building trust and rapport with participants, which in turn, makes it more likely that rich, detailed information will be obtained (Polit & Beck,

2021:571). In this study, the researcher prolonged the length of engagement with nurses collecting data using virtual focus group discussion through Google meet until the point of data saturation. Prolonged engagement enabled the researcher to have a thorough understanding of the experiences of nurses. Prolonged engagement assisted in the development of trust and promoted rapport between the researcher and the nurses. Experts were also given a maximum of two weeks to validate the developed guidelines.

- **Persistent observation**

Persistent observation refers to the researchers' focus on the characteristics or aspects of a situation or a conversation that are relevant to the phenomena being studied (Polit & Beck, 2021:571). During the online FGDs, the participants were observed for any verbal or nonverbal cues and hand written field notes were kept.

- **Reflective strategies**

Reflexivity involves attending systematically and continually to the context of knowledge construction, to the researcher's effect on the collection, analysis and interpretation of data (Polit & Beck, 2021:571). In this study, reflective notes assisted the researcher to remain open to the experiences of nurses caring for patients diagnosed with COVID-19.

- **Peer debriefing**

Peer debriefing involves seeking the opinions of peers who have a similar status or are colleagues who are experts in either the method or phenomenon being studied (Brink *et al.*, 2018:158). In this study, the researcher discussed the research process and findings of the study with both promoters who are knowledgeable and have experience with qualitative research. The research proposal was also presented to the group of experts in the School of Nursing Science (SONS).

- **Researcher credibility**

In qualitative studies, researchers are the data collecting instruments, as well as the analytic process. Therefore, the researcher's qualifications, experience and reflexivity are relevant in establishing confidence in the findings (Polit & Beck, 2021:578). The researcher of this study is a professional nurse with extensive experience in the nursing profession. The researcher has previously conducted a qualitative study and has gained experience which was used in this study. Both promoters of this study are PhD holders and are experienced in qualitative research and guidelines development.

1.9.2 Dependability

Dependability refers to the provision of evidence, such that if it were to be repeated with the same (or similar) participants in the same (or similar) context, its findings would be similar. In other words, dependability refers to the stability of data over time (Brink *et al.*, 2018:159). In this study, the researcher kept field notes and used a tape recorder for verification. To ensure that dependability is achieved, the researcher included a range of experts, as indicated in phase 4 above.

1.9.3 Confirmability

Confirmability refers to objectivity, that is the potential for congruence between two or more independent people about the data's accuracy, relevance or meaning. Confirmability is enhanced by efforts to establish that the data represent participants' viewpoints and the interpretations of those data are not invented by the inquirer (Polit & Beck, 2021:570). Confirmability was achieved during data collection through FGDs with nurses, by using a tape recorder and an audit trail, including observation during interviews, as well as by writing down field notes. Confirmability was assessed by maintaining a detailed description of the e-Delphi data collection and analysis process. Data was analysed independently by both the researcher and the co-coder.

1.9.4 Transferability

Transferability refers to the ability to apply the findings in other contexts or to other participants (Brink *et al.*, 2018:159). In this study, purposive sampling and data saturation were used to enhance transferability. Purposive sampling maximises the range of specific information obtained from the particular context, by purposefully selecting participants in terms of knowledge of the phenomenon under investigation (Brink *et al.*, 2018:159). Data saturation occurs when additional participants provide no new information and when themes that emerge become repetitive (Brink *et al.*, 2018:160). Transferability was established by using verification of the applicability of the e-Delphi findings.

1.9.5 Authenticity

Authenticity refers to the extent to which researchers fairly and faithfully show a range of realities. Authenticity emerges in a report when it conveys the feeling tone of participants' lives as they are lived. When a text achieves authenticity, readers are able to understand the lives being portrayed "in the round," with some sense of the mood, feeling, experience, language

and context of those lives (Polit & Beck, 2021:570). In this study, descriptive statements of the lived experiences by the research participants were included in the research reports.

1.10 ETHICAL CONSIDERATIONS

According to the Belmont Report issued in 1979, cited in Polit and Beck (2021:133), the three fundamental ethical principles on which standards of ethical conduct in research should be based are: beneficence, respect for human dignity and justice. These ethical principles guided the researcher and are described below:

- **Beneficence**

The principle of beneficence imposes a duty on researcher to maximize benefits and minimise harm (Polit & Beck, 2021:133). This principle covers the following aspects:

a) The right to freedom from harm and discomfort

In research involving humans, the researcher has an obligation to avoid, prevent or minimise harm. Participants should not be subjected to unnecessary risk of harm or discomfort. Research should be conducted by qualified people, ethical researchers must be prepared to terminate a study if they suspect that continuation would result in harming the participant (Polit & Beck, 2021:133). In this study, the researcher ensured that the well-being of participants was protected from physical, psychological or emotional discomfort or harm. In the event where there was any emotional discomfort, participants were referred to the psychologist of their choice or to the Employee Assistance programme (EAP). If there was a need for referral, the researcher had the contact details of the counsellor and the employee assistance programme.

b) The right to protection from exploitation

Participants' involvement in the study should not place them at a disadvantage or expose them to damages. Participants should be ensured that their participation, or information that they provide, will not be used against them (Polit & Beck, 2021:133). In this study, participants were ensured that their identity would be anonymous.

- **Respect for human dignity**

This principle includes the right to self-determination and the right to full disclosure (Polit & Beck, 2021:134).

a) The right to self-determination

Self-determination means that prospective participants can voluntarily decide whether to take part in a study, without risk of prejudicial treatment. The participants have the rights to ask questions, to refuse to give information and to withdraw from the study (Polit & Beck, 2021:134). In this study, participants were informed that their participation is voluntary, they have the right to participate or to refuse to participate in the study. Participants were informed that they have the rights to withdraw or discontinue from the study at any time without any penalty or prejudicial treatment.

b) Right to full disclosure

Full disclosure means that the researcher has fully described the study, the right to refuse participation, the researcher's responsibilities and likely risks and benefits. Participants should not be deceived or provided with incorrect information about the study (Polit & Beck, 2021:134).

- **Justice**

The principle of justice includes participants' right to fair treatment and their right to privacy (Polit & Beck, 2021:135).

a) The right to fair treatment

The selection of participants should be based on study requirements and not on a group's vulnerability. The right to fair treatment means that researchers must treat people who decline to participate or who withdraw from the study in a non-prejudicial manner (Polit & Beck, 2021:135).

In this study, prospective participants were selected on the basis of the inclusion criteria. Nurses choosing not to participate in the study were not judged in any way and were not required to give any reason for the decision made.

b) The right to privacy

The researcher ensured that their research was not more intrusive than it needed to be and that participants' privacy was maintained.

1.10.1 Measures to ensure privacy / confidentiality / anonymity

On the basis of the right to privacy, the participants have the right to anonymity and the right to assume that all data collected is kept confidential. Anonymity means that even the researcher cannot link a participant's identity to that participant's individual responses.

Confidentiality is the researcher's management of private information shared by a participant that must not be shared with others without the authorisation of the participant (Grove *et al.*, 2021:205). In this study, each participant was assigned a code number. The research report was written in such a way that the participant's personal information could not be linked to her individual responses.

The researcher ensured the protection of Information obtained from the participants according to the Protection of Personal Information Act (POPIA) (Act 4 of 2013) and the information was not shared with people other than the researcher, promoters and the co-coder. The setting was convenient for both the researcher and participants as the interviews were conducted via Google meet and it ensured privacy and confidentiality. The researcher ensured that the identity of the participants was protected and not disclosed to anyone other than the research team. This ensured that the participants felt safe, and comfortable enough to participate and give valuable information that answered the research questions and met the study's objectives. This was achieved by assigning pseudonyms to participants during data collection. To ensure privacy, confidentiality and anonymity the participants were identified as Participant 1 or Participant 2 during data collection.

1.10.2 Data management

The results of all the virtual FGDs were kept safe and there was confidentiality. Only the researcher and the co-coder were able to look at the findings of this study. Before data analysis, findings and other important documents were kept safe by locking hard copies in a locked cupboard in the researcher's office and electronic data was password protected. As soon as data had been transcribed and analysed by both the researcher and an independent co-coder, it was deleted from the researcher and the co-coder's recordings. All people involved in this research signed the confidentiality agreement before being involved in this research. This included the researcher, promoters, independent co-coder, counsellor who was on standby and the language editor.

After data analysis and completion of the study, all hard copy documents were scanned and the hard copies shredded by the researcher. After the study is completed, the storage device will be stored in the office of the research director in a locked cupboard for a minimum period of five years for auditing purposes. The following will be stored with the device:

- Student name and university number and supervisors' names

- Title of the study
- Name of degree and date it was awarded
- Student's contact details: phone and email address
- Description of the device on which electronic copies are stored

In a sealed envelope, the password of the storage device will be written and after five years, the electronic copies including the audio and video recordings will be discarded.

1.10.3 Legal authorization

Research involving people requires the researcher to submit the research plans to the Institutional Review Board. The Institutional Review Board assesses the research plans to confirm that the rights and welfare of the participants in the study are protected from harm. Confirmation is also needed that the appropriate methods were used to secure informed consent and that the potential benefits of the study are greater than the risks (Grove *et al.*, 2021:208). In this study, the researcher obtained permission from the NuMIQ scientific review, North-West University Health Research Ethics Committee (NWU-HREC), North West Provincial Department of Health, approval from the Chief Executive Officers (CEOs) where data was collected and a written informed consent from nurses caring for patients diagnosed with COVID-19. The researcher ensured that ethical principles are considered throughout the study.

1.10.4 Recruitment of participants

1.10.4.1 Recruitment of participants (Step 1 and 2 of empirical phase)

Participants were approached by the researcher after written approval from NuMIQ Focus Research Area, North-West University Health Research Ethics Committee (NWU-HREC), NWP Department of Health. The researcher wrote and emailed letters to the Chief Executive Officers (CEO) of the selected hospitals in NWP to act as a gatekeepers. Once the invitation was sent to the CEO's office, the researcher waited for his/her response before requesting permission from the nursing service managers. The researcher then wrote a letter to the nursing service managers for them to be the mediators and to allocate specific wards affected by the COVID-19 pandemic. Due to the COVID-19 pandemic, there were no face-to-face meetings with potential participants during the recruitment process.

The researcher sent recruitment material to the nursing service managers via email so that he or she could share it with the nurses through their notice boards, WhatsApp groups. The researcher communicated with nursing service managers via e-mail and told them about the research project, indicating the inclusion and exclusion criteria. Following this, the nurse managers e-mailed the advertisement to the most appropriate participants. If a participant was interested in taking part in the study, they reached out via phone or e-mail to the nurse manager indicating their interest. After all permission had been granted, the researcher, through the nursing service manager and operational managers (OM), after identifying potential participants, started recruiting participants through telephone calls, emails or WhatsApp (De Vos *et al.*, 2021:362).

The researcher contacted the participants' individually through telephone, email and WhatsApp. However, participants were not forced or coerced to participate in the study. An appointment was then be made with the participants to be interviewed virtually using FGD through Google meet at the time that was convenient for them. Before data collection, all potential participants were given one gigabyte of data for participating in the study.

The researcher sent one gigabyte to the participants' cell phones. This was not a payment but to say thank you for spending time by participating in the study. The researcher did not want potential participants to suffer financially from participating in this study. The researcher contacted participants telephonically to confirm the appointment prior the scheduled date of appointment. Participants were given a minimum of seven days before FGDs. See Annexure C.

1.10.4.2 Recruitment of experts

After the approval from the CEO of the selected hospitals, the researcher wrote invitation letters to the experts requesting them to participate in the study.

Experts such as the psychiatrists, psychologists, social workers, advanced psychiatric nurses, nursing service managers and operational managers, lecturers at nursing colleges and universities were recruited by sending them invitation letters to participate in the study via-email.

The researcher sent recruitment material to the experts via emails or WhatsApp to those experts who are comfortable using WhatsApp. Recruitment material was written in English. Once the experts had indicated that they are willing to participate, and signed the informed

consent, then the researcher emailed a summary of findings of phase 1 and 2, and the instrument to validate the draft guidelines (Likert scale).

According to Keeney *et al.* (2011:8), an e-Delphi technique determines that the size of the experts' panel should consists of 10 to 20 participants (experts), and some of the experts should have expert knowledge in the subjects. In this study, 20 participants (experts) were invited to participate in the study. Experts remained anonymous to one another and the panel of experts were asked to participate independently within the specified time frames. In this study, experts who are qualified and knowledgeable in the subject were requested to participate in the validation of the psychosocial guidelines. Before data collection, all potential experts were given one gigabyte of data for participating in the study. The researcher sent one gigabyte to the experts' cell phones. This was not a payment but to say thank you for spending time by participating in the study.

1.10.5 Process of obtaining informed consent

1.10.5.1 Process of obtaining informed consent from nurses caring for patients diagnosed with COVID-19 infection

Obtaining informed consent from human participants is essential for the conduct of ethical research. Consent is the prospective participant's agreement, after assimilating essential information to participate in a study as a participant (Grove *et al.*, 2021:214). In this study, due to the COVID-19 pandemic, the researcher made use of a virtual link when obtaining informed consent from the participants. The researcher emailed the informed consent documents to potential participants in advance. The researcher contacted the participants in order to make an appointment during which consent forms were signed. Zoom was used to make it easier to have visual contact with participants during the signing process.

During the signing of the consent form, the participant had a person present to co-sign and witness the signing process, while the researcher also had a person present to co-sign and witness the signing process to ensure a fair and safe manner of obtaining an informed consent. This means that four people were present during the signing process as being visibly undertaken over the video link. Participants were requested to email or use a WhatsApp to send the signed consent forms back to the researcher. The researcher asked the participants to use courier services to send the original hard copies of the signed consent form to the researcher. The researcher has paid the courier services.

1.10.5.2 Process of obtaining informed consent from experts

The researcher emailed the informed consent documents to experts in advance. During the signing of the consent form, the expert had a person present to co-sign and witness the signing process, while the researcher had a person present to co-sign and witness the signing process to ensure a fair and safe manner of obtaining an informed consent. This means that four people were present during the signing process. Experts were requested to email or use a WhatsApp to send the signed consent forms back to the researcher. The researcher asked the experts to use courier services to send the original hard copies of the signed consent form to the researcher. The researcher has paid the courier services.

1.10.6 Vulnerable participants

This study does not include vulnerable groups.

1.10.7 Probable experience of participants

Participants in phase one possessed one year of relevant experience in caring for patients diagnosed with the COVID-19 infection in NWP.

Experts were people with relevant qualifications and a minimum of three years of working experience.

1.10.8 Risk and precautions

The researcher avoided, prevented or minimised harm to all participants. If participants were emotional because they were asked questions related to the COVID-19 pandemic and if that precipitated feelings of sadness because they had lost their colleagues, patients and their loved ones, the researcher discontinued or terminated the study if she suspected that continuation would result in harming the participants. In the event where there was any emotional discomfort, the participant would be referred to the psychologist of their choice or to the Employee Assistance programme (EAP). If there was a need for referral, the researcher had the contact details of the counsellor and the employee assistance programme. Confidentiality agreements were signed to assure confidentiality for FGDs.

Table 2: Risk and precautions

Risk of focus group discussion	**Risk mitigation strategies followed to protect the participants**

• Confidentiality The nature of a focus group is such that confidentiality cannot be guaranteed	• Participants were informed about the public nature of the forum before they participated in the study • At the start of the session, the researcher established group rules with the participants, such as respecting one another, not sharing what you do not feel comfortable about sharing, participants to speak one at a time and to maintain the confidentiality of what is said in the group.
Risk associated with performing data collection on an online platform	**Mitigation factors that was followed**
• Technical difficulties -This may lead to trouble downloading the software, signing in or getting set up	• The researcher provided technical support to all participants when entering the session • The researcher informed participants about early log on times, at least ten minutes before the session so that the participants join the group early, to deal with any technical problem.
• Distraction	Participants were asked to remove any distraction that could interrupt the session or make them to step away from their computer for a moment, such as answering a cell phone.

1.10.9 Anticipated benefits

Table 3: Direct and indirect benefits

Direct benefits	Indirect benefits

There are no direct benefits for participating in this study	• Being equipped to assess and implement evidence- based practice • Have the opportunity to verbalise their experiences regarding their experiences of caring for patients diagnosed with a COVID-19 infection in NWP. • Knowledge obtained from the research may expand the participants' understanding of some issues related to health • The participants may receive the benefit of knowing that they had the opportunity to make a contribution to nursing education, nursing practice and nursing research. • Taking an active role in one's own healthcare

1.10.10 Risk/benefit ratio analysis

There were more benefits than risks for participating in this study.

Table 4: Risk/benefit ratio analysis

Risks for the expert panel	Benefits for the expert panel
• Experts might drop out due to the long temporal commitment • Does not allow participants' discussion, therefore there is no opportunity for participants to elaborate on their views	• Anonymity reduces impact of dominant participants and helps reduce pressure to confront other participants • Responses are weighed equally

1.10.11 Experience, skills and competency of researchers

The researcher is a professional nurse with a Master of Nursing Science, Bachelor of Nursing Science, Bachelor of Nursing (Education) and Postgraduate Diploma in Management. She has worked as a nurse for 15 years. The researcher attended HREC training and received

certification. She has good communication and interpersonal skills, problem solving and decision making skills. Both promoters are PhD holders and experienced in qualitative research and guideline development. They have extensive publication in qualitative research.

1.10.12 Dissemination of research results

The results of this study will be made available in thesis form for the doctoral degree at North-West University, Faculty of Health Sciences. Feedback will be given to all the participants of this study and to all relevant stakeholders. The researcher will organise workshop and invite all the participants of the study including relevant stakeholder and give them a presentation of the research findings. The researcher will also publish articles and present the results of the study at national and international conferences.

1.10.13 Conflict of interest

The researcher and promoters do not have any conflict of interest in this study.

1.11 Research report structure

The dissertation on the psychosocial support guidelines for the nurses caring for patients diagnosed with COVID-19 infection in the North West Province is divided as follows:

Section 1 A: Overview of the study

Section 1 B: Literature review

Section 2 A: Manuscripts/Articles

Section 2 B: Development and validation of the psychosocial support guidelines

Section 3: Conclusions, limitations and recommendations

1.12 CONCLUSION

Section one focused on the introduction and background of the study, problem statement, research questions, aim and objectives of the study, significance of the study, paradigmatic perspective, as well as a description of the research design and methodology that was used in the study. The section also comprised the trustworthiness, ethical considerations and structure of the study.

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SECTION ONE B:

LITERATURE REVIEW

1.1 INTRODUCTION

The literature review provides a framework for establishing the importance of the study, as well as a benchmark for comparing the results with other findings and it relates a study to the larger, ongoing dialogue in the literature and filling in gaps (Creswell & Creswell, 2018:26). The literature review also provides a foundation on which to base new evidence and it is usually conducted before data are collected (Polit & Beck, 2021:51).

The aim of this study was to review the current literature by exploring and describing the published articles regarding psychosocial support for the nurses caring for patients diagnosed with a COVID-19 infection. This section presents the scope of the literature review, methodology and the discussion of findings from literature review.

1.2 SCOPE OF THE LITERATURE REVIEW

The scope of the literature review covered all relevant literature regarding the psychosocial support for nurses caring for patients diagnosed with a COVID-19 infection.

1.3 METHODOLOGY

The methodology was discussed under the following headings: search strategy for peer-reviewed journals, search strategy for grey literature, and the inclusion and exclusion criteria.

1.3.1 Search strategy for peer-reviewed journals

Databases that were consulted include Google Scholar, Science Direct, EBSCOhost, Medline, Emerald, Scopus, articles published from 2019-2022 in order to improve the credibility of the review. An internet search was also carried out using Google and Google Scholar databases. The following search terms were identified: corona, COVID-19, nurses, care, caring, experiences and psychosocial support. Documents or articles that did not answer the research question were excluded from the study. The researcher searched and selected literature considering the population, intervention, comparison, outcomes, time, setting (PICOT). Keywords that were included in the final search strategy are corona, COVID-19, nurses, care, caring, experiences and psychosocial support.

1.3.2 Search strategy for grey literature

Grey literature stands for manifold document types produced on all levels of government, academics, business and industry in print and electronic formats, but which is not controlled by commercial publishers (Woods *et al.*, 2020:262).

Electronic search strategies were used to identify grey literature. The first step in the search for grey literature was to search all articles related to psychosocial support for nurses caring for patients diagnosed with a COVID-19 infection.

1.3.3 Screening of the literature

Literature or documents that were related to the psychosocial support for nurses caring for COVID-19 patients were screened. Literature that did not answer the research questions were excluded from the study. Literature considered for the review were those that focused on psychosocial support for nurses caring for COVI-19 patients. Duplicated publications were excluded.

1.3.4 Quality evaluation

The researcher and an independent reviewer assessed the quality of the selected literature. An appraisal was conducted with the help of Johns Hopkins nursing evidence-based practice appraisal (JHNEBP) tool. Quality appraisal of all the relevant documents were documented.

1.3.5 Analysis of the literature

Data was extracted into tables and analysed for the similarities and differences. The table included authors, year, country, design and method, population and sampling, purpose and quality appraised.

Table 5: List of the sites from which the information on psychosocial support for nurses caring for patients diagnosed with COVID-19 infection was obtained

Sites for grey literature search

DATABASE	LINK	COMMENTS

Science Direct	https://www-sciencedirect-com.nwulib.nwu.ac.za	Databases and website focused on psychosocial support for nurses caring for patients diagnosed with COVID-19
Google Scholar	https://onlinelibrary.wiley.com	Databases and website focused on psychosocial support for nurses caring for patients diagnosed with COVID-19
Emerald	https://www-emerald-com.nwulib.nwu.ac.za	Databases and website focused on psychosocial support for nurses caring for patients diagnosed with COVID-19

1.3.6 Inclusion and exclusion criteria

In this literature review, the following inclusion and exclusion criteria were used.

The articles considered for the review were:

- Focusing on the psychosocial support for nurses caring for patients diagnosed with a COVID-19 infection.
- Written in English
- Published between 2019 and 2022 because COVID-19 started in 2019

The section that follows discusses the key findings of the literature review. However, some of the articles in this literature review are briefly referred to as they provide supporting information for this study.

1.4 DISCUSSION OF FINDINGS FROM LITERATURE REVIEW

The discussion of psychosocial support for nurses caring for patients diagnosed with a COVID-19 infection was covered under the following headings: psychological support, social support and stress related to shortage of personal protective equipment (PPEs).

1.4.1 Psychological support

Global studies have shown that nurses are at high risk for developing mental health symptoms, as a result of caring for patients diagnosed with a COVID-19 infection (Kovner *et al.*, 2021:745). In a study conducted by Sehularo *et al.* (2021:5), psychological support helps to relieve emotional suffering so that beneficiaries are sooner able to rely on their own resources and cope more successfully with the hardship they face on the road to recovery. The COVID-19 pandemic has had significant negative impacts on nurses' psychological health, fostering issues such as anxiety, depression, sleep disturbance and burn-out (Alnazly *et al.*, 2021:2). Additionally, Araujo *et al.* (2022:3) pointed out that nurses caring for patients diagnosed with COVID-19, experience mental exhaustion and consequences, including forgetfulness and irritability and feelings of loneliness. In a study conducted by Shah and Huang (2021:857), it was revealed that reduced safety standards, increased workload and poor mental health could predispose nurses to burn-out. This indicates the necessity of providing psychological support for nurses caring for patients diagnosed with a COVID-19 infection (Alnazly *et al.*, 2021:2).

Xu *et al.* (2021:13) reported that during the outbreak, nurses who had close contact with patients experienced initial fears of being contaminated at work, and of becoming sick and dying. The same authors further indicated that some nurses reported that the infection or death of other nurses exacerbated their fear, creating serious anxiety and stress. In addition to the fear of oneself being infected, nurses also expressed concerns about transmitting the infection. Gordon *et al.* (2021:2) pointed out that nurses reported that they are at a risk of contracting and/or transmitting the virus to others, including family members. This potential risk increased the nurses' anxiety as they worried about being carriers of the virus and infecting their family members and loved ones (Xu *et al.*, 2021:13).

In a study conducted by Shah and Huang (2021:852), nurses indicated that it becomes difficult to focus on their work goals because of their preoccupations with their personal and loved one's risks and the associated tendency to respond with strategies that require significant cognitive energies, hence their mental health become drained over time, and they feel exhausted at work. Furthermore, Hochwarter *et al.* (2022:207) argued that because the COVID-19 pandemic has increased exposure to traumatic, life-altering events, nurses are more vulnerable to severe psychological anxiety, as evidenced by nurses experiencing PTSD.

The findings of Da Rosa *et al.* (2021:6) suggest a high prevalence of emotional distress among nurses during the COVID-19 pandemic. Concerns for worsening pre-existing mental health conditions, job dissatisfaction, higher number of COVID-19 cases with direct clinical contact at the facility, fear of getting infected at work, and feeling unprepared for the pandemic were

independent predictors for higher emotional distress. These findings underline the need to promote appropriate support in the work environment to reduce nurses' emotional distress and promote psychological well-being for nurses caring for patients diagnosed with a COVID-19 infection (Da Rosa *et al.*, 2021:6).

Psychological support can help reduce negative psychological effects on nurses. In addition to these practical measures, it may be useful to establish an on-going mental health monitoring programme for nurses caring for COVID-19 patients (Aksoy & Koçak, 2020:432). Shah and Huang (2021:852) added that high psychological stress prevails among nurses who provide care for patients diagnosed with a COVID-19 infection. Moradian *et al.* (2022:24) further stipulate that measures should be taken to improve the psychological health of nurses to prevent further damage to the nurses. The following sub-headings are discussed under psychological support: Employee Assistance Programme (E.A.P), Pastoral counselling and Psychotherapy.

- **Employee Assistance Programme (EAP)**

The Canadian Centre for Occupational Health and Safety defines an EAP as a programme provided by an employer or service provider with a focus on addressing the well-being of employees that might be impacting their performance (Veldsman & van Aarde, 2021:3).The Trade Union department of the hospital considered the psychological challenges employees were facing and launched the EAP, which includes different forms of psychological intervention (Xu *et al.*, 2021:8).

The findings of Xu *et al.* (2021:8) revealed that professional psychological counselling could potentially alleviate psychological illnesses, provide a theoretical basis for promoting EAP psychological services, and demonstrate how to reduce pressure on nurses caring for patients diagnosed with COVID-19 infections. A study conducted by Fang *et al.* (2021:5) found that nurses are willing to have psychological counselling during normal working hours. This finding also shows that actively providing and encouraging nurses to participate in EAP psychological counselling can significantly alleviate abnormal psychological symptoms (Xu *et al.*, 2021:10).

In Australia, the majority of nurses caring for COVID-19 patients indicated that their workplace provided support services such as debriefing and staff psychological support services, only a small proportion of nurses attended debriefings and accessed psychological services. Those who used these services rated them useful (Nahidi *et al.*, 2022:26).

- **Pastoral counselling**

Spiritual support is a key element of holistic care, and better healthcare professionals training and stronger strategic guidelines become urgent in light of health disasters and emergencies, such as the COVID-19 pandemic (Papadopoulos *et al.*, 2021:2209). The main goal of pastoral counselling is the convergence of theology and psychology through the use of spiritual resources and psychological knowledge, for the care and growth of the person being counselled (Stizzi *et al.*, 2022:2). According to the study conducted by Rathnayake *et al.* (2021:7), nurses caring for COVID-19 patients reported that they believed in their religion and followed their religious activities.

There are spiritual care practitioners (SCP), who are trained to facilitate positive spiritual and religious coping for nurses caring for patients diagnosed with COVID-19 infections, such as chaplains, priests, pastors, who have put themselves at great risk while offering their service in hospitals. Indeed, thousands of SCPs all around the world have been working tirelessly offering spiritual assistance, prayers and sacraments to nurses during the COVID-19 pandemic (Domaradzki, 2022:2).

The pastors support nurses, bring them hope during isolation from their families and assist in their problems and fears and they help nurses in coping with the anxieties caused by the pandemic and bring them hope for a better future (Domaradzki, 2022:975). According to the study conducted by Chew *et al.* (2020:353), many nurses found prayer and support from the religious community to be helpful during the COVID-19 pandemic.

In a study conducted by Domaradzki (2022:976), pastors are often approached by nurses to ask for help in managing their emotions resulting from work overload, emotional separation and longing for their loved ones or mourning after someone died. The presence of pastors give nurses certainty that they also have to be there (Domaradzki, 2022:976). The positive impact of chaplaincy support for nurses in high-stress contexts has been recognized in various studies and there is evidence that chaplains have found innovative ways to provide nurses' support (Tata *et al.*, 2021:1).

In a study conducted by Ahmadidarrehsima *et al.* (2022:6), it was revealed that nurses caring for COVID-19 patients used strategies such as spiritualising their work, trusting in God, engaging in religious activities, and creating an atmosphere of empathy to reduce work-related

stress in the wards, such as deprivation, mental health problems, fear, unpleasant experiences, including social and communication challenges. Nurses also tried to improve their self-care and reduce the stress caused by working during the COVID-19 pandemic with various strategies, such as prayer (Ahmadidarrehsima *et al.*, 2022:6).

- **Psychotherapy**

The results of the literature search showed that supportive psychotherapy is good for every setting, including emergency settings and enhances the coping mechanism (Shatri *et al.*, 2021:230). The same author further indicated that nurses caring for patients diagnosed with COVID-19 infections should be given the opportunity to talk, show them usable resources, encourage them to be good co-workers, to be consistent, to provide peace of mind, support them to keep taking care of themselves, and to help them to explore the causes of stress.

Shatri *et al.* (2021:230) stated that the role of nurses is very important in the success of the psychological interventions, with coping strategies, such as increasing self-knowledge about the COVID-19 virus, instilling positive values, making the most of rest time, music therapy, and watching TV. According to the study conducted by Giordano *et al.* (2020:4), music therapy (MT) has been shown to play an important role in helping address psychological distress as it provides effective results in lowering the intensity of fatigue, sadness, fear, and worry. This music therapy may also be applicable to units working in high stress conditions such as those working in COVID-19 units (Giordano *et al.*, 2020:4).

The basic intervention consists of debriefing, identifying critical incidents, helping set the situation in perspective, and reinforcing the capacity and skills of the nurses, therefore in this setting, supportive psychotherapy is very useful to control tension in their mental state (Shatri *et al.*, 2021:230). Psychotherapy provided by psychologists has been organised for nurses working on the frontline during COVID-19 and where requested, in-house psychologists are providing outreach in various front-line workplaces, giving short interactive sessions on basic self-care skills and resilience (Williams *et al.*, 2020:60).

Araujo *et al.* (2022:6) stated that at the individual level, one of the strategies to cope with the stress of the COVID-19 pandemic is to seek hobbies and leisure activities in the free time, deviating one's attention from the daily worries related to the COVID-19. The de-stressor activities mentioned include reading, watching movies, cooking, spending time with family members.

1.4.2 Social support

Social support is conceptually defined as providing individuals with resources in either tangible or intangible forms, which are typically divided into the categories of emotional, instrumental, or informational support, and appraisal (Kim *et al.*, 2020:2). Social support is necessary as a coping mechanism to decrease nurses' psychological distress and promote positive feelings (Alnazly *et al.*, 2021:17). The following sub-headings are discussed under social support: families, peers / colleagues and management.

- **Family support**

According to the study conducted by Mo *et al.* (2020:1006), nurses received family support and encouragement from their loved ones during the COVID-19 pandemic. Muller *et al.* (2020:4) reported that nurses utilised support from family during the COVID-19 pandemic as a main emotional motivational factor to continue working. Elderly parents and children at home were again mentioned, and concern was great enough that several nurses did not tell their family they were working on the frontline, while others did not live at home during this period (Muller *et al.*, 2020:4).

On the other hand, Xu *et al.* (2021:8) reported that when nurses are not working, their time to rest is in hotels, which is isolating. Their everyday lives are limited, they cannot meet with their families and relatives, and their social support is insufficient. However, a study by Shatri *et al.* (2021:230) found that nurses are more comfortable with social support from family and colleagues than from professional help. A study conducted by Ren *et al.* (2021:7) showed that nurses received social support mainly from family members.

Nurses mentioned the importance of family support. The emotional comfort and affection provided help nurses to feel strong and move on with their duties despite adversities. Family members also provide a sense of purpose and inspiration (Araujo *et al.*, 2022:8). According to the findings of Xu *et al.* (2021:16), nurses viewed communication with family members as an additional psychosocial support that could encourage, motivate, and comfort them. Considering the potential risk of being a carrier, nurses restricted their social activities, and many of them had even isolated themselves from family members and friends. As family members and friends used to be an important support system on which nurses relied, these new social restrictions and self-isolation suddenly and dramatically decreased nurses' social

and emotional relationships, which resulted in depression and loneliness for nurses during this adaptation process (Xu *et al.*, 2021:16).

- **Peers and colleagues support**

A study conducted by Rathnayake *et al.* (2021:7) found that working together with colleagues in an harmonious working environment can help relieve psychological stress, especially during the time of COVID-19 infections. According to Cui and Lee (2020:1142), peer support is a powerful force that induces a feeling in nurses that they are not alone and increases their confidence that the epidemic will be overcome. Nurses encourage one another, discuss and share their feelings and experiences with their colleagues in a timely manner, and vent negative emotions (Mo *et al.*, 2020:1006). According to the study conducted by Rathnayake *et al.* (2021:7), nurses reported that the main group who shared their suffering were nursing peers and colleagues who worked in the same units. Many junior nurses received assistance and support from their senior nurses, especially in decision making.

In a study conducted by Rathnayake *et al.* (2021:7), nurses were advised to communicate with colleagues who had the same experience or similar feelings and then understand and heal each other. They were asked not to force themselves to forget unpleasant experiences. It was normal for them to not forget such experiences; they might even remember it for a lifetime (Rathnayake *et al.*, 2021:7). A study conducted by Shen *et al.* (2020:1) found that the social support system improved after regular chats with family and colleagues were organised through WeChat videos. Han *et al.* (2022:8) pointed out that when colleagues encounter difficulties, team co-operation and mutual support are critical to improving the state of mind.

On the personal level, the strategies used by nurses include engaging in remote social connections and sharing personal stories, making use of peer support to actively engage in positive assertive control, practicing self-compassion and self-care practices for nutrition, rest and exercise, tapping into a sense of purpose and altruism (Araujo *et al.*, 2022:4). Social support and supportive practices at work can serve as a buffer for some of the adversity nurses experience and promote positive mental health outcomes during the COVID-19 pandemic (Da Rosa *et al.*, 2021).

- **Management support**

Hospital management and nurse managers have a central role in COVID-19 care, particularly ensuring support for nurses. The activities led by nurse managers include doing basic risk assessment among nurses before placing nurses in COVID-19 units, the arrangement of training programmes, granting leave, arranging progress meetings, and arranging welfare, were highly appreciated (Rathnayake *et al.*, 2021:10). A study conducted by Alnazly *et al.* (2021:16) found that nurses are encouraged to take vacations from work for helping them relax, which contributes to preventing stress. Nursing management assess the level of social support nurses perceive at work and develop initiatives to enhance communication and the exchange of support, based on nurse feedback (Schierberl Scherr *et al.*, 2021:7).

A study conducted by Zhu *et al.* (2020:4) found that an intensive training on PPE and infection control measures were found to be helpful to support nurses. Al Thobaity and Alshammari (2020:9) added that updating nurses with current information about the COVID-19 pandemic and ensuring the availability of PPE help reduce their fear and worries. Zhu *et al.* (2020:2) added that the management of Tongji Hospital implemented a series of hospital support measures, including organising a WeChat Balint group, reasonable work shift arrangements, and sufficient logistical support and lodging support for nurses living apart from their families. Zhang *et al.* (2021:5) pointed out that the shorter shift durations were more beneficial to mitigate fatigue and fatigue-related risks than longer shift durations. The same authors further stated that to manage frontline nurses' work hours scientifically and to ensure their mental safety while improving their response readiness are urgent problems for health managers to address. According to the findings of Zhang *et al.* (2021:5), the actual work hours of the nurses were longer than the nurses' reported preferred work hours.

Zhu *et al.* (2020:3) reported that hospital-based support included additional allowances for frontline nurses, regular greetings and reassurance from hospital executives and nursing managers for all nurses caring for COVID-19 patients. In addition, when nurses are infected, such incidents should be treated as work-related injuries (Zhu *et al.*, 2020:3). A study conducted by Sehularo *et al.* (2021:6) found that the importance of hospital administration provided psychological support was a crucial factor in the nurses' ability to overcome their challenges caused by COVID-19 infections. Increasing social support and setting up psychological intervention groups for nurses with anxiety and stress disorders is also a helpful and actionable step that hospital management can take, with the earliest interventions being ideal (Xu *et al.*, 2021:10).

Mo *et al.* (2020:1003) indicated that when nurses are exposed to working environments with high job demands and low resources, higher job stress and greater physical and psychological stress symptoms may adversely affect health and well-being. Maintaining the mental health of nursing staff is essential to the control of infectious diseases.

According to the study conducted by Nahidi *et al.* (2022:26), the most common challenge reported by nurses is in relation to PPE supply and use. Lack of appropriate PPE including the training for use of PPE, frequent changes to PPE guidelines, and fear of PPE shortages were the most dominant concerns. The same author further indicated that there is poor communication between management and nurses during the course of the outbreak. This showed a lack of preparedness, slow response and lack of timely communication of management strategies while often completely ignoring the concerns raised by nurses (Nahidi *et al.*, 2022:26).

In a study conducted by Han *et al.* (2022:2), nurses caring for COVID-19 patients in Korea reported that they viewed themselves as lacking knowledge about COVID-19 patients and that they felt pressured and overwhelmed in response to the demand to provide nursing care for critically ill patients without sufficient nursing experience regarding patients with a COVID-19 infection, leading to an increase in emotional and psychological stress. Additionally, Gordon *et al.* (2021:2) stipulated that nurses have a knowledge deficit regarding the care of patients diagnosed with COVID-19 infections. Moradian *et al.* (2022:24) added that nurses have a high tendency to be infected with the virus. At the management level, acknowledging the scope of the COVID-19 pandemic and the uncertainty and change created, promoting collective efficacy and fostering on-going peer support and mental health support programmes, which may arrange collective psycho-education and relaxation activities, group and individual mental problem sharing, might help to safeguard the nurses' mental health (Araujo *et al.*, 2022:4).

Araujo *et al.* (2022:4) added that the support can take place at the individual level (e.g. mental help support consultations), at the peer level (e.g. sharing experiences with peers with shared roles) and at the unit level (e.g. strategies fostered by the organisations or departments) where these nurses work and some practical and easy to implement actions can be applied by hospitals and other health-care organisations to foster physical and mental health of these nurses. Han *et al.* (2022:2) further stipulate that in-depth educational programmes are needed, specifically training programmes for nurses caring for patients diagnosed with COVID-19.

As a consequence of long shifts and to avoid contamination risks of taking off PPEs, even the basic physiological needs have to be postponed, including eating, drinking water, sleeping and going to the bathroom, unhealthy habits were also mentioned as a consequence of the increased anxiety (Araujo *et al.*, 2022:6). According to the findings of Xu *et al.* (2021:17), the nurses were disappointed by their respective organisations' managers during the COVID-19 pandemic due to unreasonable arrangements and scheduling, accordingly, nurses hoped that managers could arrange work more appropriately in consideration of their physical and mental well-being, thereby increasing the trust in the workplace and improving the efficiency of nursing work. In addition, nurses put forward the need for social support. Some nurses expressed expectations for appropriate and timely financial allowance or reimbursement for their work during the pandemic (Xu *et al.*, 2021:17).

Sevinc *et al.* (2022:174) pointed out that nurses caring for COVID-19 patients should be further supported and encouraged mentally and physically. The same authors further added that, the number of night shifts and scope of their responsibilities should be revised, and this could diminish the incidence of post-traumatic stress disorder likely to occur as a result of the COVID-19 pandemic. According to the findings of Chau *et al.* (2021:8), nurses in the Philippines highlighted the importance of organisational measures to support nurses' mental health and to reduce fear, including social support, psychological support services, COVID-19-related training, and accurate and regular information and updates.

1.4.3 Stress related to shortage of personal protective clothing (PPEs)

In a study conducted by Galanis *et al.* (2021:1305), nurses have to wear PPE unceasingly for more than 6- 8 hours in a shift during the COVID-19 pandemic, moreover inappropriate PPE reuse (e.g. donning of a used PPE item without contamination) due to global PPE shortages continues to affect nurses and patients' safety and the sustainability of health care systems. According to the study conducted by Cohen and van der Meulen Rodgers (2020:1), since early 2020 in the United States, it was reported that there were severe shortage of personal protective equipment (PPE) needed by nurses fighting the COVID-19 pandemic.

Cohen and van der Meulen Rodgers (2020:1) added that medical professionals have called for federal government action to mobilise and distribute adequate supplies of protective equipment, especially gloves, medical masks, goggles or face shields, gowns, and N95 respirators. N95 respirators, which have demonstrated efficacy in reducing respiratory infections among nurses, have been in particularly short supply. Without proper PPE, nurses

are more likely to be affected psychologically and also become ill. A decline in the supply of healthcare due to worker illness combines with intensified demand for care, causing healthcare infrastructure to become unstable, thus reducing the quality and quantity of care available (Cohen & van der Meulen Rodgers, 2020:1).

Araujo *et al.* (2022:6) reported that knowledge from previous epidemics highlights the importance of PPE for nurses to reduce the spread of disease, safeguard nurses' health and wellbeing, and maintain a sustainable health workforce to curb the outbreak. Adequate provision of PPE helps nurses to feel confident and prepared to deliver quality care. The same author added that lack of material resources for providing adequate care is perceived as a source of stress. Due to the high demand during the COVID-19 pandemic, some health-care supplies and protective materials are not promptly found in the market, are sold at exorbitant prices or are of low quality (Araujo *et al.*, 2022:6).

Shah and Huang (2021:849) indicated that an alarming level of PPE (i.e. N95 masks, goggles, gloves, or protective suits) deficiency has been felt in many hospitals, as the number of nurses testing positive for the deadly COVID-19 surged massively, such near absence of protective gear triggered unrest among nurses. In a study conducted by Shah and Huang (2021:849), nurses reported that they need PPE; not only for ourselves but also to save the lives of many. The same authors further indicated that to curb the spread of infection in hospital premises is to provide nurses caring for COVID-19 patients with adequate training to safeguard themselves and others.

The rapid spread of the virus, coupled with the inadequate PPE supply in the US, led the Centers for Disease Control and Prevention to issue guidance to optimise the PPE supply, including conservation strategies and re-use of conventionally disposable PPE (Gordon *et al.*, 2021:2). According to the study conducted by Xu *et al.* (2021:2), personal protective equipment (PPE) creates barriers to the efficacy of nurse-patient communication and physical contact. It means that nurses are unable to provide adequate services to patients in the way they were taught and expected to, resulting in increased pressure for the nurses and dissatisfaction with their work.

Zhang *et al.* (2021:6) indicated that personal protective equipment (PPE) is necessary for nurses to protect themselves from being infected. However, the use of personal protective equipment has resulted in many problems. PPE could lead to sensory deprivation and a psychological stress response. The same author added that the use of PPE resulted in

sweating and dehydration among nurses, and the prolonged use of goggles led to fog that their obscured vision, thus affecting their clinical practice. Li and Mahyuddin (2022:3) added that during the COVID-19 epidemic, nurses need to wear PPE for a long period of time to protect themselves from infection when they are in contact with patients. However, this can lead to extreme discomfort and may increase thermal stress which may adversely affect their performance, safety and health (Li & Mahyuddin, 2022:3). Hochwarter *et al.* (2022:209) added that disruption of work routines, such as wearing PPE for long hours, causes anxiety/panic and physical symptoms, including breathing difficulties and chest pains.

Conclusion

The literature review in this chapter indicated that nurses caring for COVID-19 patients faced many challenges and as a result, they needed psychological and social support. Lack of personal protective equipment is also perceived as a source of stress for nurses. In order to overcome those challenges, some nurses received support from their families, colleagues and hospital managers.

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SECTION TWO A:

MANUSCRIPTS

2.1 INTRODUCTION

The previous section focused on the introduction and background of the study, problem statement, research questions, aim and objectives of the study, significance of the study, paradigmatic perspective, as well as a description of the research design and methodology that was used in the study. It also comprised of the trustworthiness, ethical considerations and structure of the study. This section presents the five manuscripts produced in this study. The manuscripts were submitted to the accredited journals. The title of the manuscripts and journal submitted to are listed below as follows:

Manuscript One: Psychosocial support for nurses caring for patients diagnosed with COVID-19 disease: An integrated literature review, was published in Gender & Behaviour Journal, June 2023.

Manuscript Two: The live experiences of nurses caring for patients diagnosed with COVID-19 infection in the North West Province, was published in The Open Public Health Journal, January 2023.

Manuscript Three: The psychosocial support needed by nurses caring for patients diagnosed with COVID-19 infection in the North West Province, South Africa, was published in Gender & Behaviour Journal, December 2022.

Manuscript Four: Conceptual framework for the psychosocial support of nurses caring for patients diagnosed with COVID-19 infection in North West Province, South Africa, was published in International Journal of Environmental Research and Public Health, March 2023.

Manuscript Five: Psychosocial support guidelines of nurses caring for patients diagnosed with COVID-19 infection in North West Province, South Africa, submitted to Qualitative Health Research Journal, February 2023.

MANUSCRIPT ONE

Title: Psychosocial support for nurses caring for patients diagnosed with COVID-19 disease: An integrated literature review, was published in Gender & Behaviour Journal, June 2023



Gender & Behaviour, Volume 21 No. (2), June 2023
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ISSN: 1596-9231

PSYCHOSOCIAL SUPPORT FOR NURSES CARING FOR PATIENTS DIAGNOSED WITH COVID-19 DISEASE: AN INTEGRATED LITERATURE REVIEW

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Abstract

Caring for COVID-19 patients can be very stressful. Nurses continue to be at the frontline, caring for COVID-19 patients despite the spread of the infectious and deadly disease. Nurses caring for these patients are exposed to psychological and social problems. The purpose of this study was to review the current literature by exploring and describing the articles published on psychosocial support for nurses caring for COVID-19 patients. An integrative literature review (ILR) method was used to explore published evidence on a certain phenomenon thereby, identifying potential research gaps to be addressed in future studies. The six steps of ILR used to achieve the purpose of this study were: formulation of the purpose and/or review questions(s); systematic search and selection of appropriate literature; quality appraisal; analysis and synthesis; discussion and conclusion; and dissemination of findings. An appraisal was done using the Johns Hopkins Nursing Evidence-Based Practice Appraisal (JHNEBP) tool. Google Scholar, Science Direct, EBSCOhost, Medline, Emerald and Scopus were used to identity and select articles considered in the study. Articles used in this ILR were published from 2019-2022. The findings yielded two themes: psychological and social support. The findings also revealed that the increase in COVID-19 cases puts pressure on global health care systems, leading to psychological and social pressure on nurses caring for COVID-19 patients. Nurses caring for COVID-19 patients are affected, both psychologically and socially thus, needing psychosocial support. Supporting nurses psychologically and socially is critical to enable them provide quality care for COVID-19 patients.

Keywords: Caring; COVID-19; nurses; psychosocial support

Introduction

There is emerging evidence that nurses caring for COVID-19 patients have greater risks of being affected psychologically, resulting in mental health conditions, such as anxiety, depression, insomnia and stress [1]. Nurses are vital resources for providing care, treatment and rehabilitation services to patients. The long working hours under uncomfortable and stressful conditions may jeopardise the psychological well-being of nurses, their morale and work performance [2]. Their psychosocial well-being and safety are crucial in ensuring safe patient care, and control of infectious diseases, such as COVID-19. Supporting the mental health of nurses is a critical part of public health response as nurses experience psychological and social pressure when caring for COVID-19 patients [3]. Challenges faced by nurses include increased workload, fear of contagion (for nurses and their families) and caring for very sick and deteriorating patients [3].

There is a growing demand and focus on protecting nurses across the world through the provision of Personal Protective Equipment (PPE), training, addressing fatigue and addressing psychosocial consequences [4]. The World Health Organisation (WHO) and International Council of Nurses (ICN) produced guidelines and manuals to provide nurses with sufficiently holistic psychosocial support systems to minimise effects that may disrupt their psychological well-being [2]. There is need for the development of a more beneficial psychoeducational training module integrated in the national standard operating procedures (SOP) to manage health crises [2]. Such training module could help nurses in enhancing their self-psychological management skills in order to better manage their mental, emotional, social, and spiritual capacities prior to entering the uncertain conditions of battling other pandemic health crises in future [2].

In Canada, employers are providing mental health support to employees by waiving fees for mental health services, offering additional psychosocial support and increasing awareness of mental health among employees [5]. Virtual care for mental health has been established and 62% of Canadians seeking services are satisfied with the level of service. In the United States of America (USA), federal hotlines and online therapy services that predate the COVID-19 pandemic are being utilised more and more by emotionally distressed nurses, leading to a marked increase in the use of the services [5]. According to a study conducted by [1] in the United Kingdom (UK), there are several reasons why nurses experience adverse psychological consequences when caring for COVID-19 patients. Firstly, rising cases of the pandemic led to longer hours, more intense working environments, and work-life imbalance, disrupting the equilibrium between work demands and workers' response capacity. This often resulted in poor control mechanism and undefined role of nurses.

High levels of stress, coupled with the unique demands of the COVID-19 pandemic, undoubtedly placed nurses at additional risks for mental health problems, with early reports from around the world indicating elevated rates of depression, anxiety, post-traumatic stress disorder (PTSD) and suicidality [6]. Communication is essential in assessing the quality of care for patients. Since the time of Florence Nightingale, the nurse-patient communication has assumed an increasingly predominant role in the effectiveness and efficiency of care [7]. Since the outbreak of the COVID-19 pandemic, communication with patients has become more complicated through the use of PPEs, which cover most of the face, and nurses have less time to spend with each patient [3]. Family and friends are not able to visit patients, and nurses often feel guilty that patients are unable to see members of their families or friends before death. Normal routines for breaking news of death are not available, and the news may have to be shared over the phone, and there is no opportunity to view the body of the deceased [3].

A global analysis of the literature on COVID-19 highlights the need for research from Africa regarding psychosocial support for nurses caring for COVID-19 patients, which remains under-researched [5]. According to a study conducted by [5] in sub-Saharan Africa, the COVID-19 pandemic has impacted the lives of many nurses around the world and is likely to result in mental health problems among those with no previous mental illness as well as exacerbate the condition of those with pre-existing mental health problems. Nurses' experience of caring for COVID-19 patients, breakdown of psychosocial support and stigma are possible causes of mental health problems. Despite the above information, there are no studies on the psychosocial support for nurses caring for COVID-19 patients in Africa.

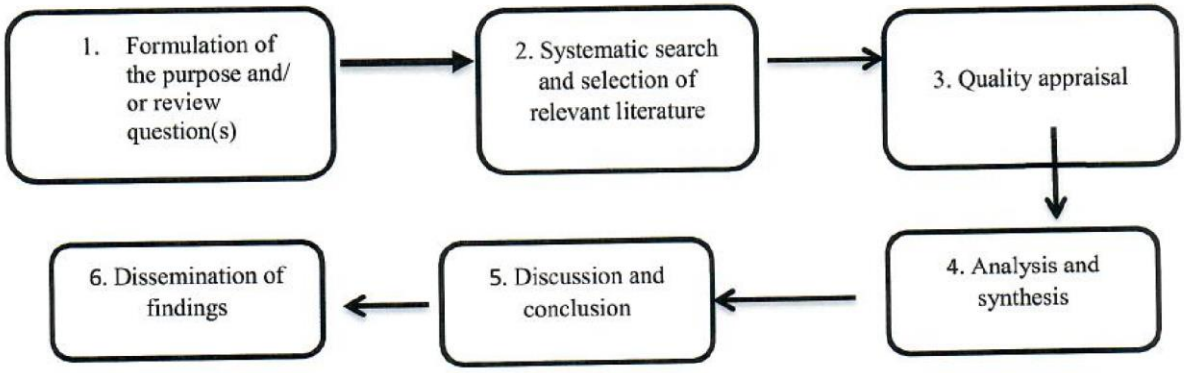
Aim of the study

The purpose of this study was to review current literature by exploring and describing the published articles on psychosocial support for nurses caring for COVID-19 patients.

Research methods

An Integrative Literature Review (ILR) was used in the study since it allows researchers to go beyond an analysis and synthesis of primary research findings and provides new insights and summarised knowledge about a specific topic, allowing for a broader understanding of a particular phenomenon [8]. Through ILR, researchers are able to explore published evidence on a certain phenomenon thus, identifying potential research gaps to be addressed in future studies [8].

The following six steps of the integrative literature review were used in this study as suggested by [9].



Step1: Formulation of the purpose and/or review question(s)

The purpose of this study was to review current literature by exploring and describing published articles on psychosocial support for nurses caring for COVID-19 patients. The question asked in the review was:

What are the psychosocial measures put in place to support nurses caring for COVID-19 patients?

Step 2: Systematic search and selection of relevant literature

The second step of the ILR involved the systematic search and selection of relevant literature. Google Scholar, Science Direct, EBSCOhost, Medline, Emerald and Scopus were used to select relevant literature. The ILR included studies published from 2019-2022. The COVID-19 pandemic started in 2019 and researchers have already published on the topic.

Inclusion and exclusion criteria

Articles or documents considered for the review were those that focused on psychosocial support for nurses caring for COVID-19 patients. The articles considered were written in English and published between 2019 and 2022.

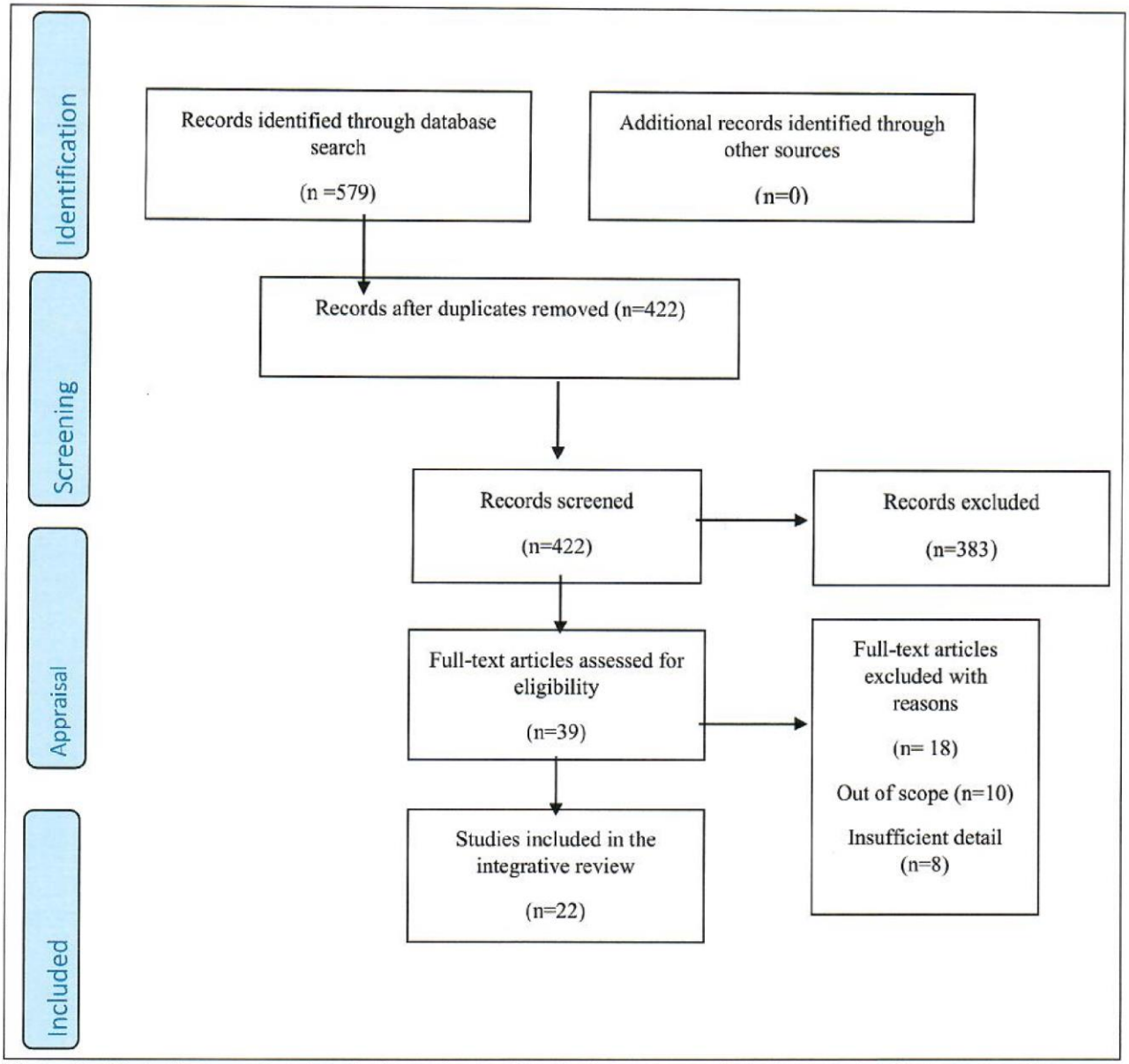


Figure 1: Flow diagram showing the inclusion and exclusion process of the integrative literature review

Step 3: Quality appraisal

This is the third step in the ILR process, and entails in-depth appraisal of relevant documents identified during the search. The researcher and independent reviewer assessed the quality of studies selected. An appraisal was conducted using the Johns Hopkins Nursing Evidence-Based Practice Appraisal (JHNEBP) tool, consisting of an appraisal of all nursing research methods [10]. There are three quality ratings based on quality appraisal A, B and C. A stands for high-quality research and consists of studies that are consistent with generalisable results with sufficient sample size for the study design. It also includes studies with adequate control, definitive conclusions, and consistent recommendations based on a comprehensive literature review that includes thorough reference to scientific evidence. B consists of good quality studies. This means that there are reasonably consistent results, sufficient sample size for the study design, some control and definitive conclusions, reasonably consistent recommendations based on comprehensive literature review that includes some reference to scientific evidence. C consists of low quality or major flaws studies. With C, there is little evidence with inconsistent results, insufficient sample size for the study design, conclusions cannot be drawn.

Step 4: Analysis and synthesis

Content analysis was used to classify words in a text into categories [11]. The researcher searched for repeated ideas from the literature reviewed. Content analysis and integration of a large amount of existing data were used to generate new perspectives on psychosocial support needed for nurses caring for COVID-19 patients. Data was extracted into tables and analysed for similarities and differences in relation to the purpose of the review or questions. The table included authors, year of publication, country, design, population and sampling, purpose and quality appraisal.

Table 1: Evidence of studies included for appraisal

Author(s) Year Country	Design and method Population and sample	Purpose	Quality appraisal (scale: high=h, low=l nr=not reported
Alnazly *et al*. 2021 USA	Cross-sectional, correlational design to collect data from N= 365	To assess the respective levels of fear, anxiety, depression, stress, social support, and associated factors experienced by Jordanian health-care workers during the COVID-19 Pandemic	h) Aims and objectives clearly stated (h) Study design adequately described (h) Research methods appropriate (nr) Explicit theoretical framework (h) Limitations presented (h) Implications discussed
Al Thobaity and Alshammari. 2020. Saudi Arabia	Integrative review N= 95	To explore issues faced by nurses during their response to the COVID-19 pandemic	(h) Aims and objectives clearly stated (h) Study design adequately described (h) Research methods appropriate (nr) Explicit theoretical framework (h) Limitations presented (h) Implications discussed
Chew *et al*., 2020 Singapore	Narrative synthesis N=144	To synthesise extant literature regarding the combined psychological responses and coping methods used by the general population in past outbreaks.	(h) Aims and objectives clearly stated (h) Study design adequately described (h) Research methods appropriate (nr) Explicit theoretical framework (h) Limitations presented (h) Implications discussed
Domaradzki, 2022 Poland	Semi-structured interviews conducted. Interpretative phenomenological approach adopted N=24	To explore the lived experiences of SCP during the current health crisis in Poland.	h) Aims and objectives clearly stated (h) Study design adequately described (h) Research methods appropriate (nr) Explicit theoretical framework (h) Limitations presented (h) Implications discussed
Fang *et al*., 2021. China	Cross-sectional study design,	To understand their mental health status and needs, so as to	h) Aims and objectives clearly stated

	N= 540	provide a scientific basis for alleviating the psychological pressure of health care workers	(h) Study design adequately described (h) Research methods appropriate (nr) Explicit theoretical framework (h) Limitations presented (h) Implications discussed
Giordano *et al.*, 2020 Italy	An interactive relational approach N= 34	To verify the effectiveness of receptive MT as a support intervention to reduce stress and improve wellbeing in CS assisting COVID-19 patients	h) Aims and objectives clearly stated (h) Study design adequately described (h) Research methods appropriate (nr) Explicit theoretical framework (h) Limitations presented (h) Implications discussed
Kim and Cho, 2020 Korea	Online survey N= 382	To explore the job engagement and job retention intention of nurses for patients despite the risks in the long-term COVID-19 situation	h) Aims and objectives clearly stated (h) Study design adequately described (h) Research methods appropriate (nr) Explicit theoretical framework (h) Limitations presented (h) Implications discussed
Mo *et al.*, 2020 China	A cross-sectional survey using an online questionnaire N= 180	To investigate work stress among Chinese nurses supporting Wuhan in fighting against Coronavirus Disease 2019 (COVID-19) infection and to explore relevant influencing factors.	h) Aims and objectives clearly stated (h) Study design adequately described (h) Research methods appropriate (nr) Explicit theoretical framework (h) Limitations presented (h) Implications discussed
Muller *et al.*, 2020 Norway	Systematic review N=59	To identify, assess and summarise research on the mental health impact of the covid-19 pandemic on HCWs	h) Aims and objectives clearly stated (h) Study design adequately described (h) Research methods appropriate (nr) Explicit theoretical framework (h) Limitations presented (h) Implications discussed
Papadopoulos *et al.*, 2021 England	Scoping review design N= 19	To explore provision of spiritual support within mass and social media and websites of spiritual leaders, institutions and NHS chaplaincy units during COVID-19 in England	h) Aims and objectives clearly stated (h) Study design adequately described (h) Research methods appropriate (nr) Explicit theoretical framework

			(h) Limitations presented (h) Implications discussed
Rathnayake *et al.*, 2021 Sri Lanka	Colaizzi's phenomenological approach N=14	To explore experiences and challenges of nurses working with COVID-19 patients	h) Aims and objectives clearly stated (h) Study design adequately described (h) Research methods appropriate (nr) Explicit theoretical framework (h) Limitations presented (h) Implications discussed
Ren *et al.*, 2021 China	Cross-sectional study N= 593	To assess psychological responses among nurses dealing with COVID-19 in Wuhan and outside Hubei province.	h) Aims and objectives clearly stated (h) Study design adequately described (h) Research methods appropriate (nr) Explicit theoretical framework (h) Limitations presented (h) Implications discussed
Schierberl Scherr *et al.*, 2021 USA	Descriptive correlational research design N= 312	To examine work functioning and symptoms of depression, anxiety and posttraumatic stress (PTSD) among nurses who did not care for patients with COVID-19	h) Aims and objectives clearly stated (h) Study design adequately described (h) Research methods appropriate (nr) Explicit theoretical framework (h) Limitations presented (h) Implications discussed
Sehularo *et al.*, 2021 SA	Narrative literature review	To explore and describe coping strategies used by nurses during the COVID-19 pandemic.	h) Aims and objectives clearly stated (h) Study design adequately described (h) Research methods appropriate (nr) Explicit theoretical framework (h) Limitations presented (h) Implications discussed
Shatri *et al.*, 2021 Indonesia.	Evidence-based clinical review N= 6.	To identify psychotherapy as a psychological health intervention, for healthcare workers during the COVID-19 pandemic.	h) Aims and objectives clearly stated (h) Study design adequately described (h) Research methods appropriate (nr) Explicit theoretical framework (h) Limitations presented (h) Implications discussed

Shen *et al.*, 2020 China	Qualitative research design used through online interviews N= 85	To identify the psychological stress of ICU nurses during COVID-19	h) Aims and objectives clearly stated (h) Study design adequately described (h) Research methods appropriate (nr) Explicit theoretical framework (h) Limitations presented (h) Implications discussed
Stizzi *et al.*, 2020 Italy	Qualitative research design used through online interviews N= 8	To investigate the role of the spiritual dimension of pastoral support interventions created to help inhabitants of a strongly deprived territory in Southern Italy during the COVID19 pandemic.	h) Aims and objectives clearly stated (h) Study design adequately described (h) Research methods appropriate (nr) Explicit theoretical framework (h) Limitations presented (h) Implications discussed
Tata *et al.*, 2021 USA	International Survey of Chaplain Activity N= 1657	To understand how chaplains delivered spiritual care to staff during the Covid-19 pandemic.	h) Aims and objectives clearly stated (h) Study design adequately described (h) Research methods appropriate (nr) Explicit theoretical framework (h) Limitations presented (h) Implications discussed
Veldsman and van Aarde, 2021 South Africa	Thematic analysis N= 1002	To evaluate the impact of COVID-19 on the value, utilisation and scope of an EAP within the South African insurance sector.	h) Aims and objectives clearly stated (h) Study design adequately described (h) Research methods appropriate (nr) Explicit theoretical framework (h) Limitations presented (h) Implications discussed
Williams *et al.*, 2020 UK	Narrative literature review N= 36	To consider measures Put in place by countries to support health workers and enable them to do their job.	h) Aims and objectives clearly stated (h) Study design adequately described (h) Research methods appropriate (nr) Explicit theoretical framework (h) Limitations presented (h) Implications discussed

Xu *et al.*, 2021 China	Interventional clinical observation and psychological evaluation N= 1198	To evaluate the mental health of hospital staff before and after the psychological intervention from the Employee Assistance Programme (EAP).	h) Aims and objectives clearly stated (h) Study design adequately described (h) Research methods appropriate (nr) Explicit theoretical framework (h) Limitations presented (h) Implications discussed
Zhu *et al.*, 2020 China	Cross-sectional survey	To assess the sociodemographic characteristics and hospital support measures associated with the immediate psychological impact on HW.	h) Aims and objectives clearly stated (h) Study design adequately described (h) Research methods appropriate (nr) Explicit theoretical framework (h) Limitations presented (h) Implications discussed

Step 5: Discussion and conclusion

The discussion section of the ILR is dedicated to the findings of the study. In this study, comparisons and contrasts of the findings of the review with background literature and works of other researchers are made. Recommendations and implications for research, practice, education and policy about psychosocial support for nurses caring for COVID-19 patients are made. Comments on methodological limitations of the review are also provided. The conclusion is a concise summary of major findings and key contributions to the state of science.

Step 6: Dissemination of findings

The last step of the ILR is dissemination of findings. Dissemination occurs when a reviewer communicates the synthesis of his/her research. The findings of this ILR have been submitted to a journal for publication.

Results

The results of this ILR yielded two themes, psychological and social support. These themes and sub-themes are discussed below.

Theme 1: Psychological support

Psychological support was identified as a method used to support nurses caring for COVID-19 patients. Psychological support helps to relieve emotional suffering so, beneficiaries are able to rely on their own resources and cope more successfully with the hardship they face on the road to recovery [12]. The COVID-19 pandemic has significant negative impacts on nurses' psychological health, fostering issues, such as anxiety, depression, sleep disturbance and burnout. There is need to provide psychological support to nurses caring for COVID-19 patients [13]. The following sub-themes emerged from psychological support: Employee Assistance Programme (E.A.P); Pastoral counselling; and Psychotherapy.

Employee Assistance Programme (EAP)

The Canadian Centre for Occupational Health and Safety defines EAPs as a programme provided by an employer or service provider with a focus on addressing the well-being of employees that might be impacting their performance [14]. The Trade Union department of the hospital considered the psychological challenges employees were facing and launched the EAP, which includes different forms of psychological intervention [15]. The findings of this ILR revealed that professional psychological counselling could potentially alleviate psychological illnesses, provide a theoretical basis to promote EAP psychological services, and demonstrate how to reduce pressure on nurses caring for COVID-19 patients [15]. A study conducted by [16] found that nurses are willing to have psychological counselling during normal working hours. This finding also shows that actively providing and encouraging nurses to participate in EAP psychological counselling can significantly alleviate abnormal psychological symptoms [15].

Pastoral counselling

Spiritual support is a key element of holistic care, and better healthcare professionals training and stronger strategic guidelines become urgent, considering health disasters and emergencies, such as the COVID-19 pandemic [17]. The main goal of pastoral counselling is the convergence of theology and psychology, using spiritual resources and psychological knowledge, for the care and growth of the person being counselled [18]. According to a study conducted by [19], nurses reported they believed their religion and followed their religious activities. There are spiritual care practitioners (SCPs), who are trained to facilitate positive spiritual and religious coping for nurses caring for COVID-19 patients, such as chaplains, priests, pastors, who have put themselves at great risk while offering their service in hospitals. Indeed, thousands of SCPs all around the world, have been working tirelessly, offering spiritual assistance, prayers and sacraments to nurses during the COVID-19 pandemic [20].

Pastors support nurses, give them hope during isolation from their families, assist in their problems and fears. They also help nurses in coping with anxieties caused by the pandemic and give them hope for a better future [20]. According to a study conducted by [21], many nurses found prayer and support from the religious community to be helpful during COVID-19. Pastors are often approached by nurses to seek help in managing their emotions, resulting from work overload, emotional separation and longing for their loved ones or mourning after the death of a patient. The presence of pastors gives nurses certainty that they also must be there [20]. The positive impact of chaplaincy support for nurses in high-stress contexts has been recognised in various studies and there is evidence that chaplains have found innovative ways to provide nurses' support [22].

Psychotherapy

The results of the literature search revealed that supportive psychotherapy is good for every setting, including emergency setting and enhancing the coping mechanism [23]. According to a study conducted by [23], nurses caring for COVID-19 patients should be given the opportunity to talk, show them usable resources, encourage them to be good co-workers, be consistent, provide peace of mind, support them to keep taking care of themselves, and help them explore the causes of stress. According to [23], the role of nurses is very important in the success of psychological interventions, with coping strategies, such as increasing self-knowledge about COVID-19, instilling positive values, making the most of rest time, music therapy and watching TV. According to a study conducted by [24], music therapy (MT) plays an important role in helping address psychological distress, as it provides effective results in lowering the intensity of fatigue, sadness, fear and worry. This music therapy may also be applicable to units working in high stress conditions, such as those working in COVID-19 wards.

Basic intervention consists of debriefing, identifying critical incidents, helping set the situation in perspective and reinforcing the capacity and skills of nurses. In this setting, supportive psychotherapy is very useful to control tension in their mental state [23]. Psychotherapy provided by psychologists was organised for nurses working in the frontline during COVID-19. Where requested, in-house psychologists provide outreach in various front-line workplaces, giving short interactive sessions on basic self-care skills and resilience [25].

Theme 2: Social support

Social support is also used to support nurses caring for COVID-19 patients. Social support is conceptually defined as providing individuals with resources in either tangible or intangible forms, and typically divided into emotional, instrumental, or informational support and appraisal [26]. Social support is necessary as a coping mechanism, to decrease nurses' psychological distress and promote positive feelings [13]. The following sub-themes emanated from social support: families; peers / colleagues; and management.

Family support

According to a study conducted by [27], nurses received family support and encouragement from loved ones during COVID-19. According to [28], nurses utilised support from members of their families during COVID-19 as a main emotional and motivational factor to continue working. Elderly parents and children at home were also mentioned, and concern was great enough that several nurses did not inform members of their families they were working in the frontline, while others did not live at home during this period [28]. On the other hand, [15] reported that when nurses are not on duty, they spend time in hotels, isolating. Their everyday lives are limited, and they cannot meet with their families and relatives, thus, their social support is insufficient. However, a study by [23] found that nurses are more comfortable with social support from family and colleagues than from professional help. A study conducted by [29] revealed that nurses received social support mainly from family members.

Support from peers and colleagues

A study by [19] revealed that working together with colleagues in a harmonious working environment, can help relieve psychological stress, especially during COVID-19. Nurses encourage one another, discuss, share their feelings and experiences with colleagues in a timely manner, and vent negative emotions [27]. According to [19], nurses reported that the main group that shared their suffering were nursing peers and colleagues who worked in the same units. Many junior nurses received assistance and support from senior nurses, especially in decision-making. Nurses were advised to communicate with colleagues who had the same experience or similar feelings and then understand and heal each other. They were also asked not to force themselves to forget unpleasant experiences. It was normal for them to not forget such experiences; they might even remember it for a lifetime [19]. A study by [30] found that the social support system was improved since regular chats with family and colleagues were organised through WeChat videos.

Management support

Hospital administration and nurse managers have a central role in COVID-19 care, particularly in ensuring support for nurses. Activities undertaken by managers include doing basic risk assessment among nurses before placement in COVID-19 units, arrangement of training programmes, granting leaves, arranging progress meetings and arranging welfare, which are highly appreciated [19]. A study conducted by [13] found that nurses are encouraged to take vacations from work to relax, thus, preventing stress. Nursing management assess the level of social support nurses perceive at work and develop initiatives to enhance communication and exchange of support based on nurse feedback [31]. A study conducted by [32] found that an intensive training on PPE and infection control measures were found to be helpful to support nurses. According **to** [33], updating nurses with current information about COVID-19 and ensuring availability of PPE help reduce fears and worries. A study conducted by [32] found that management of Tongji Hospital implemented a series of hospital support measures, including organising WeChat Balint group, reasonable work shift arrangement, and sufficient logistical support and lodging support for nurses living apart from their families.

Hospital-based included additional allowances for frontline nurses, regular greetings and reassurance from hospital executives and nursing leaders for all nurses. In addition, when nurses are infected, such incidents should be treated as work-related injuries [32]. A study by [12] found that the importance of hospital administration provided psychological support as a crucial factor in the ability of nurses to overcome challenges caused by COVID-19. Increasing social support and setting up psychological intervention groups for nurses with anxiety and stress disorders is also a helpful and actionable step that hospital management can take, with the earliest interventions being ideal [15].

Discussion

The aim of this study was to review current literature by exploring and describing the published articles on psychosocial support for nurses caring for COVID-19 patients. A literature review design and methods were used to address concerns regarding psychosocial support for nurses caring for COVID-19 patients. Twenty - two articles were considered relevant to address concerns on psychosocial support for nurses caring for COVID-19 patients [13]; [33]; [21]; [20]; [16]; [24]; [26]; [27]; [28]; [17]; [19]; [29]; [31]; [12]; [23]; [18]; [22]; [14]; [25]; [15]; [32]. The findings revealed that psychological and social support are used to assist nurses caring for COVID-19 patients.

EAP, pastoral counselling and psychotherapy are used to support nurses psychologically when caring for COVID-19 patients. Supporting nurses psychologically is essential in preserving their health in the short and long-term, particularly when occupational stress levels are so high [34]. [35] found that spiritual support can be useful in counteracting the negative effects of the pandemic, producing improvements in the quality of life. Nurses look after others and not self, and are likely to need social support from families, colleagues, peers and managers. A study conducted by [31] revealed that social support drawn from important stakeholders also protects against the development of stress-associated psychopathology. The authors add that social support is associated with lower anxiety and stress symptoms in nurses caring for COVID-19 patients. According to [26], social support has positive effects, such as reducing stress and improving self-esteem. These findings are supported by [12] who found that during pandemics, such as COVID-19, social support from members of the family help in reducing stress.

A study conducted by [36] revealed that nurses caring for COVID-19 patients experience stress, anxiety and lack organisational support. The authors found that nurses experience burnout due to exposure to COVID-19 and death of patients and were also deprived of social support. It is also important that senior nurses seek support for themselves, to be able to support others [34]. The findings of this study could assist nurses psychologically and socially, when caring for COVID-19 patients.

Strength and limitations of the study
This integrated literature review focused on psychosocial support for nurses caring for COVID-19 patients, with emphasis on psychological and social support. The authors contributed enormously towards its success. The researchers agreed that qualitative studies related to the outbreak of COVID-19 were limited in the literature and no study conducted on psychosocial support for nurses caring for COVID-19 patients in the North West Province, South Africa.

Implications of the findings
The findings of this study confirmed that nurses caring for COVID-19 patients experience psychological and social problems. Thus, there is need to provide psychological and social support to nurses in order for them to provide quality care to COVID-19 patients.

Conclusion

Nurses are in the frontline, and have a significant role in fighting COVID-19. Nurses caring for COVID-19 patients are affected, both psychologically and socially; and need psychosocial support. Thus, supporting nurses, psychologically and socially, is essential. More research is needed to explore and describe the psychosocial support for nurses caring for COVID-19 patients.

Authors' contribution
J.M.D drafted the manuscript, M.M.M and L.A.S assisted in the review of the manuscript, and all the authors agreed to publish the final version of the manuscript.

Ethical considerations
This ILR followed all ethical standards for research without direct contact with human or animal subjects. The ILR is part of a doctoral study approved by the North-West University Health Research Committee (NWU-HREC) [Reference Number: NWU-00309-21-A1].

Human and animal rights
No humans or animals were used in the study.

Informed consent
No participant was involved in the ILR.

Funding
No funding was received for this study.

Conflict of interest
The authors declare no conflict of interest, financial and non-financial competing interest.

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MANUSCRIPT TWO

Title: The live experiences of nurses caring for patients diagnosed with COVID-19 infection in the North West Province, was published in The Open Public Health Journal, January 2023



1874-9445/23

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RESEARCH ARTICLE

The Live Experiences of Nurses Caring for Patients Diagnosed with COVID-19 Infection in the North West Province

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Abstract:

Background:

Nurses are the frontline healthcare workers and continue to play a vital role in caring for patients diagnosed with COVID-19 infection. Exploring and describing the experiences of nurses caring for COVID-19 patients are significant to determine what nurses are experiencing physically, psychologically, and socially, in order to help them in improving the quality of patient care.

Objective:

The study aimed to explore and describe the live experiences of the nurses caring for patients diagnosed with COVID-19 infection in the North West Province.

Methods:

A qualitative, descriptive, phenomenological and contextual design was used to collect data. The study used a non-probability sampling approach and purposive sampling technique to select four focus group discussions (FGDs) in this study. Data were collected through semi-structured interviews, and analysis was done using descriptive phenomenological data analysis to develop themes and categories. Measures to ensure the trustworthiness of the study were considered throughout the study.

Results:

The results indicated nurses' conceptualisation of COVID-19, nurses' physical experiences of caring for patients diagnosed with COVID-19 infection, nurses' psychological experiences of caring for patients diagnosed with COVID-19 infection, nurses' social experiences of caring for patients diagnosed with COVID-19 infection, nurses' positive experiences of caring for patients diagnosed with COVID-19 infection, and nurses' experiences of coping when caring for patients diagnosed with COVID-19 infection.

Conclusion:

The study showed nurses caring for COVID-19 patients to be physically, psychologically, and socially affected by the disease. Therefore, they needed support from the managers, colleagues, family members, and the community.

Keywords: Live experience, Nurses, Caring, Patients, COVID-19, Disease.

Article History	Received: November 07, 2022	Revised: January 18, 2023	Accepted: January 18, 2023

1. INTRODUCTION

Nurses play an essential role in ensuring the continuity of healthcare systems globally and improving healthcare practices; they work on the frontline in fighting against COVID-19 infection [1]. COVID-19 is defined as an infectious disease caused by a new type of coronavirus associated with severe acute respiratory syndrome (SARS) [2]. The major symptoms of COVID-19 includefever, cough, dyspnoea, fatigue, muscle aches, headaches, loss of taste/smell, congestion, diarrhoea, or nausea [3].

Globally, nurses as frontline healthcare workers are faced with mental health burden when caring for patients diagnosed with COVID-19 infection [4]. Khatatbeh *et al.* [5] further indicated that nurses caring for patients with COVID-19 have greater risks of mental health problems, such as anxiety, depression, insomnia, and stress. Xu *et al.* [6] reported that during the outbreak, nurses who had close contact with

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COVID-19 patients experienced fears of being contaminated at work, and of becoming sick and dying. The same authors further indicated that some nurses reported that the infection or death of other nurses exacerbated their fear, creating serious anxiety and stress. Gordon *et al.* [7] stated that in addition to the fear of being infected themselves, nurses also expressed concerns about transmitting the infection to others, including their family members.

A study conducted on the COVID-19 pandemic [1] has revealed that nurses who are directly in contact with a potentially fatal virus have increased concerns about their personal health, which tends to make them feel stressed about continuing to provide care. Khatatbeh *et al.* [5] added that many physical problems have been reported by nurses caring for COVID-19 patients because they worked for long hours and were mentally occupied.

Caring for patients diagnosed with COVID-19 infection can cause a wide range of psychosocial and physical impacts on nurses because they serve under extraordinary stress due to the high risk of infection, stigmatization, understaffing, and uncertainty [5]. The stigmatisation faced by nurses caring for COVID-19 patients in their social lives has led to limitations in areas of their personal freedom [8]. Stigma is defined as a mark of disgrace that sets a person apart from others [9].

Ardebili *et al.* [10], stated that feelings of helplessness, hopelessness, and becoming powerless are prevalent among nurses caring for COVID-19 patients. A study [11] revealed nurses to be both sad and stressed due to the morbidity and mortality of the COVID-19 pandemic. Lulgjuraj *et al.* [12] reported that despite the experiences and stress faced by nurses, many were proud to be on the frontline, and they saw themselves as being in a position to help when care seemed out of their control; as a result, nurses were proud of the lives that were saved. It is imperative that research be undertaken to determine what nurses are experiencing physically and emotionally to help nurses today and in the future [3].

2. METHODS

2.1. Study Design

This study used a qualitative, descriptive, phenomenological and contextual design to explore and describe the live experiences of nurses caring for patients diagnosed with COVID-19 infection in the North West Province.

2.2. Study Setting

The study was conducted at four selected public hospitals caring for patients diagnosed with COVID-19 infection in the North West Province.

2.3. Population and Sampling

The study population comprised nurses caring for patients diagnosed with COVID-19 infection in the NWP, including registered professional nurses, enrolled nurses, and enrolled nursing auxiliary. The target population was nurses who have been registered with the South African Nursing Council (SANC) and currently employed in COVID-19 sites in NWP with more than one month of experience in caring for patients diagnosed with COVID-19 infection in NWP. A non-probability sampling technique was used to obtain a sample for the study.

2.4. Data Collection

Data were collected through semi-structured virtual focus group discussions (FGDs) *via* Google Meet, where an interview guide was used. Data collection techniques included the use of a voice recorder and field notes. A broad question was asked to all participants, "What are your experiences in caring for patients diagnosed with COVID-19 infection? And this was followed by probing questions based on the responses. Data were collected until data saturation was reached at the fourth focus group discussion. The names of nurses were not used. Data were collected from nurses caring for patients diagnosed with COVID-19 infection in four public hospitals of North West Province. From each public hospital's COVID-19 ward, 4 nurses (1 professional nurse,1 enrolled nurse, and 2 enrolled nursing assistants) caring for 21 COVID-19 patients were selected for focus group discussion. The interviews took a total of 45 minutes. Ethical approval was obtained from the North-West University Health Research Ethics Committee (NWU-HREC), with approval number: NWU-00309-21-A1.

2.5. Data Analysis

Data were analysed using descriptive phenomenological data analysis [13]. Data were transcribed verbatim from the collected data. An independent co-coder was involved and consensus was reached for themes and categories.

2.6. Measures to Ensure Trustworthiness

Credibility, dependability, confirmability, transferability, and authenticity were determined in this study to ensure the trustworthiness of the study [14]. Credibility was ensured through prolonged engagement with nurses and by collecting data using virtual focus group discussion. Purposive sampling and data saturation were used to enhance transferability [15].

3. RESULTS

Data saturation was achieved with a sample of four focus group discussions. A total of 26 nurses participated in the study. The FGDs of nurses consisted of professional nurses, enrolled nurses, and enrolled nursing auxiliary. The themes and categories of the live experiences of nurses caring for patients diagnosed with COVID-19 infection are presented in Table 1 below.

3.1. Theme 1: Nurses' knowledge of COVID-19

3.1.1. Nurses' conceptualisation of COVID-19

The study has identified that nurses seem to have an understanding of what COVID-19 is and also the symptoms of COVID-19. The following quotes substantiated this finding:

Participant 3 said "*COVID-19 is a large family of viruses that cause illnesses ranging from common cold to more severe diseases, like pneumonia, SARS and MERS.*"

Table 1. The live experiences of nurses caring for patients diagnosed with COVID-19 infection.

Main Themes	Categories
1. Nurses' knowledge of COVID-19	1. Nurses' conceptualisation of COVID-19
2. Nurses' experiences of caring for patients diagnosed with COVID-19 infection	2.1 Nurses' physical experiences of caring for patients diagnosed with COVID-19 infection
	2.2 Nurses' psychological experiences of caring for patients diagnosed with COVID-19 infection
	2.3 Nurses' social experiences of caring for patients diagnosed with COVID-19 infection
	2.4 Nurses' positive experiences of caring for patients diagnosed with COVID-19 infection
	2.5 Nurses' experiences of coping when caring for patients diagnosed with COVID-19 infection

Participant 4 said *"The signs and symptoms that are associated with the virus are fever, cough, body aches, and sometimes you also have headache. The virus when advances to stages, it happens to have signs of diarrhoea and loss of appetite, as well as loss of sense of smell."*

Participant 3 stated "*COVID-19 is an airborne disease that can spread from one person to another, and it affects your lungs and the upper respiratory system in most cases; some of the patients will struggle with insufficient oxygen to the lungs and to the brain that is when they get hypoxia."*

3.2. Theme 2: Nurses' experiences of caring for patients diagnosed with COVID-19 infection

The findings of the study revealed that nurses have different experiences in caring for COVID-19 patients. The nurses alluded that they have physical, psychological, and social experiences of caring for COVID-19 patients. The nurses further indicated their positive experiences and their experiences of coping when caring for patients with COVID-19. The following categories detail the experiences of nurses caring for COVID-19 patients.

3.3. Nurses' Physical Experiences of Caring for Patients Diagnosed with COVID-19 Infection

Nurses verbalized that as the result of caring for patients diagnosed with COVID-19, they ended up having physical problems, and some of the nurses indicated that they ended up having COVID-19 infection.

Participant 3 stated "*Physically, it has drained us, and it has left us with comorbidities; now I am hypertensive because of covid-19, of which I was not hypertensive, so now I have blood pressure that is always elevated, and it is not nice".*

Participant 4 said *"I do not have sense of smell since 2020 when it was started. It is depressing for me, I do not have sense of smell, and it is 2 years and half now, so COVID-19 has affected my health. My fear is that what if my sense of smell won't come back, it is not normal."*

3.4. Nurses' Psychological Experiences of Caring for Patients Diagnosed with COVID-19 Infection

The study revealed nurses to experience fear when caring for COVID-19 patients. Nurses reported being afraid of infection with COVID-19, and they felt that they would also die of COVID-19. Their fears and feelings are supported by the following quotes:

Participant 6 stated *"It stresses to go in there; you have to go inside there. You don't have a choice, you have to go inside and try to save somebody there. You might be infected, you might die with the very same person that you are going inside to try to save.*

Participant 3 said *"When we lost colleagues, I felt that we were all going down; that was the feeling, I felt like we are all gonna die."*

Participant 1 reported *"I am caring for patients with covid-19; psychologically, it affected me in this way because of seeing patients fighting for their lives every now and then and people are dying now and then in our hands. I have been diagnosed with depression, so I was depressed and had been taking medications for depression."*

3.5. Nurses' Social Experiences of Caring for Patients Diagnosed with COVID-19 Infection

The findings of the study further revealed that nurses were stigmatised and socially isolated because they were seen as carriers of COVID-19 infection. Nurses reported that people, including their colleagues working in non-COVID-wards and managers, did not want to be closer to them because they thought that they would infect them with COVID-19.

Participant 5 stated *"even with us, we were affected because you know when you go to the passage they know that you are working in COVID ward you are like an alien, people would run away from you. The night supervisor would just say put the report there by the entrance, that is the reality. That is how we worked. Management was not even coming, they were afraid of us just to come and say how are you feeling."*

Participant 6 reported *"and you felt as sometimes isolated when you get amongst other people and they just say you are a nurse, people just want to be scattered, they do not want to be next to you because you are a nurse and you might be having the infection; you might be infectious, and you might kill them because it was a disease that was drastic, a drastic disease that is causing death. When they see you, they just say this one is going to kill us."*

Participant 4 added *" the management did not want to enter our ward; they feared for their lives, so they would be standing at the door and calling you; even some of the colleagues knowing that we are working in COVID-19 ward, they would be standing at the door. It is not nice for us. It was very very bad. It was emotional to be neglected by management and colleagues from other wards."*

3.6. Nurses' Positive Experiences of Caring for Patients Diagnosed with COVID-19 Infection

The study also revealed some nurses to have shown compassionate care to COVID-19 patients. Nurses used their phones to video call patients' families because they were not allowed to visit during COVID-19; in addition, they reassured patients and prayed for them, and they further used their money to buy things that they thought could assist the patients in recovering from COVID-19.

Participant 2 said *"Sometimes I was buying for the patients the lemons, ginger, and garlic so that we can prepare for the patients. We even boiled them hot water every day when I was on duty so that they could drink hot water from the jars, not cold water. We mix that with the gingers and garlics so that they can all drink."*

Participant 7 stated *"When the patient is about to demise when the condition changes and maybe the saturation level goes down and you can see that the patient is dying, and we have tried everything, you know sometimes when they would speak you can see that they are scared, they long for that family member, so on my side what I would do is that I would video call the family members so that they can just say their last words and see the patient for the last time and say whatever that they need to say; I think because what a lot of family members say on its own brought a lot of closure because they can at least see that my father, my mother, or my sister is suffering. They can see that he/she is fighting, but chances are that they are not gonna make it, so that on its own brings closure."*

Participant 6 added *"We were just standing next to the bed holding their hands, reassuring them; even when you know the prognosis is not good, you reassure them to say that she is going to be okay. A lot of time we were just standing and praying for them."*

3.7. Nurses' Experiences of Coping when Caring for Patients Diagnosed with COVID-19 Infection

Nurses alluded that they had to accept, continue to be committed and care for COVID-19 patients. The following are the quotes from the participants:

Participant 1 said *"but I remembered that I said I solemnly...you see the nurses' pledge. I said okay, I am going to care for the patients, let me just be strong and do what I said I want to"*

Participant 5 *"but it is okay, but at least we did our best only God knows because it is not only about money, it is about caring, and reassuring the patients. We have played our part."*

Participant 3 *"it is a matter of saying okay, I am going to work, I don't know what I am gonna come across today but 'God help me."*

4. DISCUSSION

The findings of this study revealed nurses to be physically, psychologically, and socially affected when caring for patients diagnosed with COVID-19 infection. Nurses reported to have developed comorbidities, such as hypertension, since they started caring for COVID-19 patients. These findings are supported by the study conducted by Gholami *et al.* [16], who reported hypertension to be a prevalent comorbidity among nurses caring for COVID-19 patients. Khatatbeh *et al.* [5] added that nurses complained of having headaches and muscle pain, so they started using analgesics.

Furthermore, it was reported that nurses caring for COVID-19 patients had a fear of being infected and infecting others with COVID-19. The results of this study indicated that nurses were not sure whether they were the carriers of the COVID-19 virus, and it was not easy for them to go home because of the fear of transmitting COVID-19 infection to others. Nurses reported that it was so difficult to go home because they were not sure whether they were taking the virus home. In a study conducted by Galehdar *et al.* [17], nurses' experience showed that they could not have close contact with their family members because of the risk of being a potential carrier. The same authors are of the impression that nurses have always had fear and anxiety about being a carrier, and because of this, they may not be able to see their family members for several days.

In the study conducted by Galehdar *et al.* [17], one of the causes of stress in nurses was the fear of being infected with COVID-19. Hu *et al.* [18] added that nurses suffered from the fear of spreading the infection to their loved ones. These findings were also supported by Lee and co-worker [19], who reported that nurses were fearful that their contact with COVID-19 patients would result in the unintended infection of others, especially their own family. The findings of this study also revealed nurses to have a fear of dying. The nurses mentioned that when they saw their colleagues dying, they thought they were also going to die. Nurses verbalized that they felt powerless, helpless, and hopeless. They even thought to be failures because they could not save patients' lives. These results concur with the findings of Ardebili *et al.* [10], who stated the feeling of helplessness, hopelessness, and becoming powerless to be prevalent among nurses caring for COVID-19 patients.

The findings of this study showed nurses' experienced trauma to be related to sudden and multiple deaths of COVID-19 patients. These responses are in line with the findings presented earlier [20], which revealed that patient death is often interpreted as a traumatic experience for nurses, contributing to stress and other psychiatric symptoms. The study has also shown some of the nurses to no longer be the same people as they used to be; they reported to have developed long-term emotional effects, such as anger. The present study showed that nurses were stigmatised and isolated by their colleagues working in non-COVID-wards, managers, families, and the community because they thought the nurses to be carriers of COVID-19. These results are congruent with those of Muz and Erdogan [1], who stated that the isolation and stigma towards nurses by some members of the society continue. They further reported that such reactions of the society cause nurses to feel guilty and prefer a life that increases social isolation and restricts contact with the outside world. In a study conducted [11], nurses reported that they had moved away from social environments because of the risks of

being stigmatised by society and of transmitting the disease; hence, they felt isolated and lonely.

In this study, the findings revealed that COVID-19 has helped nurses to learn about some other equipment that they did not know about before, such as ventilation machines. The results of this study indicated nurses to have shown acts of kindness and care to COVID-19 patients, as shown by video calling the relatives to connect the patients with their families. Kellogg *et al.* [20] stated that nurses had additional responsibilities to use technology during COVID-19, such as smartphones or tablets, to allow patients to see their loved ones, provide updates to family, or facilitate goodbyes as patients came close to the end of life. The same authors further stated that nurses' use of technology was the link between patients and their families.

During the COVID-19 pandemic, effective coping strategies promoted positive psychological health outcomes among nurses [21]. Chow *et al.* [22] pointed out the importance of spirituality as a coping skill in the maintenance of psychological well-being for nurses during COVID-19 pandemic. The same authors maintained that positive religious coping remains a significant coping mechanism to boost mental health, commonly *via* prayers, attending religious services, reading scriptures, or meditation. The authors [22] also stated that spirituality was found to aid nurses in coping with stress, encourage recovery, resilience, and reduction in burnout, and reduce fear, sorrow, and anxiety in relation to the COVID-19 pandemic and consequent social isolation.

The findings of this study revealed nurses to have thoughts of resigning because of the trauma that they experienced when caring for COVID-19 patients. Nurses felt like they were in danger, and many left their jobs and resigned because of COVID-19. Kackin *et al.* [11] confirmed these results that nurses caring for COVID-19 patients had felt an extreme desire to resign, and they may also exhibit avoidance behaviour. In a study conducted by Lulgjuraj *et al.* [12], nurses reported that they have thought about leaving bedside nursing since experiencing the peak of the COVID-19 pandemic.

5. STRENGTHS AND LIMITATIONS OF THE STUDY

The study was conducted in the four hospitals of the North West Province caring for patients diagnosed with COVID-19. Due to the fact that this study was conducted only on nurses working in North West Province, the results of this study can only be generalized to the individuals included in the study. This makes it difficult to compare the experiences of nurses based on their culture with other provinces and other countries. Taking into consideration the fact that the COVID-19 pandemic is not limited to a single province or country, a global integrated comparative study is required that takes into account the experiences of nurses working in other countries.

6. IMPLICATIONS OF THE FINDINGS

The study findings confirm the nurses caring for COVID-19 patients to experience physical, psychological, and social problems. In this regard, providing them with the necessary support will encourage them to provide quality patient care.

CONCLUSION

This study reveals important aspects of nurses' experiences in caring for patients diagnosed with COVID-19; nurses have experienced fears of being infected with COVID-19, and they also have had fears of transmitting COVID-19 infection to their loved ones. The findings of this study can provide guidance for understanding the problems of nurses as frontline healthcare workers during COVID-19 and provide solutions for healthcare institutions to respond effectively to similar pandemics in the future.

AUTHORS' CONTRIBUTION

J.M.D initially drafted the manuscript. M.M.M and L.A.S assisted in the review of the manuscript, and all the authors agreed to publish the final version of this manuscript.

LIST OF ABBREVIATIONS

SARS	=	Severe Acute Respiratory Syndrome
SANC	=	South African Nursing Council
FGDs	=	Focus Group Discussions
NWU-HREC	=	North-West University Health Research Ethics Committee

ETHICS APPROVAL AND CONSENT TO PARTICIPATE

The study includes human participants, and the ethical approval of the study was obtained from the North-West University Health Research Ethics Committee (NWU-HREC), with the number: NWU-00309-21-A1.

HUMAN AND ANIMAL RIGHTS

No animals were used for studies that are the basis of this research. All the human procedures used were in accordance with the ethical standards of the committee responsible for human experimentation (institutional and national), and with the Helsinki Declaration of 1975, as revised in 2013 (http://ethics.iit.edu/ecodes/node/3931).

CONSENT FOR PUBLICATION

The participants were made aware of the data for publication and an informed consent has been obtained from them; their participation was, thus, voluntary.

STANDARDS OF REPORTING

COREQ guidelines were followed.

AVAILABILITY OF DATA AND MATERIALS

The derived data used to support the findings of the study are available from the corresponding author [J.D] on request.

FUNDING

This study was funded by the North-West University Postgraduate Bursary.

CONFLICT OF INTEREST

The authors declare no conflict of interest.

ACKNOWLEDGEMENTS

The authors would like to thank the management of the hospitals in the North West Province, where data were collected, for granting permission to conduct the study and also the nurses who participated in the study.

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MANUSCRIPT THREE

Title: The psychosocial support needed by nurses caring for patients diagnosed with COVID-19 infection in the North West Province, South Africa, was published in Gender & Behaviour Journal, December 2022



Gender & Behaviour, Volume 20 No.(4), December 2022 20598 - 20607
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ISSN: 1596-9231

THE PSYCHOSOCIAL SUPPORT NEEDED BY NURSES CARING FOR PATIENTS DIAGNOSED WITH COVID-19 INFECTION IN THE NORTH WEST PROVINCE, SOUTH AFRICA

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Abstract

Nurses caring for patients diagnosed with COVID-19 infection are exposed to many psychosocial challenges. Exploring and describing the psychosocial support needed for the nurses caring for patients diagnosed with COVID-19 is significant to determine what type of support is needed by the nurses. The objective of this study was to describe the psychosocial support needed by the nurses caring for patients diagnosed with COVID-19 infection in the North West Province of South Africa. A qualitative, descriptive phenomenological, contextual design was used to collect data. The study used a non-probability sampling approach and purposive sampling technique to select four focus group discussions (FGDs) from the four hospitalsselected for this study. Data were collected through semi-structured interviews and analysis was done using descriptive phenomenological data analysis to develop themes and categories. Measures to ensure trustworthiness were considered throughout the study. The finding indicated that it is difficult for nurses to care for COVID-19 patients because it is a novel disease. There is no specific treatment for COVID-19 and most patients who were diagnosed with COVID-19 were demised. Shortages of human and material resources to care for COVID-19 patients were also reported. Nurses caring for COVID-19 patients are at risk of being infected and they are physically and psychologically affected. The study shows that nurses caring for COVID-19 patients are physically, psychologically and socially affected by the disease. Therefore, they need the support of their managers through the appreciation of their work, provision of adequate Personal protective equipment (PPE) and human capital to provide quality patient care. Nurses caring for COVID-19 patients need psychological support when they are depressed. They also need colleagues from other wards to encourage them and not see them as the carriers of the disease. Also, the community needs to understand the risks that nurses caring for COVID-19 patients take and support them.

Keywords: caring for patients with COVID-19; nurses; psychosocial support; South Africa

Introduction

Frontline healthcare nurses devoted themselves to dealing with the outbreak of COVID-19, saving many lives (Ren et al. 2021). Nurses continued to play their part in the healthcare sector, including in the prevention and control of infections. They worked on the frontlines as caregivers during the treatment of complicated COVID-19 cases that require hospitalisation (Muz & Erdoğan Yüce, 2021). The literature states that nurses caring for COVID-19 patients are at risk of infection and are exposed to significant stress, and the intensely experienced stress brings psychosocial problems (Kackin et al. 2021). Furthermore, nurses are at a greater risk of developing psychological problems such as anxiety, depression, insomnia and stress (Moradi et al. 2021). The same authors add that nurses face a variety of challenges due to being in stressful situations never experienced before. A study conducted by Leng et al. (2021) reveals that nurses caring for COVID-

19 patients are particularly at risk because they take care of patients during the severest illness state and their role may heighten the risk of being infected.

The onset of the pandemic in many countries exposed nurses to the health system's lack of preparedness to cope with the pandemic. Nurses were faced with various challenges such as inadequate resources, a lack of human workforce, insufficient personal protective equipment (PPE) and an increasing number of COVID-19 patients and death (Moradi et al. 2021). Kackin et al. (2021)). add that the lack of specific treatment medications and the lack of support increased the mental health burdens of nurses. A study conducted by Akkuş et al. (2022) reveal that nurses continued to carry out their professional duties under difficult conditions despite technical and supply limitations. Kackin et al. (2021) recommend monitoring mental problems, implementing early intervention methods such as professional psychological counselling and strengthening crisis support systems for nurses caring for patients diagnosed with COVID-19. The same authors state that these interventions are important to prevent secondary trauma caused by witnessing severe illness and death.

During the pandemic, nurses were burdened with increasing workloads and working in isolated wards (Cho & Kim, 2021). A study conducted by Akkuş et al. (2022) reveal that many nurses working on the front lines were infected and/or lost their lives and those who survived continued caring for COVID- 19 patients despite the risks. The same authors add that protecting the health of nurses is crucial in emergencies because they are responsible for the preparation, rapid response and critical decision making to manage the health challenges that may arise.

Another challenge experienced during the pandemic was that some nurses perceived the personal risks to be too high which lead to an increase in resignations and requests for job assignment change. Staff shortages in the health sector increased and the expectations placed on these nurses resulted in prolonged separation from their families, sleep deprivation and burnout (Huang et al. 2020). Compounding the situation was nurses' existing high levels of job-related stress or burnout. All these concerns can exert psychological strains on nurses, which may lead to nurses' mental distress such as post-traumatic stress disorder (PTSD) and perceived stress (Leng et al. 2021).

Knowing and understanding the psychosocial support needed by nurses caring for COVID-19 patients may facilitate the collective development of global solutions to pandemics. The present study seeks to explore and describe the psychosocial support needed by nurses caring for patients diagnosed with COVID-19 infection in the North West Province (NWP) of South Africa.

Methodology

Research Design

This study used a qualitative, descriptive phenomenological and contextual design to explore and describe the psychosocial support needed by the nurses caring for patients diagnosed with COVID-19 infection in the NWP.

Study Setting

The study was conducted at four selected public hospitals caring for patients diagnosed with COVID-19 infection in the NWP.Two of the hospitals were tertiary hospitals (level 3) while the other two were regional hospitals (level 2).

Population and Sampling

The study population comprised nurses caring for patients diagnosed with COVID-19 infection in the NWP. These include registered professional nurses, enrolled nurses and enrolled nursing auxiliaries. Hospital A had a population of 24 nurses and 8 nurses took part, hospital B had a population of 28 nurses and 5 nurses participated, hospital C had a population of 12 nurses and 7 nurses participated and hospital D had a population of 16 nurses and 6 nurses participated in the study. Nurses who volunteered to participate in the study were selected. Each FGD had 5 to 8 participants and all FGDs were conducted until data saturation. The target population was nurses who are registered with the South African Nursing Council (SANC) and currently employed in COVID-19 wards with more than one month of experience caring for patients diagnosed with COVID-19 infection. A non-probability sampling technique was used to obtain the sample for the study.

Data Collection and analysis

Data were collected through semi-structured focus group discussions (FGDs) via google meet and an interview guide was used. Data collection techniques included the use of a voice recorder and field notes. A broad question was asked to all participants, "*What type of support do you need when you care for patients diagnosed with COVID-19 infection*? And this was followed by probing questions based on the responses. Data were collected until data saturation was reached at the fourth focus group discussion. The names of nurses were not used. Interviews took 20 to 45 minutes. Ethical approval was obtained from the North-West University Health Research Ethics Committee (NWU-HREC), Ethics number: NWU-00309-21-A1. Giorgi's (2012) descriptive phenomenological method was utilized for data analysis by explaining the meaning of interview transcripts. The method involves raw data divided in units of meaning, reorganized in terms of meaning clusters, where all the participants' constituent themes are the same (Isabirye & Makoe 2018:3).

Measures to ensure Trustworthiness

Credibility, dependability, confirmability, transferability and authenticity were used in this study to ensure the trustworthiness of the study (Polit & Beck, 2021) credibility was ensured through prolonged length engagement with nurses while collecting data using virtual focus group discussions. Purposive sampling and data saturation were used to enhance transferability (Brink et al. 2018).

Findings

Data saturation was achieved with a sample of four focus group discussions. A total of 26 nurses participated in the study. 8 participants from hospital A, 5 from hospital B, 7 from hospital C and 6 from hospital D participated in the study. Participants were nurses who volunteered to participate in the study. The FGDs of nurses consisted of professional nurses, enrolled nurses and enrolled nursing auxiliaries. The themes and categories of the psychosocial support needed for the nurses caring for patients diagnosed with COVID-19 infection are reflected in Table 1 below.

Table 1: The psychosocial support needed for the nurses caring for patients diagnosed with COVID-19 infection

Main themes	Categories
1.Nurses' challenges when caring for patients diagnosed with COVID-19 infection	1.1 Nurses' challenges in caring for patients diagnosed with COVID-19 infection
	1.2 Nurses' challenges to obtain support when caring for patients diagnosed with COVID-19 infection
	1.3 Nurses' occupational challenges when caring for patients diagnosed with COVID-19 infection
2. Psychosocial support needed by nurses caring for patients diagnosed with COVID-19	2.1 Psychological and physical health support needed by nurses caring for patients diagnosed with COVID-19
	2.2 Resources needed by nurses caring for patients diagnosed with COVID-19

Nurses' challenges when caring for patients diagnosed with COVID-19 infection
The findings of this study revealed that nurses experienced challenges such as not having specific treatment for COVID-19 patients and not knowing what to do because COVID-19 was a novel disease.

Nurses' challenges in caring for patients diagnosed with COVID-19 infection
The findings of this study revealed that COVID-19 was new and there is no specific treatment for COVID-19 and it is difficult to deal with its complications and complexities. The following quotes substantiated this finding:

but really it was very difficult in the beginning to nurse patients with COVID-19 because it was a new thing for all of us"(P4)

we had lots of renal failures. Patients were drinking lengana because there was no cure, they were

treating the symptoms. ...so people ended up using traditional medicine, traditional concoctions from

all over, and advice from people who also did not have the knowledge. Now we had lots of patients

that had renal impairment(P5).

Lots of patients came into the hospital and we saw them experiencing the first episode of being diabetic, so a lot of young adults were having symptoms of being diabetic"(P5)

Nurses' challenges to obtain support when caring for patients diagnosed with COVID-19 infection
Participants indicated that it was difficult for them to obtain psychological support and they further indicated that the management team was unproductive as they never checked on them and/or refer them to occupational health and safety (OHS) for investigations such as X-rays.

There was no group therapy, there was no individual therapy, there was no psychological support, there was no debriefing and there was no team building (P5).
I still remember one day I even asked one of the sisters if she can book me to go and see the psychologist and I was crying at that time. She tried to call the psychologist to talk to me but they said I must bring the file, I said I will stop as I wasn't going to waste time because I needed the psychologist now. I felt like I wanted to talk right then. I did not see the psychologist because the distance from the ward to the psychologist was far, hence I suggest there should be an office of a psychologist next to our COVID ward. It is like 20-25 minutes to go there and you will find other patients waiting. I never talked to the psychologist (P6).
I longed for that support from the management team and unfortunately there was none (P3).
There were no follow ups from our occupational health and safety (OHS), physically or emotionally (P5)

Nurses' occupational challenges when caring for patients diagnosed with COVID-19 infection
The study also revealed that nurses had occupational challenges such as overcrowding, staff shortages and overworked, inadequate healthcare resources and shortages of appropriate PPEs. Nurses also faced challenges related to occupational and financial insecurities.

Our ICU has a small space, there are 2 ICUs, the other one was there and the other one was up there, ...they can only cover for six patients, the other one was covering about 15 patients, but the more the patients were admitted, the more they died even in casualty because even that side they don't have enough space to accommodate many people. So people died because of shortage of space to accommodate them, ...they died (P3).

Shortage of staff, at first we were about 6 nurses in the COVID ICU a 15 or 16 bedded ward. ...what is an ICU with 16 patients with 6 nurses only, imagine an ICU nursing 3 or 4 patients or maybe you are nursing 2 intubated patients and you have another CPAP patient. How do you nurse three patients? In the ICU we have to go one-on-one, but by that time we had to nurse 4 or 3 patients so that was the problem, maybe that is the problem that caused more death because we were short staffed and mostly we were not ICU trained and/or experienced (P1).

We were not having PPEs and they expect us to enter the room without PPEs, that was the worst thing. Those patients needed our care, imagine caring for those not having PPEs. ... we had to enter there whether you had PPE on or not (P4).

Now the time has come, yes we did know that the contract was gonna come to an end, we were hoping and thinking these people will someday absorb us as we have helped so much. ...they are ready to get rid of us just like that, so it takes us back to unemployment. ...it is not easy, it takes us back, ...now that we have helped and sacrificed our lives (P3).

Psychosocial support needed for nurses caring for patients diagnosed with COVID-19
The findings of the study revealed that nurses need support from the management in terms of providing them with vitamins and they reported that they needed to see a psychologist.

Psychological and physical health support needed by nurses caring for patients diagnosed with COVID-19

The other support that we needed was for management or government to give us vitamins just to boost our immune systems as we were working in the COVID-19 units (P1).

Maybe it would be best if there is someone from outside or from the department or people who are trained to come and check on us once a month so, for everyone to be relieved because this thing has affected us emotionally and it is so heavy (P4).

We needed to be attended to by our managers. We needed them to hear our cry if we do not have the equipment they should supply. ...if we are sick they must hear us and take care of us. They must refer us to other sections for example to a psychologist (P2).

They should encourage us to have teamwork in the wards. ...team spirit in the ward and to have motivational patient programmes. The motivation patient programme about how to manage Covid-19, the signs and symptoms of covid-19 and how to prevent infection. Teamwork in the ward, if we are working together and there will be no resistance (P5).

Resources needed by nurses caring for patients diagnosed with COVID-19

They should skill us more. They should also provide us with in-service training now and then to show how to connect the CPAP because we forget (P3).

We thought that the government would maybe create a small policy that if we die as frontliners, if you can die, there will be remuneration for the family if you die. ... to say that we will give your family such and such amount. Like insurance for COVID-19 frontliners (P6).
I need money for appreciation. I know we were earning, but a reward is important (P6)
We also need to be supported with PPEs, there is a serious shortage (P3).

Discussion

The current study was conducted to explore and describe the psychosocial support needed by nurses caring for patients diagnosed with COVID-19 in the NWP. The findings of this study revealed that it was difficult to nurse patients with COVID-19 because the disease was novel and there was no specific treatment for COVID-19. The findings of this study are consistent with the findings of (Akkuş et al. 2022) that nurses were exhausted by working under new/unknown conditions with heavy workloads and feared being infected and infecting others.

The other challenge experienced by nurses in this study is the complications and complexities of COVID-19. Nurses reported that patients were drinking concoctions such as lengana and as a result lots of patients developed renal failure and were dying. It was discovered that there were many other symptoms not only respiratory. A study conducted by Kackin et al. (2022) reveals that the lack of specific treatment for COVID-19 and increased positive cases and fatalities of COVID-19 may have increased the mental health burdens of nurses. Furthermore, nurses reported that lots of patients who came into the hospitals experienced the first episode of being diabetic and thad to deal with diabetic complications. Nurses also

stated that COVID-19 infection causes multi-organ failures. They also revealed that most patients who had chronic illnesses had COVID-19 infection.

The findings of this study also revealed that nurses were unable to access psychological support. Nurses indicated that there were no individual or group therapies and no debriefing and/or psychological support. Other nurses stated that psychologists came to the wards to have group sessions with nurses and nurses did not attend because they thought they needed one on one sessions. Others reported that they could not consult with psychologists because their offices were far and they were told to make an appointment and they felt they could not do that when off duty as they needed time to rest. The study conducted by Kackin et al. (2022) found that nurses caring for COVID-19 patients were negatively affected by the pandemic both psychologically and socially. Akkuş et al. (2022) added that nurses experienced adverse physiological and psychosocial impacts due to unmet psychological needs.

Another challenge revealed by the study is the ineffective support from management during the COVID-19 outbreak. The findings of this study reveal that hospital management never visited the wards to ask nurses how they were doing. Nurses believe that management does not care and does not appreciate the work they are doing. In a study conducted by Akkuş et al. (2022) state that nurses they not only wished to be verbally appreciated and applauded but also expected rewards and improvement in their work and remuneration conditions (retirement, salary, leave, etc.). Nurses reported that they never received the support they needed, they stated that they did their best to save the nation only to be used by the hospital management and the government. The finding of the study also revealed that nurses needed management and/or the government to provide them with at least vitamins to boost their immune systems and expected to be referred for x-ray checks to determine if they were still okay.

In a study conducted byMuz and Erdoğan Yüce (2021) it is emphasised that nurses caring for COVID-19 patients should be made to feel valued and their safety should be given priority. Nurses in the study felt they should be appropriately rewarded so that they can provide similar support if the same happens in the future. The findings of this study also revealed that the resources needed by nurses caring for covid-19 patients include adequate occupational security and compensation. Some institutions included in the study practiced support such as organising morale visits by managers to the wards and creating specially arranged break areas and these increased nurses' motivation. However, these practices were not prevalent in all institutions. Nurses also reported that they need management to provide them with in-service training to help them understand more about COVID-19 and how to manage the disease.

Staff shortages and being overworked are other challenges that nurses caring for COVID-19 patients faced. This is supported by existing literature which shows that the emotional repercussion of isolation (not only on health professionals but also on the patient and the family) increased the workload for nurses and their perceived stress level (Fernández-Castillo et al. 2021). The study also identified that there were challenges of overcrowding in the COVID-19 wards leading to the opening of others wards including the ICU. The other challenge revealed by the study is the inadequate healthcare resources, including medication and equipment such as ventilators which affected the quality of patient care and led to increased death rates. Shortage of PPE was also reported to be a challenge for nurses caring for COVID-19 patients. Adequate healthcare resources, specifically PPEs are considered fundamental during pandemics. This is supported by existing literature, which

shows that the lack of protective equipment caused anxiety and insecurity in ICU nurses, as well as the fear of being infected by the virus (Fernández-Castillo et al. 2021)

Strengths and limitations of the study

The study was conducted in the four hospitals in the NWP caring for patients diagnosed with COVID-19. Due to the fact that this study was conducted only with nurses working in NWP, the results can only be generalised to the individuals included in the study. This makes it difficult to compare the psychosocial support needed for the nurses based on their culture and beliefs in other provinces and countries. The COVID-19 pandemic is not limited to a single country; therefore, a global integrated comparative study can be beneficial.

Implications of the findings

The study findings confirmed that nurses needed psychosocial support when caring for patients diagnosed with COVID-19. In this regard, providing nurses with the necessary support will help them to be encouraged and thus provide quality patient care.

Conclusion

This study reveals that nurses need support from the management, psychologists and their peers when providing patient care during an outbreak of a novel disease. The study also revealed that adequate healthcare resources are needed by nurses caring for COVID-19 and these include adequate competent human capital, adequate occupational security and compensation. The findings of this study can act as a guide for understanding the challenges and needs of nurses caring for patients diagnosed with COVID-19 and solutions for the establishment of a safe and reliable healthcare system that can effectively respond to global calamities in the future.

Authors' Contribution

J.M.D. initially drafted the manuscript under the supervision of M.M.M and L.A.S and all the authors agreed to publish the final version of this manuscript.

Ethical approval and consent to participate

The study includes human participants, and the ethical approval of the study was obtained from the North-West University Health Research Ethics Committee (NWU-HREC) with the ethics number: NWU-00309-21-A1. Permission to collect data was obtained from the nurses. The researcher made use of a virtual link when obtaining informed consent from the participants.

Human and animal rights

There were no animals used in the research study. All human research procedures for conducting the study were followed and adhered to in line with the ethical standards.

Availability of data and materials

The derived data used to support the findings of the study are available from the corresponding author on request.

Consent for publication

The participants were made aware that the data will be made available for publication and gave informed consent and the participation was voluntary. The study adhered to ethical principles of confidentiality, privacy and anonymity. Names of participants were not used, however, numbers were used throughout the study.

Funding

None

Conflict of interest

The authors declare that there are no conflicts of interest or financial or personal relationships that may have incorrectly influenced them in writing this manuscript.

Acknowledgements

The authors would like to thank the management of the hospitals in the North West Province where data was collected for granting permission to conduct the study and the nurses who participated in the study.

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MANUSCRIPT FOUR

Title: **:** Conceptual framework for the psychosocial support of nurses caring for patients diagnosed with COVID-19 infection in North West Province, South Africa, was published in International Journal of Environmental Research and Public Health, March 2023



International Journal of
Environmental Research and Public Health

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Article

Conceptual Framework for the Psychosocial Support of Nurses Caring for Patients Diagnosed with COVID-19 Infection in North West Province, South Africa

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Abstract: Introduction: A conceptual framework provides the detailed components or concepts identifying the interrelationships in and across a project's components. Due to a lack of psychosocial support, nurses caring for patients diagnosed with COVID-19 are physically, psychologically and socially affected. However, there are no conceptual frameworks for the psychosocial support of nurses caring for patients diagnosed with COVID-19 infection in North West Province, South Africa. The purpose of this study was to develop a conceptual framework for the psychosocial support of these nurses. Design: A qualitative, descriptive phenomenological and contextual research design was followed to conduct this study. Six questions were used to classify concepts and develop the proposed framework. These six crucial questions are based on the agent, recipient, context, procedure, dynamics and terminus. Findings: The results of the framework involved the mobilisation of effective managerial support, the provision of adequate human medical healthcare resources and the mobilisation of support from nurses working in non-COVID wards and family members in the provision of psychological support systems (procedure). The newly developed conceptual framework aims to support nurses caring for patients diagnosed with COVID-19 infection in North West Province (terminus) and to improve their wellbeing. Conclusion: The developed framework provides information that can assist nurses in providing quality care to patients. Contribution: The framework will provide solutions for healthcare institutions to respond effectively to similar pandemics in the future, improving the psychosocial wellbeing of nurses caring for patients diagnosed with COVID-19.

Keywords: psychosocial support; nurses; caring; COVID-19; patients; conceptual framework

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Citation: Dikobe, J.M.; Moagi, M.M.; Sehularo, L.A. Conceptual Framework for the Psychosocial Support of Nurses Caring for Patients Diagnosed with COVID-19 Infection in North West Province, South Africa. *Int. J. Environ. Res. Public Health* **2023**, *20*, 5078. https://doi.org/10.3390/ijerph20065078

Academic Editor: Lucian-Ionel Cioca

Received: 23 January 2023
Revised: 9 March 2023
Accepted: 9 March 2023
Published: 14 March 2023

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1. Introduction

Nurses play an essential role in providing care, treatment and rehabilitation to patients diagnosed with COVID-19 infection. Their psychosocial wellbeing and safety are crucial for ensuring safe patient care, as well as for the control of infectious diseases such as COVID-19 (Dikobe, Moagi and Sehularo, 2023) [1]. In a study conducted by Bakar and Ramli (2020) [2], the psychosocial wellbeing of nurses as well as their morale and work performance were shown to be jeopardised by working long hours under uncomfortable and stressful conditions. There is emerging evidence that nurses caring for patients diagnosed with COVID-19 infection have greater risks of being affected psychologically, and as a result, they develop mental health conditions such as anxiety, depression, insomnia and stress (Aughterson et al., 2021 [3]). Supporting the mental health of nurses is a critical part of the public health response to the pandemic, because nurses experience psychological and social pressure when caring for patients diagnosed with COVID-19 infection (Walton et al., 2020) [4]. In this study, the framework developed by Dickoff et al. (1968) [5] is used to create a conceptual framework for the psychosocial support of nurses caring for patients diagnosed with COVID-19 infection.

A conceptual framework represents a network of interlinked concepts and can provide a structure for understanding a phenomenon or subject (Glover et al., 2020) [6]. According to Bordage (2009) [7], a conceptual framework represents the ways in which complex things work. The same author indicates that it is used to guide a work based on best practices. A conceptual framework provides the detailed components or concepts that identify the interrelationships in and across a project's components (Springer, 2020) [8]. The aim of the conceptual framework is to classify, define and organise ideas and to determine the relationships between concepts (Turan et al., 2022) [9]. The aim of the newly developed framework in this study is to support those nurses caring for patients diagnosed with COVID-19 infection in North West Province (NWP), South Africa.

There are several definitions of a conceptual framework. Jabareen (2009) [10] defines a conceptual framework as a network or "a plane" of interlinked concepts that together provide a comprehensive understanding of a phenomenon or phenomena. The author further indicates that the concepts that constitute a conceptual framework support one another, articulate the respective phenomena and establish a framework-specific philosophy. According to Springer (2020) [8], these concepts are logically developed and organised to support an overall framework. Meanwhile, Rogers (2016) [11] states that a conceptual framework involves reading critically and making connections or integrating and synthesising existing works related to concepts to understand the theoretical and practical contexts behind them. Polit and Beck (2021) [12] assert that frameworks are often implicit, without being formally described. The same authors further state that without an articulated conceptual framework, it is difficult to determine the researchers' thoughts. The conceptual framework allows researchers to make reasoned and defensible choices about the topics or themes to be explored in search of new contexts (Ravitch and Riggan, 2016) [13]. A conceptual framework should be used to represent the comprehensive linkages between concepts: in this case, the themes and categories that emerge with regard to the psychosocial support needed for nurses caring for patients diagnosed with COVID-19 infection in the NWP.

Globally, the psychosocial wellbeing and support of nurses caring for patients diagnosed with COVID-19 has been a concern (Billings et al., 2020) [14]. Xu et al. (2021) [15] added that protecting nurses' mental wellbeing by providing adequate psychosocial support during the COVID-19 pandemic has been identified as crucial.

The literature reviewed for this study revealed that there are no existing conceptual frameworks for the psychosocial support of nurses caring for patients diagnosed with COVID-19 infection in the NWP of South Africa. Thus, there is a need for the development of a such a conceptual framework.

Purpose of the Study

The purpose of the study was to develop a conceptual framework for the psychosocial support of nurses caring for patients diagnosed with COVID-19 infection in the North West Province of South Africa.

2. Materials and Methods

2.1. Study Design

A qualitative, descriptive phenomenological and contextual research design as explained by Polit and Beck (2021) [12] was followed in developing a conceptual framework. This study was conducted in three distinct phases, namely: an integrative literature review, an empirical phase and the development of the conceptual framework. The findings of the integrative literature review and empirical phases inform the development of the framework.

Phase 1: Integrative literature review (ILR)

An integrative literature review was used to explore published evidence regarding the psychosocial support guidelines for nurses caring for patients diagnosed with COVID-19 infection. Databases that were consulted included Google Scholar, Science Direct, EBSCOhost, Medline, Emerald and Scopus. Articles published between 2019 and 2022 were explored to improve the credibility of the review (Dikobe et al., 2023 [1], see Table 1).

Table 1. Information on studies included in integrative literature review (Dikobe et al., 2023) [1].

Author(s) Year Country	Design and Method Population and Sample	Purpose	Quality Appraisal (Scale: High = h, Low = l nr = Not Reported
Alnazly et al., 2021 [16], USA	Cross-sectional, correlational design to collect data N = 365	To assess the respective levels of fear, anxiety, depression, stress and social support and the associated factors experienced by Jordanian healthcare workers during the COVID-19 pandemic.	(h) Aims and objectives clearly stated (h) Study design adequately described (h) Research methods appropriate (nr) Explicit theoretical framework (h)Limitations presented (h) Implications discussed
Al Thobaity and Alshammari, 2020 [17], Saudi Arabia	Integrative review N = 95	To explore the issues facing nurses during their response to the COVID-19 crisis.	(h) Aims and objectives clearly stated (h) Study design adequately described (h) Research methods appropriate (nr) Explicit theoretical framework (h) Limitations presented (h) Implications discussed
Chew et al., 2020 [18], Singapore	Narrative synthesis N = 144	To synthesise extant literature regarding the combined psychological responses and coping methods used by the general population in past outbreaks.	(h) Aims and objectives clearly stated (h) Study design adequately described (h) Research methods appropriate (nr) Explicit theoretical framework (h) Limitations presented (h) Implications discussed
Fang et al., 2021 [19], China	Cross-sectional study design N = 540	To understand the mental health status and needs of healthcare workers, so as to provide a scientific basis for alleviating their psychological pressure.	(h) Aims and objectives clearly stated (h) Study design adequately described (h) Research methods appropriate (nr) Explicit theoretical framework (h) Limitations presented (h) Implications discussed
Muller et al., 2020 [20], Norway	Systematic review N = 59	To identify, assess and summarise research on the mental health impact of the COVID-19 pandemic on HCWs.	(h) Aims and objectives clearly stated (h) Study design adequately described (h) Research methods appropriate (nr) Explicit theoretical framework (h) Limitations presented (h) Implications discussed
Rathnayake et al., 2021 [21], Sri Lanka	Colaizzi's phenomenological approach N = 14	To explore the experiences and challenges of nurses who have worked with patients hospitalised with COVID-19.	(h) Aims and objectives clearly stated (h) Study design adequately described (h) Research methods appropriate (nr) Explicit theoretical framework (h) Limitations presented (h) Implications discussed

Table 1. *Cont.*

Author(s) Year Country	Design and Method Population and Sample	Purpose	Quality Appraisal (Scale: High = h, Low = l nr = Not Reported
Sehularo et al., 2021 [22] SA	Narrative literature review	To explore and describe the coping strategies used by nurses during the COVID-19 pandemic.	(h) Aims and objectives clearly stated (h) Study design adequately described (h) Research methods appropriate (nr) Explicit theoretical framework (h) Limitations presented (h) Implications discussed
Shatri et al., 2021 [23] Indonesia	Evidence-based clinical review N = 6	To identify psychotherapy as a psychological health intervention for healthcare workers during the COVID-19 pandemic.	(h) Aims and objectives clearly stated (h) Study design adequately described (h) Research methods appropriate (nr) Explicit theoretical framework (h) Limitations presented (h) Implications discussed.
Xu et al., 2021 [15] China	Interventional clinical observation and psychological evaluation N = 1198	To evaluate the mental health of hospital staff before and after a psychological intervention by the Employee Assistance Program (EAP).	(h) Aims and objectives clearly stated (h) Study design adequately described (h) Research methods appropriate (nr) Explicit theoretical framework (h)Limitations presented (h) Implications discussed

Phase 2: The empirical phase

The empirical phase of this paper is comprised of two steps using qualitative research methods. Step 1 explores and describes the lived experiences of nurses caring for patients diagnosed with COVID-19 infection. Step 2 explores and describes the psychosocial support needed for nurses caring for patients diagnosed with COVID-19 infection.

2.2. Population and Sampling

The study population was comprised of nurses caring for patients diagnosed with COVID-19 infection in the NWP of South Africa, including registered professional nurses, enrolled nurses and enrolled nursing auxiliary. The target population included nurses who are registered with the South African Nursing Council (SANC) and are currently employed in COVID-19 sites in NWP with more than one month of experience in caring for patients diagnosed with COVID-19 infection in NWP. A non-probability sampling technique was used to obtain a sample for the study.

2.3. Data Collection

Data were collected through semi-structured virtual focus group discussions (FGDs) via Google Meet in which an interview guide was used. A voice recorder and field notes were used as data collection techniques. Broad questions were asked of all participants, including: "What are your experiences in caring for patients diagnosed with COVID-19 infection?" and "What type of support do you need when you care for patients diagnosed with COVID-19 infection?" This was followed by probing questions based on the responses. Data were collected until data saturation was reached at the fourth focus group discussion.

2.4. Setting

The study was conducted at four selected public hospitals in which patients diagnosed with COVID-19 infection are cared for in the North West Province of South Africa.

2.5. Recruitment of Nurses

After receiving the approval letters to conduct the study, the researcher sent recruitment materials to the nursing service manager via email to share with nurses through their notice boards and through WhatsApp. Participants who were interested in taking part in the study informed the nursing manager. The nursing manager emailed the names and contact numbers of those nurses who were interested in participating in the study to the researcher. Appointments were made with the nurses to be interviewed virtually using FGD through Google Meet at a time that was convenient for them. The researcher made use of a virtual link when obtaining informed consent from the participants.

2.6. Ethical Approval

This manuscript was part of a doctoral study that was approved by the North-West University Health Research Ethics Committee (NWU-HREC) (Reference Number: NWU-00309-21-A1). The study was also approved by the North West Provincial Department of Health (NWP DoH), as well as the chief executive officers (CEOs) from which the data were collected. Permission to collect data was also obtained from the nurses.

2.7. Trustworthiness

Trustworthiness was ensured through credibility, dependability, confirmability and authenticity, as described by Polit and Beck (2021) [12]. Credibility was ensured by consulting relevant databases related to the psychosocial support of nurses caring for COVID-19 patients. Credibility was further maintained by prolonged engagement with nurses during the empirical phase. Dependability was ensured by using an audio recorder for verification. Confirmability was achieved by using an audit trail as well as by writing down field notes during virtual focus group discussions.

3. Results

Data saturation was achieved with a sample of four focus group discussions. A total of 26 nurses participated in the study. Participants were nurses who signed consent forms (Dikobe et al. (2023) [24] and see Table 2).

Table 2. Biographical data of participants for the FGDs. Dikobe et al. (2023) [24].

VARIABLE	CATEGORIES	NUMBER
Gender	Male	2
	Female	24
Age in years	33–60	
Nurses participating in the study per institution	Hospital A	8
	Hospital B	5
	Hospital C	7
	Hospital D	6
Current position of nurses Occupational categories	Professional nurses (PN)	10
	Enrolled nurses (EN)	7
	Enrolled nursing auxiliary (ENA)	9

Table 2. *Cont.*

VARIABLE	CATEGORIES	NUMBER
Educational level	Certificate	16
	Diploma	6
	Degree	4
Years of experience in the above work position	All categories of nurses	3–29

The following two themes and six categories emerged from the ILR phase.

Theme 1: Psychological support

The COVID-19 pandemic has had significant negative impacts on nurses' psychological health, fostering issues such as anxiety, depression, sleep disturbances and burnout. This indicates the necessity of providing psychological support for nurses caring for patients diagnosed with COVID-19 infection (Alnazly et al., 2021) [16]. The following subthemes emerged:

- Employee Assistance Program (EAP)

The findings of this ILR revealed that professional psychological counselling could potentially alleviate psychological illnesses, provide a theoretical basis for promoting EAP psychological services and demonstrate ways in which to reduce pressure on nurses caring for patients diagnosed with COVID-19 (Xu et al., 2021) [15].

- Pastoral counselling

According to the study conducted by Chew et al. (2020) [18], many nurses found prayer and support from the religious community to be helpful during the COVID-19 pandemic.

- Psychotherapy

The results of the literature search showed that supportive psychotherapy is good for every setting, including emergency settings, and for enhancing coping mechanisms (Shatri et al., 2021) [23].

Theme 2: Social support

Social support is necessary as a coping mechanism to decrease nurses' psychological distress and promote positive feelings (Alnazly et al., 2021) [16]. The following subthemes emerged:

- Family support

Muller et al. (2020) [20] reported that nurses utilised support from family during the COVID-19 pandemic as a major emotional and motivational factor to continue caring for COVID-19 patients.

- Peer and colleagues' support

A study conducted by Rathnayake et al. (2021) [21] found that working together with colleagues in a harmonious working environment can help to relieve psychological stress, especially during the time of COVID-19.

- Management support

A study conducted by Sehularo et al. (2021) [22] found the importance of hospital administration's provision of psychological support as a crucial factor in the nurses' ability to overcome the challenges caused by COVID-19.

The following two themes and four categories emerged from step 1 of the empirical phase.

Theme 1: Nurses' knowledge of COVID-19 (Dikobe et al., 2022 [24]). The following categories detail the experiences of nurses caring for COVID-19 patients:

- Nurses' conceptualisation of COVID-19

The study has identified that nurses seem to have an understanding of what COVID-19 is and also the symptoms of COVID-19.

"COVID-19 is an infectious disease caused by virus known as SARS-CoV 2 and MERS. It affects the respiratory systems (P5)".

"COVID-19 is an infectious communicable disease that can be transmitted from one person to another (P1)".

Theme 2: Nurses' experiences of caring for patients diagnosed with COVID-19 infection (Dikobe et al., 2022 [24]).

The findings of the study revealed that nurses have different experiences in caring for COVID-19 patients.

- Nurses have distinct physical experiences in caring for patients diagnosed with COVID-19 infection.
  - Nurses verbalised that as a result of caring for patients diagnosed with COVID-19, they ended up developing physical problems, and some of the nurses indicated that they ended up having COVID-19 infection.

"It wasn't easy seeing people dying day in and day out in your hands, we would be resuscitating patients with COVID-19 and most of us ended up having COVID-19. I was one of them (P3)".

- Nurses have distinct psychological experiences in caring for patients diagnosed with COVID-19 infection.
  - Nurses reported that they are afraid of being infected with COVID-19, and they also felt that they would die of COVID-19.

"it was very traumatising and we were not sure whether we were going to get the infection or not. We were always on edge when we care for patients with COVID infection (P7)".

"but it was not easy because at the same time we were scared that what if I get it or what if I don't see that I have it and infect somebody that is closer to me and seeing the patients suffer in that way we were scared (P4)".

- Nurses have distinct social experiences in caring for patients diagnosed with COVID-19 infection.
  - The findings of the study further revealed that nurses were stigmatised and socially isolated, because they were seen as carriers of COVID-19 infection.

"the hospital staff were afraid of us, they feared us, and they didn't want us near them when we were meeting them in the corridors of the hospital (P2)".

The following two themes and four categories emerged from step 2 of the empirical phase.

Theme 1: Nurses' challenges when caring for patients diagnosed with COVID-19 infection (Dikobe et al., 2022) [25]. The following categories detail the challenges of nurses caring for COVID-19 patients.

- Nurses experienced challenges in caring for patients diagnosed with COVID-19 infection.
  - The findings of this study revealed that because COVID-19 is a new disease, there is no specific treatment for COVID-19, and it is difficult to deal with its complications and complexities.

"People used concoctions, we had lots of renal failures. Patients were drinking traditional concoctions because there were no cure (P5)".

- Nurses experienced challenges in obtaining support when caring for patients diagnosed with COVID-19 infection.
  - Participants indicated that it was difficult for them to obtain psychological support, and they further indicated that the management team was unproductive, as

they never checked on the staff and/or referred them to occupational health and safety (OHS) for investigations such as X-rays.

"we do not go for the x-ray, we have to take ourselves to the private doctor to check x-ray. You cough and cough and they give you only 2 days off (P2)".

Theme 2: Psychosocial support needed by nurses caring for patients diagnosed with COVID-19 (Dikobe et al., 2022) [25]. The following categories detail the support needed by nurses caring for COVID-19 patients.

- Psychological and physical health support is needed by nurses who are caring for patients diagnosed with COVID-19.

  "We needed to be attended to by our managers. We need them to hear our cry if we do not have the equipment they should supply . . . if we are sick they must hear us and take care of us (P2)".

- Resources are needed by nurses who are caring for patients diagnosed with COVID-19.

  "We also need to be supported with PPEs, there is a serious shortage (P3)".

4. Discussion

The results of this study are presented and discussed according to the three phases presented above, namely: the integrative literature review, the empirical phase and the development phase.

Using the ILR method, the researchers explored and described the published articles regarding psychosocial support for nurses caring for patients diagnosed with COVID-19 infection.

Supporting nurses psychologically is essential to preserving their health in the short and long term, particularly when occupational stress levels are so high (Maben and Bridges, 2020) [26]. The first step of the empirical phase explored and described the lived experiences of nurses caring for patients diagnosed with COVID-19 infection. Secondly, the kinds of psychosocial support needed by nurses caring for patients diagnosed with COVID-19 infection have been explored and described.

Nurses reported that they have developed comorbidities such as hypertension since they started caring for COVID-19 patients. These findings are supported by Fang et al. (2021) [19], who reported hypertension to be a prevalent comorbidity among nurses caring for COVID-19 patients. Semo and Frissa (2020) [27] added that nurses complained of having headaches and muscle pain, so they started using analgesics. A study conducted by Walton et al. (2020) [4] revealed that the lack of specific treatment for COVID-19 and increased positive cases of and fatalities due to COVID-19 may have increased the mental health burden of nurses.

4.1. Development of a Conceptual Framework

The results of the ILR and empirical phases were merged to develop a conceptual framework for the psychosocial support of nurses caring for patients diagnosed with COVID-19 infection in NWP, South Africa.

According to Jabareen (2009) [10], grounded theory is adequate for conceptual framework building, because it involves the use of coding paradigms to ensure conceptual development. The same author further states that this is a research method aimed at the discovery of theory from systematically obtained data. Grounded theory is also contextual, procedural and inductive (Jabareen, 2009) [10]. In this study, the concepts were deduced from the themes and categories of the integrative literature review and empirical phase of the paper by asking and answering the following six questions proposed by Dickoff et al. (1968) [5] according to Practical Orientation Theory.

The crucial questions were based on the following:

1. Who is the agent of the framework (agent)?
2. Who is the recipient of the framework (recipient)?

3. In which context will the framework be implemented (context)?
4. How will the framework be implemented (procedure)?
5. What are the dynamics of the framework (dynamics)?
6. What will be the endpoint of the framework (terminus)?

4.2. Description of the Structural Presentation of the Conceptual Framework

The description of the conceptual framework provides a process for the development of the conceptual framework for the psychosocial support of nurses caring for patients diagnosed with COVID-19 infection in NWP. Figure 1 provides a description of the conceptual framework for the psychosocial support of nurses caring for patients diagnosed with COVID-19 infection in NWP according to Dickoff et al. (1968) [5]. The process of developing the above conceptual framework was influenced by the six crucial survey list questions. The process started with the "Agent" and ended with the "Terminus" (Dickoff et al., 1968) [5]. The concepts (agent, recipient, context, procedure, dynamics and terminus) are discussed in the study.

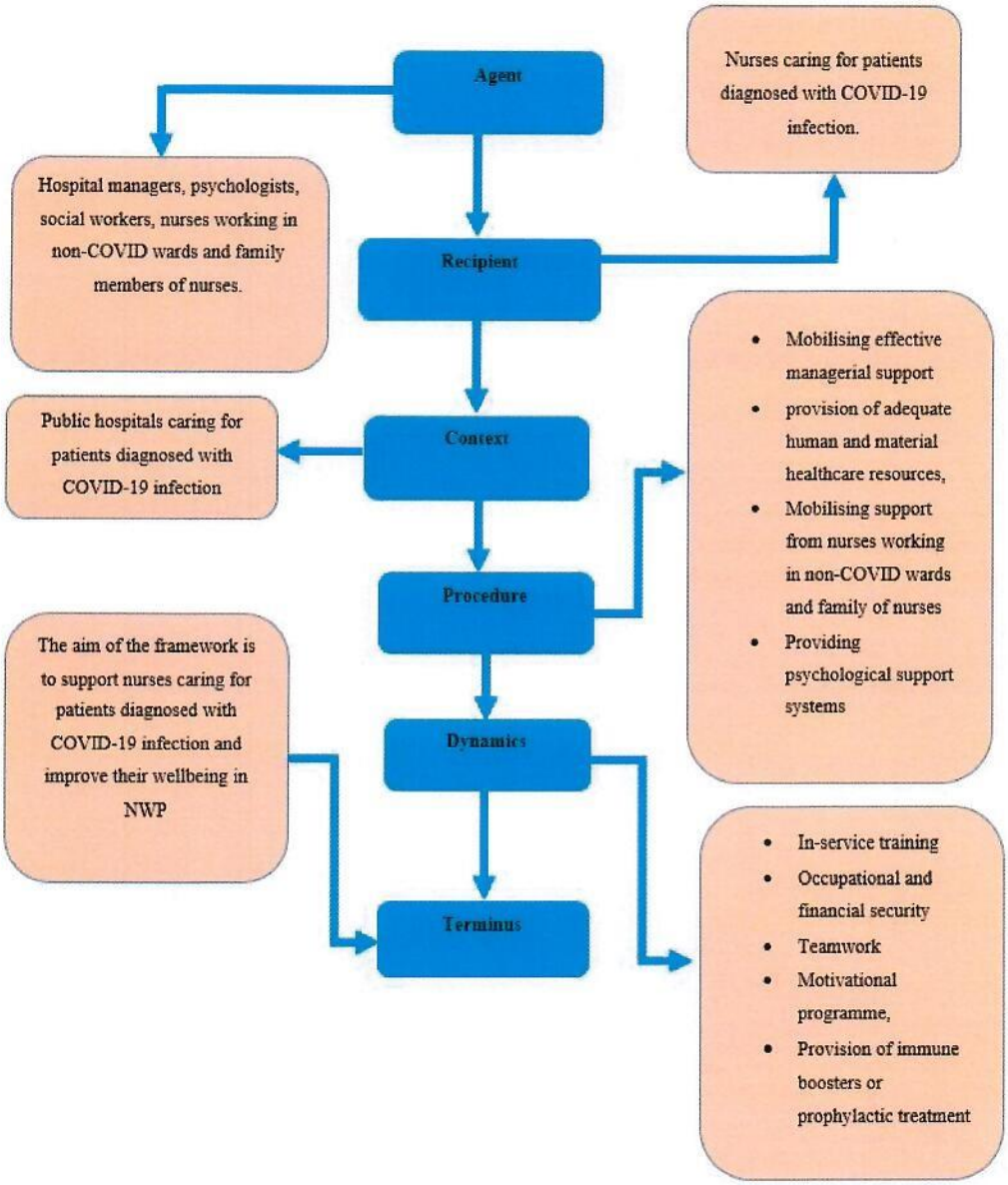


Figure 1. A conceptual framework for the psychosocial support of nurses caring for patients diagnosed with COVID-19 infection in NWP adapted from Dickoff et al. (1968) [5].

4.3. Relevance and Objective of the Conceptual Framework

The conceptual framework can facilitate psychosocial support for the nurses caring for patients diagnosed with COVID-19 infection in NWP. Therefore, the conceptual framework can provide clear information on the ways in which psychosocial support for the nurses caring for patients diagnosed with COVID-19 infection can be carried out. The information in the conceptual framework can also benefit the hospitals caring for COVID-19 patients as well as policymakers. In addition, the adoption of this conceptual framework can improve clinical practice and the quality of care for patients diagnosed with COVID-19.

4.4. Assumptions of the Conceptual Framework

The themes and categories that emerged from the integrative literature review and empirical phases of this study were merged to develop this conceptual framework. Nurses must receive psychosocial support when caring for patients diagnosed with COVID-19 infection. Considering the fact that nurses are experiencing fear, anxiety, depression and stigmatisation, this necessitates the development of a conceptual framework for psychosocial support for the nurses caring for patients diagnosed with COVID-19 infection.

Responses to the six crucial questions proposed by Dickoff et al. (1968) [5] on Practical Orientation Theory are explained in the following paragraphs.

4.4.1. Agent: Who Is the Agent of the Framework?

The first concept on the survey list of Dickoff et al. (1968) [5] is the agent. An agent of the framework refers to a person who moves the practice towards a goal by ensuring effective psychosocial support for nurses caring for patients diagnosed with COVID-19 infection. Thus, these agents have a direct impact on the psychosocial support for nurses caring for patients diagnosed with COVID-19 infection. Agents have responsibilities in enabling psychosocial support for nurses caring for COVID-19 patients. The list of agents includes the following: hospital managers, psychologists, social workers, nurses working in non-COVID wards and family members. These agents must understand their roles in supporting the nurses caring for COVID-19 patients.

Hospital managers, as one of the agents, should provide a comprehensive support system for nurses, as nurses experience fear when caring for COVID-19 patients. Managers should ensure that they are present in the wards and provide psychological support by recognising staff, listening to their experiences and creating a safe environment, as this allows nurses to raise concerns. Management should provide nurses with material resources such as personal protective equipment (PPE), treatment and ventilators. There should also be enough staff (human resources) when caring for COVID-19 patients.

Nurses should be provided with in-service training regarding COVID-19, because it is a new disease. They should also be trained on the usage of equipment or machines used to treat COVID-19 patients. Prophylactic treatment or immune boosters should be provided to nurses caring for COVID-19 patients as appropriate according to evidence-based practice to boost their immune systems, because nurses are at risk of being infected. Furthermore, agents such as family members and nurses working in non-COVID wards should understand the emotional challenges that nurses caring for COVID-19 patients are facing and support and encourage them where necessary.

Psychologists should be readily available in hospitals to help nurses who are caring for patients diagnosed with COVID-19. They should also assist nurses in learning to cope with stressful situations and perform psychotherapy, including individual therapy and group therapy.

Social workers should be available in hospitals to support nurses caring for COVID-19 patients. Several social factors, such as decreased social support, seeing relatives/friends diagnosed with COVID-19 and colleagues' readiness to cope with the COVID-19 outbreak, have increased the perceived threat of COVID-19, and the long working hours in COVID-19 wards have increased nurses' burnout (Galanis et al., 2021) [28]. Therefore, social support is critical for nurses in the fight against epidemics.

4.4.2. Recipient: Who Is the Recipient of the Framework?

The second concept on the survey list of Dickoff et al. (1968) [5] is the recipient. Recipients of this conceptual framework are the nurses caring for patients diagnosed with COVID-19 infection. Nurses should be supported physically, socially and psychologically. They should be appropriately rewarded, so that they can willingly provide care to patients if a similar situation occurs in the future. Support programmes should be established for nurses to cope with the psychosocial problems they experience when caring for patients diagnosed with COVID-19.

4.4.3. Context: In Which Context Will the Framework Be Implemented?

Context is the third concept on the survey list of Dickoff et al. (1968) [5]. Context is the setting in which the activity of psychosocial support for nurses caring for patients diagnosed with COVID-19 infection will take place. The conceptual framework for the psychosocial support of nurses caring for patients diagnosed with COVID-19 infection has been developed within a context by an agent and received by the recipient. The context of the framework includes the four public hospitals caring for patients diagnosed with COVID-19 infection in NWP. The contexts of this study are vital components, because this is where the nurses who are caring for COVID-19 patients can be found.

4.4.4. Procedure: How Will the Framework Be Implemented?

Procedure is the fourth concept on the survey list of Dickoff et al. (1968) [5]. Procedure refers to the steps or processes followed to ensure the success of the development of the psychosocial support guidelines for the nurses caring for patients diagnosed with COVID-19 infection. The procedure followed the following two steps: mobilising effective managerial support and providing adequate healthcare resources.

Step 1: Mobilising effective managerial support for nurses caring for patients diagnosed with COVID-19 infection

Mobilising effective managerial support for nurses is significant, because COVID-19 has had negative impacts on nurses, fostering fear, depression and anxiety. This indicates the necessity of providing support to nurses caring for COVID-19 patients. All the agents involved should support nurses. The support to nurses should include continuous in-service training for all nurses caring for COVID-19 patients. Therefore, nurses should be informed about COVID-19 and its management practices, including the usage of equipment such as ventilators.

Management should ensure that psychological support for nurses is readily available, and where necessary, nurses should be referred to occupational health and safety (OHS) for investigations. Nurses should be provided with immune boosters to boost their immune systems. Hospital management should visit the ward regularly to support nurses and show appreciation for the work nurses are performing.

Step 2: Provision of adequate healthcare resources to nurses caring for patients diagnosed with COVID-19

The provision of adequate human and material healthcare resources is imperative in the process of providing psychosocial support for the nurses caring for patients diagnosed with COVID-19 infection. A major issues facing nurses is a critical shortage of nurses, beds and medical supplies, including personal protective equipment (Al Thobaity and Alshammari, 2020) [17]. Providing human resources with an adequate number of nurses will reduce the workload of nurses. Governments and health policymakers need to invest in nurses and equipment and to pay attention to the needs of the health systems to ensure a healthy population (Turale and Nantsupawat, 2021) [29].

Nurses have a fear of being infected with COVID-19; therefore, they need to be provided with proper PPE such as protective gowns, masks and gloves to render quality patient care. All permanent posts should be filled, so that nurses who are on contracts can apply to obtain occupational and financial security.

4.4.5. Dynamics: What Are the Dynamics of the Framework?

The fifth concept on the survey list of Dickoff et al. (1968) [5] is dynamics. Dynamics are the motivating factors or activities that will occur to ensure the success of the developed conceptual framework for the psychosocial support of nurses caring for patients diagnosed with COVID-19 infection. The motivating factors for the conceptual framework developed include in-service training, occupational and financial security, teamwork, motivational programmes, the provision of immune boosters and follow-up treatment for nurses. The agents are expected to engage nurses to facilitate psychosocial support. There is a need for motivation and the provision of a safe environment for nurses. The collaborative efforts of the agents are important in sustaining psychosocial support for nurses caring for COVID-19 patients.

4.4.6. Terminus: What Will Be the Endpoint of the Framework?

This is the sixth and last concept on the survey list of Dickoff et al. (1968) [5]. Terminus, in this context, refers to the endpoint or the outcome of the newly developed conceptual framework. The endpoint or the aim of the newly developed framework discussed here is to support the nurses caring for patients diagnosed with COVID-19 infection in NWP. The conceptual framework will enable nurses to develop effective coping skills. The implementation of the developed conceptual framework should be supported by all agents.

5. Limitations

The study was conducted in four public hospitals in the NWP, South Africa. Furthermore, the development of the conceptual framework was based on a qualitative study. Thus, the conceptual framework cannot be generalised; rather, it can be transferred or applied in other provinces or different contexts.

6. Conclusions

A qualitative, descriptive phenomenological, contextual research design was used to develop a conceptual framework for the psychosocial support of the nurses caring for patients diagnosed with COVID-19 infection in NWP, South Africa. The conceptual framework consists of important information regarding the psychosocial support of nurses, such as the agents, recipients, context, procedures, dynamics and terminus involved. The developed framework can provide solutions for healthcare institutions to provide psychosocial support to nurses caring for patients diagnosed with infectious diseases such as COVID-19.

Author Contributions: Conceptualisation, J.M.D., M.M.M. and L.A.S.; methodology, J.M.D., M.M.M. and L.A.S.; formal analysis, J.M.D., M.M.M. and L.A.S.; investigation, J.M.D., M.M.M. and L.A.S.; data curation, J.M.D., M.M.M. and L.A.S.; writing—original draft preparation, J.M.D.;M.M.M. and L.A.S.; writing—review and editing, J.M.D., M.M.M. and L.A.S.; visualisation, J.M.D., M.M.M. and L.A.S.; supervision, M.M.M. and L.A.S.; project administration, J.M.D., M.M.M. and L.A.S. All authors have read and agreed to the published version of the manuscript.

Funding: This research received no external funding.

Institutional Review Board Statement: This study was approved by the North-West University Health Research Ethics Committee (NWU-HREC) (Reference Number: NWU-00309-21-A1) with the date of approval: 22 August 2022.

Informed Consent Statement: There were no participants involved in the conceptual framework.

Data Availability Statement: Data sharing does not apply, as no new data were discovered and/or analysed.

Conflicts of Interest: The authors declare no conflict of interest.

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MANUSCRIPT FIVE

Psychosocial support guidelines of nurses caring for patients diagnosed with COVID-19 infection in North West Province, South Africa, submitted to Qualitative Health Research Journal, February 2023.



Psychosocial support guidelines of nurses caring for patients diagnosed with COVID-19 infection in North West Province, South Africa

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Abstract

Guidelines provide direction for making decision in nursing practice. Due to lack of psychosocial support guidelines, nurses caring for patients diagnosed with COVID-19 infection are affected psychosocially. However, there are no psychosocial support guidelines of nurses caring for patients diagnosed with COVID-19 infection in North West Province.The aim of this study was to develop and validate the psychosocial support guidelines of nurses caring for patients diagnosed with COVID-19 infection in North West Province. The study was conducted in four public hospitals caring for patients diagnosed with COVID-19 infection in the North West Province. A qualitative, descriptive phenomenological and contextual research design was followed to develop the guidelines. The three components proposed by Donabedian, structure, process and outcome (SPO) were used to develop the psychosocial support guidelines. Thereafter, three rounds of e-Delphi technique was used with group of experts to validate the psychosocial support guidelines of nurses caring for COVID-19 patients in North West Province. The guidelines involved mobilising effective managerial support, provision of adequate human and medical healthcare resources, and provision of psychological and social support systems, as well as provision of prophylactic treatment or immune boosters to nurses. The newly developed guidelines will provide solutions for health care institutions to respond effectively to similar pandemics in the future, improve the psychosocial wellbeing of nurses and providing quality care to patients diagnosed with COVID-19 in the North West Province.

Keywords: COVID-19, nurses, caring, psychosocial support, guidelines

Introduction

Nurses caring for patients diagnosed with Coronavirus disease (COVID-19) are important people to fight against the infection and their psychosocial well-being is vital (Thobane et al., 2022). Globally, the psychosocial wellbeing and support of nurses caring for patients diagnosed with COVID-19 disease has been a concern (Billings et al., 2021). For instance, authors such as Akkuş et al. (2022) reported that nurses do not receive any support to protect their mental health and that stress is common among nurses with occupational risk of contracting COVID-19. Babroudi et al. (2021) state that as hospitals are faced with several challenges during the COVID-19 pandemic, the quality of hospital healthcare declined sharply, therefore addressing the quality of healthcare is essential. Hence the researchers deemed it necessary to conduct this study.

According to the Institute of Medicine (IOM), clinical practice guidelines are statements that include recommendations intended to optimise patient care that are informed by a systematic review of evidence and an assessment of the benefits and harms of alternative care options (Hoffmann-Eßer et al., 2018). Polit and Beck (2021) assert that clinical practice guidelines, give specific recommendations for evidence-based decision-making and attempt to address all issues relevant to a clinical decision, including balancing benefits and risks. Shekelle et al. (2020) added that providing guidelines seems to improve practice. Optimal provision of psychosocial supportive is therefore fundamental to the wellbeing of nurses caring for COVID-19 patients. The aim of the developed guidelines in this study is to support nurses caring for patients diagnosed with COVID-19 infection in North West Province (NWP) using the Donabedian (2005) model of quality of care.

Donabedian (2005) proposed a model for assessing the quality of health services based on Structure, Processes and Outcomes (SPO). The Donabedian model provides a fundamental framework for evaluating the quality of care in health care, which can be applied for evaluation of psychosocial support of nurses caring for COVID-19 patients (Sun et al., 2021). According to the Donabedian model, the quality of health care can be assessed by three components that are relevant for organizations: Structure, Process and Outcome (Tossaint-Schoenmakers et al., 2021). Yfantis et al. (2020) stated that according to Donabedian, there are two fundamental prerequisites to provide quality care and achieve the best outcomes, the first prerequisite demands an appropriate structure and the second the implementation of the processes. These two fundamental prerequisites are applied in the developed guidelines.

Structure is defined as the setting in which health care is provided such as facilities, equipment, human and material resources (Tossaint-Schoenmakers et al., 2021). In this study, structure refers to the environment where nurses are caring for COVID-19 patients in selected hospitals of the NWP. Human resources are concerned with staff ratio and qualifications of staff. Material resources denote the facility

and the equipment for providing quality care. Organisational structure incorporates medical and nursing staff, supervision, policies and performance review (Donabedian, 2005).

Process is defined as what is actually done in giving and receiving care such as patient and nurse activities (Tossaint-Schoenmakers et al., 2021). In this study, process is defined as the activities undertaken in supporting nurses caring for COVID-19 patients in NWP, these includes nurse and managers' relationship. Outcome is defined by Tossaint-Schoenmakers et al. (2021) as the consequences of the provided health care such as health status and satisfaction. The aim of the psychosocial support guidelines is to support nurses caring for patients diagnosed with COVID-19 infection and improve their wellbeing. Nurses who are receiving psychosocial support when caring for COVID-19 patients will provide quality care to COVID-19 patients.

The newly developed guidelines were validated by a group of experts through the e-Delphi technique. Msibi et al. (2018) defines e-Delphi as an online method widely used in health and social research to strengthen decision-making processes and reach consensus on developing guidelines for health services. The e-Delphi technique was used to validate a psychosocial support guidelines for the nurses caring for patients diagnosed with COVID-19 infection in NWP. The e-Delphi technique aims to gain consensus among "experts" as defined within the specific context of investigation through a series of survey-style rounds. Typically, survey rounds assess expert opinions through a ranking or rating approach, with controlled feedback between rounds allowing participants the opportunity to change their ratings, should they wish to, informed by the responses of other participants, until consensus is reached (Mete et al., 2021). The e-Delphi technique allows a wide variety of experts to express opinions and provide feedback, nationally and internationally, without meeting together (Polit & Beck, 2021).

From the literature reviewed, there are no psychosocial support guidelines for the nurses caring for patients diagnosed with COVID-19 infection in the NWP of South Africa (SA). Thus, the need for developing and validating the psychosocial support guidelines of nurses caring for patients diagnosed with COVID-19 infection in NWP.

Methods

Study design

A qualitative, descriptive phenomenological and contextual research design as explained by (Grove et al., 2021) was followed in developing and validating the psychosocial support guidelines for nurses caring for COVID-19 patients in the NWP of SA. This manuscript is part of a doctoral study which had four phases. Phase 1 is the integrated literature review, phase 2 is the empirical phase, phase 3 is the development phase and phase 4 is the validation phase. Manuscripts have been submitted to different journals. The first manuscript submitted is "Psychosocial support for nurses caring for patients diagnosed with COVID-19 infection: An integrated literature review" (Dikobe, Moagi & Sehularo 2023 Unpublished). The second manuscript is accepted by The Open Public Health Journal (TOPHJ) and

the title is “The lived experiences of nurses caring for patients diagnosed with COVID-19 infection in the North West Province” (Dikobe et al. 2023). The third manuscript was published by Gender and Behaviour Journal and the title is “The psychosocial support needed by nurses caring for patients diagnosed with COVID-19 infection in the North West Province, South Africa (Dikobe et al. 2023). The fourth manuscript is accepted by International Journal of Environmental Research and Public Health (IJERPH) and the title is “Conceptual framework for the psychosocial support of nurses caring for patients diagnosed with COVID-19 infection in North West Province” (Dikobe et al. 2023).

Study Context

The study was conducted in four public hospitals which were admitting COVID-19 patients in the North West Province, South Africa. These hospitals were in Dr Kenneth Kaunda, Bojanala and Ngaka Modiri Molema districts.

Data collection

The drafted preliminary guidelines were sent to the experts with Likert scale for validation. Each expert participant sent an e-mail of the drafted guidelines with an instrument to evaluate the validity of the guidelines according to a Likert scale as well as open-ended comments. After each round the guidelines were refined based on the feedback received from the experts. The experts remained anonymous to each other. Experts were given a period of two weeks to respond to the drafted guidelines. Experts from nationally and internationally participated in the validation of the guidelines.

Data Analysis

Data analysis is the reduction, organization, and statistical testing of information obtained in the data collection phase (Grove et al., 2021). In the e-Delphi process, data analysis involved qualitative in the form of open ended comments and quantitative in the form Likert scale.

Ethical considerations

Approval to conduct this study was given by the North-West University Health Research Ethics Committee (NWU-HREC) [Reference Number: NWU-00309-21-A1]. After the NWU-HREC, the study was further submitted and approved by the director from the Research, Monitoring and Evaluation Directorate in the North West Province as well as the Chief Executive Officers (CEOs) of the selected public hospitals.

Trustworthiness

The researcher ensured credibility by the ongoing iteration and feedback received from the experts during validation of the guidelines. Credibility was also ensured by giving experts a maximum of two weeks to validate the developed guidelines. To achieve dependability, the researcher included a range of skilled and experienced experts in qualitative research namely, policy and guideline development,

advanced psychiatric nurses, psychologists and social workers. Confirmability was assessed by maintaining a detailed description of the methodology during development and validation of the guidelines. The methodology used in this manuscript followed the Donabedian model (1966) of structure, process and outcome as well as e-Delphi during development and validation of the guidelines. To ensure transferability of this study, the newly developed guidelines cannot be transferred but they can be applied in other settings.

Results

The results of both the integrative literature review and empirical phases were used to develop the guidelines. Donabedian (1966) model of structure, process and outcome was used to develop the psychosocial support guidelines for nurses caring for patients diagnosed with COVID-19 infection in North West Province. The Donabedian model demonstrates that the outcomes are influenced by structures and processes of health care delivery. The changes in structure and processes may affect the outcome of nurses caring for patients diagnosed with COVID-19 infection. Wake et al. (2022) added that each component of Donabedian model (1966) has a direct influence on the next one.

E-Delphi technique was used to validate the guidelines. Non-probability sampling approach was used to select and compile a list of experts based on their expertise. The expert sampling technique was used in this study to select experts who were knowledgeable about the psychosocial support guidelines for the nurses caring for patients diagnosed with COVID-19 infection namely: researchers who are skilled and experienced in qualitative research, policy and guideline development; psychologist; advanced psychiatric nurses; university lecturers with advanced psychiatric nursing science and social workers. Using e-Delphi technique allows a wide variety of experts to express opinions and provide feedback, nationally and internationally without meeting together (Grove et al., 2021). E-Delphi technique was used to validate the psychosocial support guidelines.15 experts out of the initial 20 experts who were sent the guidelines participated in the validation of the guidelines.

Validation of guidelines by the experts

The drafted guidelines and the Likert scale were emailed to the experts. Then the experts responded and their comments and feedback were used to refine the guidelines. Experts validated the guidelines using 4-point Likert scale with AGREE II criteria. The Likert scale rating was used, whereby rating 1 was strongly agree with the guideline; rating 2 was agree to some extent; rating 3 was disagree to some extent and rating 4 was strongly disagree with the guideline. The following statements were received from the experts: “The guidelines are well researched, thought and comprehended, they will certainly add value in the body of knowledge in combating the spread of COVID-19”. Psychologist stated that: “The guidelines are clear, understandable and easily deciphered”. Another expert who is a Lecturer with Advanced Psychiatric Nursing indicated that “I am content with the refined guidelines” The social

worker maintained that: “The guideline is comprehensive and covers bio psychosocial model of functioning”.

BOX 1: Expert inputs and suggestions.

Expert 1
‘Rather encourage early identification and referral of nurses who are under stress, or wellness programs such as skills training and support groups or online support structures and helplines.’
Expert 12
‘Have infrastructure for wellness centres which are “safe spaces, meditation rooms’.
Experts 8
‘The pandemic forced us to embrace rapid change, this declares that the time is now to achieve those future and current goals for prevention of the future pandemics. We are at the mercy of the devastating diseases and must act fast to save lives.’

Figure 5: *Psychosocial support guidelines of nurses caring for patients diagnosed with COVID-19 infection in NWP according to Donabedian model for quality of care (1966)*

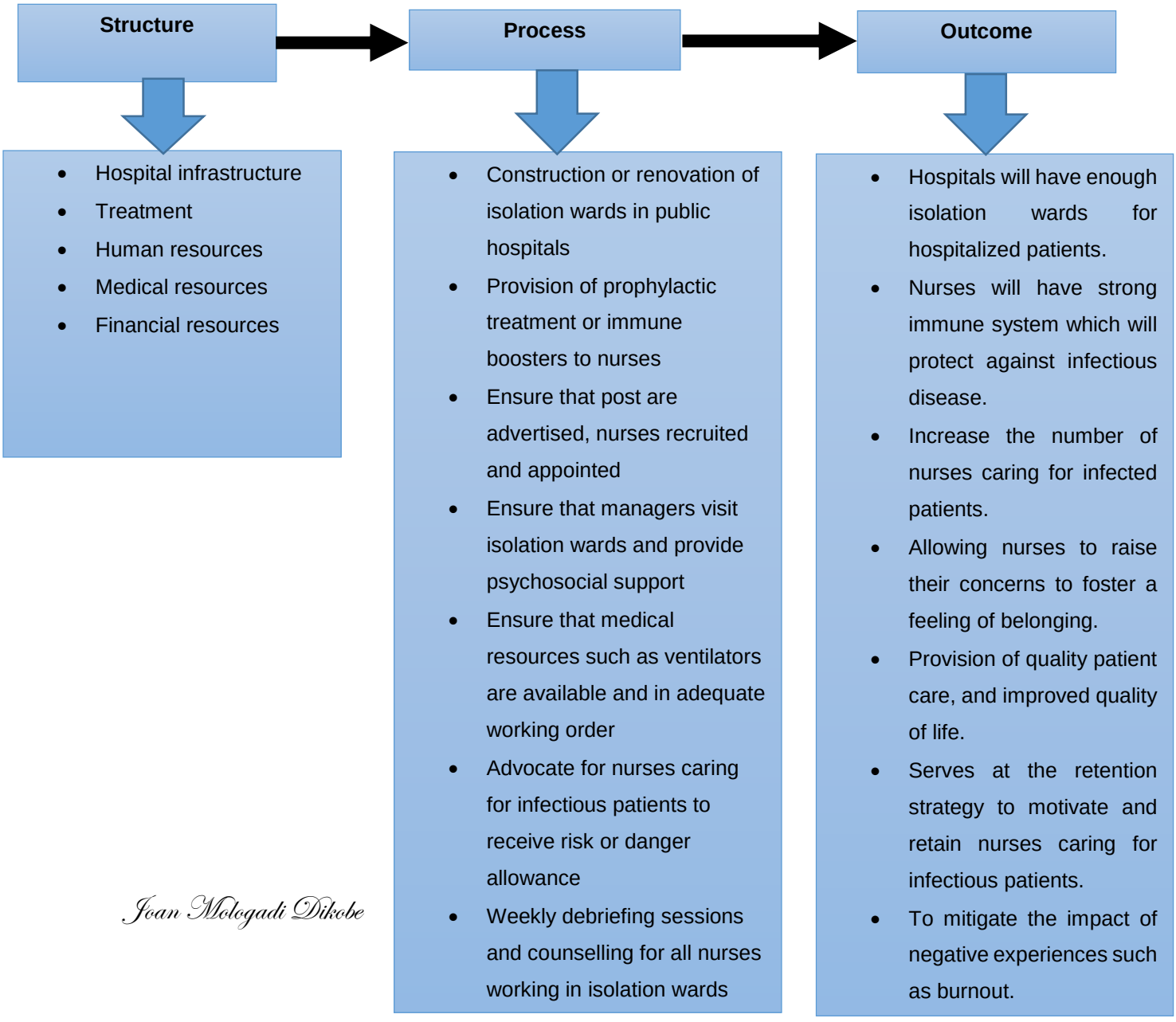


Figure 1 illustrates that the improvements of the structure of health care such as hospital infrastructure, treatment, human resources, medical resources and financial resources will lead to the improvements in the process of health care services and ultimately improve nurses' outcomes. In this study, hospital infrastructure (structure) can be improved either by construction or renovation of isolation wards in public hospitals (process), as the results the hospitals will have enough isolation wards for hospitalized patients, and it will be a conducive working environment for nurses. Prophylactic treatment (structure) ,managers to provide nurses who are willing to receive prophylactic treatment or immune boosters as appropriate according to evidence- based practice(process) ,nurses will have strong immune system which will protect against infectious disease(outcome).

Human resources (structure), managers should ensure that there are adequate and skilled human resources to care for infectious patients (process) in order to provide quality nursing care to infected patients (outcome), ensure that post are advertised, nurses recruited and appointed (process),to increase the number of nurses caring for infected patients (outcome), provide in-service training to nurses (process) for nurses to acquire more knowledge, skills and attitude to care for infected patients (outcome). Managers should visit isolation wards and provide psychosocial support by recognizing and listening to nurses' experiences, appreciating their contributions and creating a safe working environment (process) to allow nurses to raise their concerns, to foster a feeling of belonging and not being isolated (outcome).

Medical resources (structure), hospital managers should ensure that medical resources such as ventilators are available and in adequate working order to care for infected patients (process) for the provision of quality patient care, and improved quality of life (outcome). Provide nurses with adequate and proper PPEs such as N95 mask, gloves, and protective gowns (process) to prevent exposure to infectious disease and curb cross infection between patients and the nursing staff (outcome).

Financial resources (structure), managers should advocate to governance structure for all nurses caring for infectious patients to receive risk or danger allowance (process), it will serve as the retention strategy to motivate and retain nurses caring for infectious patients (outcome).There is a need for nurses working in isolation wards to attend debriefing sessions and counselling in order to mitigate the impact of negative experiences such as burnout and assist nurses in recovery from stress, and in the process curb the stressors related to disease outbreak.

TABLE 1: Summary of the rating of the e-Delphi round by panellists

PRINCIPLES	VALIDITY				RELIABILITY				APPLICABILITY				CLARITY				RELEVANCE				COMPREHENSIVENESS & EFFECTIVENESS				FLEXIBILITY				ACCEPTABILITY			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
PRIMARY PREVENTION	11	4	0	0	10	5	0	0	12	3	0	0	10	5	0	0	11	4	0	0	10	5	0	0	9	6	0	0	10	5	0	0
SECONDARY PREVENTION	11	4	0	0	10	5	0	0	12	3	0	0	10	5	0	0	11	4	0	0	10	5	0	0	9	6	0	0	10	5	0	0
TERTIARY PREVENTION	11	4	0	0	10	5	0	0	12	3	0	0	10	5	0	0	11	4	0	0	10	5	0	0	9	6	0	0	10	5	0	0
TOTAL SCORE	**33**	**12**	**0**	**0**	**30**	**15**	**0**	**0**	**36**	**9**	**0**	**0**	**30**	**15**	**0**	**0**	**33**	**12**	**0**	**0**	**30**	**15**	**0**	**0**	**27**	**18**	**0**	**0**	**3**	**15**	**0**	**0**

E-Delphi round 1

Twenty experts were invited to participate in the study. The potential e-Delphi experts' participants were sent an email of the drafted guidelines with an instrument to evaluate the validity of the guidelines according to Likert scale as well as the consent form indicating the title, purpose and the conditions of participation. Out of 20, only 15 experts signed the consent form and participated in e-Delphi round 1. Experts were given a period of two weeks to respond to the validation of the preliminary guidelines and rate the guidelines according to Likert scale. Participants used 4-point Likert scale and made open-ended comments. When the experts were done with their responses, they sent them back to the researcher through email. The guidelines were refined based on the feedback received from the experts. The experts were from nationally and internationally and they remained anonymous to each other.

E-Delphi round 2

In round 2, the same participating experts were sent the refined guidelines based on their comments and recommendations made in round 1.The experts panel were also given a period of two weeks to respond. The feedback process that were given in each round gave the experts an opportunity to reassess their initial judgements. In round 2, only 14 experts responded. The reasons of one experts are not known for not participating. Experts recommended some changes in phrasing the sentences and suggested some additions to the guidelines. The ratings were analysed and guidelines refined based on the feedback received from the experts.

E-Delphi round 3

In round 3, the refined guidelines were sent to all the 15 experts including the one who did not participate in round 2. 15 experts responded during this round. None of the experts disagreed or strongly disagreed with the guidelines. The researcher ensured that all data was analysed both qualitatively by open-ended comments and quantitatively by Likert scale. The psychosocial support guidelines were refined in line with the comments and recommendations made by the experts in all the round. The researcher concluded that consensus has been reached by experts regarding the guidelines.

Discussion

This is the first study to develop and validate the psychosocial support guidelines for nurses caring for patients diagnosed with COVID-19 infection in the NWP of SA. This study revealed that nurses needed the psychosocial support when caring for COVID-19 patients. During COVID-19 pandemic, isolation rooms are in high demand, therefore it is important to renovate or construct isolation wards in order respond to the overcrowding of infectious patients who needed hospitalization. Converting hospital wards to isolation wards can serve as a temporary solution and it also pose a challenge to patients who should be admitted in those wards that are converted to isolation wards. Wee et al. (2021) stated that

although building more permanent structures is time-consuming and costly, public hospital institutions should relieve the pressure by constructing isolation ward for infected patients.

One of the main challenges of healthcare systems against management of infectious diseases is the challenge of procurement and recruitment of the human resources (Yfantis et al., 2020). Nurses caring for infectious patients reported that there is shortage of skilled nurses to deliver quality care to patients diagnosed with COVID-19 infection. The shortage of critical care nurses with qualifications and expertise is more critical than everything during pandemics (Chegini et al., 2021) . Nurses reported that managers did not want to come to isolation wards and they never bothered to ask how they feel. Thude et al. (2021) reported that the presence of managers included being visible and available and being interested in the nurses' well-being.

The lack of adequate medical resources such as ventilation machine and PPE in public hospitals is a barrier for nurses to provide quality nursing care. Goh et al. (2020) added that shortages in equipment meant that 75% of the deceased did not receive mechanical ventilation.

In this study, the drafted guidelines were validated by the experts using e-Delphi technique. The experts shared their opinions and comments regarding the preliminary guidelines and the researcher refined the guidelines based on the feedback received from the experts. After three rounds, the researcher was able to finalize the psychosocial support guidelines for nurses caring for patients diagnosed with COVID-19 infection in NWP of SA.

Conclusion

A qualitative, descriptive phenomenological, contextual research design was used to develop the psychosocial support guidelines of the nurses caring for patients diagnosed with COVID-19 infection in NWP. The psychosocial support guidelines for nurses caring for patients diagnosed with COVID-19 infection in the NWP of SA were developed using Donabedian model (1966) of structure, process and outcome. The e-Delphi technique was used to validate the psychosocial support guidelines for nurses caring for patients diagnosed with COVID-19 infection in NWP. Three rounds of group of experts were conducted until consensus was reached.

Limitations of the study

The study was conducted in four public hospitals in the NWP. Thus, the guidelines cannot be generalised, rather they can be transferred or applied in other provinces or different contexts.

Recommendations

Based on the fact that there are no psychosocial support guidelines of nurses caring for patients diagnosed with COVID-19 infection in NWP, it is recommended that the newly developed guidelines be adopted and implemented by hospitals admitting and caring for patients diagnosed with COVID-19.

Acknowledgements

The authors would like to thank the experts for taking their time in validating the guidelines of nurses caring for patients diagnosed with COVID-19 infection in NWP.

Conflict of interest

The authors declare that there is no conflict of interest.

Contributions by authors

J.M.D conducted the study for the fulfilment of requirements for the degree PhD in Health Sciences with Nursing Science. Professor M.M.M and Professor L.A.S supervised the study.

Funding

None

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Data availability statement

Data sharing does not apply as no new data was conducted and/or analysed.

Disclaimer

The opinions stated in this manuscript are those of the authors and do not reflect the official policy or position of any affiliated agency of the authors

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SECTION TWO B

DEVELOPMENT AND VALIDATION OF GUIDELINES FOR NURSES CARING FOR PATIENTS DIAGNOSED WITH COVID-19 INFECTION

2.1 INTRODUCTION

This section presents the development and validation of the psychosocial support guidelines for nurses caring for patients diagnosed with COVID-19 infection in North West Province in South Africa. The psychosocial support guidelines of nurses caring for patients diagnosed with COVID-19 infection were developed based on the empirical data collected in Phase 2 of the study, supported with findings from the literature. A literature search of relevant sources was undertaken. The six questions suggested by Dickoff et al. (1968) framework were used to classify concepts and develop a conceptual framework of psychosocial support for the nurses caring for patients diagnosed with COVID-19 infection. The six crucial questions were based on the agent, recipient, context, procedure, dynamics and terminus.

The Donabedian (1966) model of structure, process and outcome was used to develop the psychosocial support guidelines for nurses caring for patients diagnosed with COVID-19 infection. Guidelines were drafted and formulated based on the appropriate statements from the empirical data and the literature findings.

The psychosocial support guidelines for nurses caring for patients diagnosed with COVID-19 infection were drafted according to Donabedian's model (1966) of structure, process and outcome. Primary, secondary and tertiary prevention were used to address the psychosocial support guidelines.

The validation of these guidelines was done using the framework developed by the researcher based on the AGREE II (2010) instrument. E–Delphi technique was used as a method of obtaining consensus from the experts participants nationally and internationally. An e-mail of the drafted guidelines together with an instrument to evaluate the validity of the guidelines according to Likert scale as well as open-ended comments were sent to the participating experts. The experts were given a period of about two weeks to send feedback of the validation

of the preliminary guidelines formulated. After each round, the guidelines were refined and adapted based on the feedback received from the experts and the same experts were given the refined guidelines. Three rounds of group of experts were conducted, until consensus was reached. In all three e-Delphi rounds, the experts evaluated the drafted guidelines. See discussion of e-Delphi round one, e-Delphi round two, and e-Delphi round three. A summary of response ratings of the e-Delphi round one is in table 11, e-Delphi round two, table 12 and e-Delphi round three in table 13.

Biographical data of experts

The biographical data of the panel of experts is summarised in table 9

TABLE 9: Biographical data of the e-Delphi expert panel.

Expert	**Professional qualification**	**Occupation**	**Employer**	**Experience**
1	Professor with PhD qualification in Nursing Science	Lecturer	University of Pretoria	34 years
2	Doctor with PhD qualification in Nursing Science	Lecturer	University of North West	20 years
3	Registered nurse, Advanced Psychiatric Nursing Science	Lecturer	Ghana College of Nursing	15 years
4	Clinical Psychologist with PhD qualification	Clinical Psychologist	Department of Health	22 years
5	Registered nurse, Advanced Psychiatric Nursing Science	Lecturer	University of Ghana	14 years
6	Registered nurse, Advanced Psychiatric Nursing Science	Lecturer	University of North West	15 years
7	BA in Social Work, Honours in Social Work	Social worker	North West Department of Health	7 years
8	BA in Social Work, Honours in Social Work M Cur student in Social Work	Social worker	North West Department of Health	12 years
9	Doctor with PhD qualification in peace studies and international relations, B Admin specialised in policy and planning.	Chief Director	North West Department of community safety & transport	20 years
10	BA in Social Work, Honours in Social Work	Social worker	North West Department of Health	9 years
11	Registered nurse, Advanced Psychiatric Nursing Science	Nursing Manager	North West Department of Health	19 years
12	Registered nurse, Advanced Psychiatric Nursing Science	Lecturer	University of Botswana	13 years
13	BA in Social Work, Honours in Social Work	Social worker	North West Department of Health	17 years
14	Clinical Psychologist with Masters degree	Clinical Psychologist	North West Department of Health	19 years

15	Specialist Physician	Doctor	North West Department of Health	24 years

2.2 E-Delphi round one

In round one of e-Delphi, twenty experts were invited to participate. Out of 20 experts, only 15 signed the consent forms, 4 international experts and 11 South African experts agreed to participate in the study. The experts were given two weeks to refine the drafted guidelines and rate the guidelines in accordance with the principles of AGREE tool using the 4 – point Likert scale to measure their level of agreement then make open ended comments. The participants were requested to email the refined guidelines and Likert scale.

Responses and comments of e-Delphi round one

Some of the e-Delphi experts in this round gave inputs on the guidelines and rated them and others rated the guidelines using Likert scale and did not give open-ended comments. Below are some of the inputs of the experts during round one:

Extract (P12) # e-Delphi round one

Primary prevention

Structure*: Hospital infrastructure*

Process: *Have infrastructure for wellness centres which are "safe spaces, meditation rooms"*

Outcome: *To offer a range of wellness activities for nurses. Nurses to unwind from stressful work related issues*

Secondary prevention

Process *" Additionally the hospital can create a post for a Hospital Chaplain"*

Outcome: "To address spiritual issues in the workplace".

Tertiary prevention

"Counselling and debriefing can be included in all the three levels of prevention"

Extract (P1) # e-Delphi round one

Primary prevention *Financial resource* **Secondary prevention** *Phrase as the sentence as "All permanent posts should be advertised so that nurses can apply".* **Tertiary prevention** *Vacant posts to be occupied and reduced staff shortage*

Table 10: Instrument used for refinement of draft guidelines

Principles	**Strongly Agree**	**Agree**	**Disagree**	**Strongly Disagree**
	1	**2**	**3**	**4**
Validity The guideline produces the desired results based on the truth or facts. The guideline will facilitate the psychosocial support to nurses caring for patients diagnosed with COVID-19 infection in public hospitals.	**X**			
Reliability Given the same circumstances, nurses caring for COVID-19 patients would interpret and apply the guideline similarly.	**X**			
Applicability Target population is clearly stated: nurses caring for patients diagnosed with COVID-19 infection.		**X**		
Clarity		**X**		

The guideline is clear, easily understandable, unambiguous and logical.				
Relevance The guideline is related to the psychosocial support of nurses caring for patients diagnosed with COVID-19 infection.		**X**		
Comprehensiveness & Effectiveness The guideline shows the extensive understanding of the psychosocial support needed by nurses caring for COVID-19 patients and enable the public hospitals to render adequate and appropriate psychosocial support to nurses caring for COVID-19 patients.		**X**		
Flexibility The guideline will empower nurses in public hospitals to care for COVID-19 patients and focus on a client-centred decision making process		**X**		
Acceptability The guideline is realistic and in line with the policies, mission and vision of the Department of Health.		**X**		

Amendments of the draft guideline after round one

The researcher analysed the ratings made by the experts on the Likert scale and the comments made by the expert panel in round one. Based on the comments, inputs and suggestions made by the expert panel in round one, amendments were made to the draft guidelines. The guidelines were modified and resent to the expert panel together with the Likert scale through e-mail.

TABLE 11: Summary of the rating of the e-Delphi round 1 (15 panellists)

PRINCIPLES	VALIDITY				RELIABILITY				APPLICABILITY				CLARITY				RELEVANCE				COMPREHENSIVENESS & EFFECTIVENESS				FLEXIBILITY				ACCEPTABILITY			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
PRIMARY PREVENTION	10	5	0	0	9	6	0	0	10	4	1	0	6	8	1	0	9	6	0	0	4	9	2	0	4	11	0	0	9	6	0	0
SECONDARY PREVENTION	10	5	0	0	9	6	0	0	10	4	1	0	6	8	1	0	9	6	0	0	4	9	2	0	4	11	0	0	9	6	0	0
TERTIARY PREVENTION	10	5	0	0	9	6	0	0	10	4	1	0	6	8	1	0	9	6	0	0	4	9	2	0	4	11	0	0	9	6	0	0
TOTAL SCORE	**30**	**15**	**0**	**0**	**27**	**18**	**0**	**0**	**30**	**12**	**3**	**0**	**18**	**24**	**3**	**0**	**27**	**18**	**0**	**0**	**12**	**27**	**6**	**0**	**12**	**33**	**0**	**0**	**27**	**18**	**0**	**0**

E–Delphi round 2

In this round, the experts' panel that were sent the preliminary guidelines in round one were sent the refined guidelines based on the feedback and inputs received in round one. The Likert scale was also sent in round 2 for experts to rate the guidelines. The expert participants were also given two weeks to refine the drafted guidelines. During this round, the experts had an opportunity to observe how their opinions differed from others. The feedback that was given to experts allowed and encouraged them to reassess their initial judgement.

Amendments of the draft guidelines after round two

The researcher analysed the ratings and the comments made by the e–Delphi expert panel in round two. Some of the experts completed the Likert scale only, without giving open-ended comments. The guidelines were refined based on feedback received from the experts and were sent to the same experts that participated in round 1 through e-mail. Only 14 experts participants responded, the reasons of one participant are not known for not participating in round 2.

Feedback of round two

Extract (P11) # e-Delphi round two

"Delete providing and write provide optimal care".
"Delete sentence that says" as a result it will contribute to a feeling of belonging, and write foster a feeling of belonging'

The researcher made changes to the guidelines and sent feedback to the expert panel through email. See Table 12 for the summary of the 14 respondents in round 2.

TABLE 12: Summary of the number of rating of the guidelines in e-Delphi round 2 (14 panellists)

PRINCIPLES	VALIDITY				RELIABILITY				APPLICABILITY				CLARITY				RELEVANCE				COMPREHENSIVENESS & EFFECTIVENESS				FLEXIBILITY				ACCEPTABILITY			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
PRIMARY PREVENTION	10	5	0	0	10	5	0	0	10	4	1	0	8	7	0	0	9	6	0	0	4	9	2	0	7	8	0	0	9	6	0	0
SECONDARY PREVENTION	10	5	0	0	10	5	0	0	10	4	1	0	8	7	0	0	9	6	0	0	4	9	2	0	7	8	0	0	9	6	0	0
TERTIARY PREVENTION	10	5	0	0	10	5	0	0	10	4	1	0	8	7	0	0	9	6	0	0	4	9	2	0	7	8	0	0	9	6	0	0
TOTAL SCORE	**30**	**15**	**0**	**0**	**30**	**15**	**0**	**0**	**30**	**12**	**3**	**0**	**24**	**21**	**0**	**0**	**27**	**18**	**0**	**0**	**12**	**27**	**6**	**0**	**21**	**24**	**0**	**0**	**27**	**18**	**0**	**0**

E-Delphi round 3

All 15 experts who participated in round one responded during this round. Panel of the experts strongly agreed with all the principles of the guidelines and rated them number 1(strongly agree) on the Likert scale. However, few participants agreed with the principles of the guidelines and rated number 2 (agree) on the Likert scale. The total score on each principle is 60. The principles during this round ranged from 57 to 54. All the panellist rated the principles as strongly agreed and agreed on the Likert scale. There is no even one expert who disagreed or strongly disagreed with the principles of the guidelines during round 3. An undisputed score of one on the Likert scale, which is “strongly agree”, was achieved, indicating that consensus had been reached. In this study, the researcher considered 80% as the consensus point. This meant that the panel of experts had reached consensus because in this study 92% of the experts agreed with the drafted guidelines.

Amendments of the draft guidelines after round three

The researcher reviewed and adjusted the draft guidelines and ensured that it was in line with the comments made by the participants in all three rounds. Consequent e-Delphi rounds achieved the desired level of consensus after the guidelines were refined according to the comments made by panel of experts. The researcher collated the consensus rate from the responses according to the Likert scale to indicate consensus.

Table 15 is the summary of the 15 respondents who indicated the specific rating in each criterion during round three.

TABLE 13: Summary of rating of the guidelines in the e-Delphi round 3 (15 panellists)

PRINCIPLES	VALIDITY				RELIABILITY				APPLICABILITY				CLARITY				RELEVANCE				COMPREHENSIVENESS & EFFECTIVENESS				FLEXIBILITY				ACCEPTABILITY			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
PRIMARY PREVENTION	11	4	0	0	10	5	0	0	12	3	0	0	10	5	0	0	11	4	0	0	10	5	0	0	9	6	0	0	10	5	0	0
SECONDARY PREVENTION	11	4	0	0	10	5	0	0	12	3	0	0	10	5	0	0	11	4	0	0	10	5	0	0	9	6	0	0	10	5	0	0
TERTIARY PREVENTION	11	4	0	0	10	5	0	0	12	3	0	0	10	5	0	0	11	4	0	0	10	5	0	0	9	6	0	0	10	5	0	0
TOTAL SCORE	**33**	**12**	**0**	**0**	**30**	**15**	**0**	**0**	**36**	**9**	**0**	**0**	**30**	**15**	**0**	**0**	**33**	**12**	**0**	**0**	**30**	**15**	**0**	**0**	**27**	**18**	**0**	**0**	**3**	**15**	**0**	**0**

Summary

The recommended amendments were made by the researcher, and finally the psychosocial support guidelines for nurses caring for patients diagnosed with COVID-19 infection in the North West Province were developed and validated. The validation of the guidelines were done using the e-Delphi panel of both national and international experts who reviewed the guidelines according to the principles namely validity, reliability, applicability clarity, relevance, comprehensiveness, effectiveness, flexibility and acceptability to ensure the reliable guidelines.

The final developed and validated guidelines are presented in the next table.

Table 14: Psychosocial support guidelines for nurses caring for patients diagnosed with COVID-19 infection in North West Province

	Structure	Process	Outcome
Primary Prevention	Hospital infrastructure	- Hospital managers should motivate for the construction or renovation of isolation wards in public hospitals. Activities recommended are as follows: • Write a recommendation letter to the provincial government to motivate for renovation of Isolation ward structures in public hospitals; • Ensure there is sufficient hospital budget to cater for renovations of the isolation wards. • Ensure that there is adequate space for renovating or constructing isolation wards - Hospital managers should arrange accommodation for nurses working in isolation wards in designated areas within the hospital.	- The hospitals will have enough isolation wards for hospitalized patients. -The isolation wards will be well ventilated - Reduced spread of infection - Reduced overcrowding of the wards, which will reduce the spread of infection - Conducive working environment and enhanced therapeutic milieu for the patients and conducive working environment for the staff. - Nurses who have fear of infecting family members will have the opportunity to sleep over until shift is finished and in the process assist to curb the spread of infection and therefore reduces stressors for the staff members.

		- Have infrastructure for wellness centres such as “safe spaces or meditation rooms”.	-To offer a range of wellness activities for nurses. Nurses to unwind from stressful work related issues
	Medical resources	-Hospital managers should ensure that there is adequate medical resources to care for infected patients. The activities recommended are as follows: • Ensure that medical resources such as ventilators are available and in adequate working order in the hospitals. • Ensure the calibration and maintenance of medical equipment used to care for infected patients. • Provide nurses with adequate and proper Personal Protective Equipment (PPE) such as N95 mask, gloves, and protective gowns.	- Adequate medical resources will help ease the pressure on hospitals caused by infectious disease and lighten nursing staff stressors. - Provision of quality patient care, and improved quality of life - To ensure that medical equipment work as efficiently and effectively in order to avoid stress for nurses. - Prevent exposure to infectious disease and curb cross infection between patients and the nursing staff

	Prophylactic treatment of nurses Pharmaceutical treatment of patients	• The managers should provide nurses who are willing to receive prophylactic treatment or immune boosters as appropriate according to evidence-based practice. • Encourage nurses to be vaccinated against Infectious disease. • The doctors should collaborate with the pharmacist to ensure that prescribed pharmaceutical treatment is always available in stock at the hospital pharmacy.	- Nurses to have strong immune system which will protect against infectious disease. - Nurses to have an enhanced level of immunity against infectious disease. -Availability of pharmaceutical treatment for patient care
	Human resources	-Hospital managers should ensure that there are adequate and skilled human resources to care for infectious patients. The activities recommended are as follows: • Ensure that posts are advertised, nurses recruited and appointed • Ensure that nurses are provided with in-service training regarding the infectious disease, usage of medical equipment and	-To provide quality nursing care to infected patients - Increase number of nurses caring for infected patients - Nurses to acquire more knowledge, skills and attitude to care for infected patients

		encourage them to adhere to protocols such as washing hands regularly. • Establish nurse-to-patient ratio of 1:2 or fewer at all times in ICU infectious wards according to evidence-based practice guidelines. -Ensure that managers visit isolation wards and provide psychosocial support by recognising and listening to nurses' experiences, appreciate their contributions, and create a safe working environment. - Nursing managers should adjust duration of day and night shifts to be shorter, taking into consideration a maximum time span for wearing PPEs. - Ensure continuous education regarding the usage of PPEs - Encourage flexible working schedules for nurses with breaks or off-duties between shifts to have enough rest and to avoid fatigue or exhaustion	- To Provide optimal care to infected patients. Lower the rates of hospital mortality. - Allow nurses to raise their concerns, to foster a feeling of belonging and not being isolated. -To avoid wearing PPEs for a long time, as they are not comfortable,and to avoid cross infection and curb the spread of the infectious disease -PPEs will be used appropriately - Reduced stress levels, exhaustion and burnout of nursing staff due to long working

			hours which can also cause them to be more vulnerable to illnesses.
		- Advocate for motivational talks or support programmes for nurses.	- Nurses to be well motivated to provide quality nursing care, and remain in the profession.
		- Provision of wellness sessions which allows the nurses to debrief as well as receive psychosocial support to strengthen their coping mechanisms.	- Nurses will be protected against mental disorders
		-Organise and ensure that nurses attend informative motivational talks or support groups for nurses.	-To enhance their professional skills.
		-Encourage early identification and referral of nurses who are under stress, or wellness programs such as skills training and support groups or online support structures and helplines	- Early detection and interventions, nurses will be protected against mental disorders
		- Local transport should be provided by the hospital to transport nurses to their places after work during pandemics.	- Reducing the stigma attached to nurses.

		- Surveys about nursing activities and nurse to patient ratios in isolation wards. - Weekly debriefing sessions and counselling for all nurses working in isolation wards - Encourage nurses working in isolation Intensive Care Unit (ICU) to be ICU trained	- Establish priorities in managing potential staff shortages. - To mitigate the impact of negative experiences such as burnout and assist nurses in recovery from stress, and in the process curb the stressors related to disease outbreak -To provide specialised care to infected patients admitted in ICU.
	Financial resources	• Managers should advocate to governance structure for all nurses caring for infectious patients to receive risk or danger allowance. • All permanent posts should be advertised so that nurses can apply. • Provision of financial advise to nurses so that they can take out risk assurance or life cover to be paid to their dependants when they die because of infectious diseases.	- Retention strategy to motivate and retain nurses caring for infectious patients. - Vacant posts to be occupied and reduced staff shortage - To financially assist the nurses' dependants to motivate the nurses to work in isolation wards.

Secondary Prevention		• Nurses caring for infectious patients and their immediate family members to be encouraged to receive counselling and health education.	-Assist in managing emotions, relieving the depression and anxiety caused by infectious disease.
		• Managers should ensure that psychological support for nurses is readily available and that nurses are aware of how to access support	- Accessibility to consult the psychologist.
		• The office of the psychologist to have an administrative clerk so that nurses do not stand in a queue in an outpatient department to fetch the file, there should be a proper referral system and priority to be given to nurses working in isolation wards.	-Smooth running of the process of consultation and avoiding delays
		• Advanced psychiatric nurses to be involved in assisting nurses caring for infectious patients because they are competent in employee assistance programs	- Provide support for nurses who are experiencing work related challenges due to infectious disease that may impact their psychosocial functioning and productivity at work.

		• Encourage nurses to receive spiritual support from a spiritual leader or counsellor of choice • The hospital can create a post for a Hospital Chaplain • All nurses caring for infectious patients should undergo regular examinations and screening tests to detect diseases in its earliest stages (as appropriate and indicated) • Weekly counselling and debriefing sessions for all nurses working in isolation wards	- To assist in boosting the nurses support structures and coping mechanisms to deal with stressors brought about by the pandemic. -To address spiritual issues in the workplace. -To detect ailments early, and early interventions before condition deteriorates. - To mitigate the impact of negative experiences such as burnout and assist nurses in recovery from stress, and in the process curb the stressors related to disease outbreak
Tertiary Prevention		• Encourage nurses to visit occupational health and safety (OHS) for regular check-up, investigations, and follow up visits.	-To continue providing support to nurses

		• Nurses should be offered support when they are in isolation, quarantined or admitted due to infectious disease • Weekly debriefing and counselling sessions for all nurses working in isolation wards.	- Providing support and encouragement to nurses caring for infected patients. - To mitigate the psychological impact of negative experiences such as overworking due to shortage of staff and assist nurses in recovery from stressors, and in the process curb the stressors related to disease outbreak

SECTION THREE

CONCLUSIONS, LIMITATIONS AND RECOMMENDATIONS

3.1 INTRODUCTION

In the previous section, the researcher presented the articles that were written and submitted to the accredited journals for publication. Four manuscripts have been published, and one is under review. In this section, the researcher presents conclusions from the four phases of the study. Further, this section provides conclusions on the five manuscripts submitted to the accredited journals, limitations of the study and recommendations for nursing practice, nursing research and nursing education.

Phase one comprised an integrated literature review aimed at reviewing the current literature by exploring and describing the published articles regarding psychosocial support for the nurses caring for patients diagnosed with a COVID-19 infection. Phase two was the empirical phase and it comprised two steps. Step 1 of the empirical phase aimed at exploring and describing the lived experiences of the nurses caring for patients diagnosed with a COVID-19 infection in the North West Province and step 2 of the empirical phase aimed at exploring and describing the psychosocial support needed for the nurses caring for patients diagnosed with a COVID-19 infection in the North West Province.

Phase 3 was the development phase and comprised two steps. Step 1 of phase 3 aimed at developing a conceptual framework of psychosocial support for the nurses caring for patients diagnosed with a COVID-19 infection in North West Province using Dickoff et al.'s (1968) framework. Step 2 of phase 3 aimed at developing the psychosocial support guidelines for the nurses caring for patients diagnosed with a COVID-19 infection in North West Province using Donabedian's (1966) model. Phase 4 of this study aimed at validating the psychosocial support guidelines for the nurses caring for patients diagnosed with COVID-19 infection in the North West Province using an e-Delphi technique.

Conclusions on manuscript one: Psychosocial support for nurses caring for patients diagnosed with COVID-19 disease: An integrated literature review

Manuscript one on integrative literature review (ILR) has been published in *Gender and Behaviour Journal.* Citation: Dikobe, J.M., Moagi, M.M., Sehularo, L.A.

The databases that formed part of the inclusion criteria are those that were related to the psychosocial support guidelines for nurses caring for patients diagnosed with a COVID-19 infection. The databases that were consulted include Google scholar, Science Direct, EBSCOhost, Medline, Emerald, Scopus and articles published from 2019- 2022.

The researcher used the six steps of the integrated literature review, as suggested by Toronto and Remington (2020). In step 1, the researcher formulated the purpose of the integrated literature review and the review question. In step 2, the researcher searched and selected literature considering PICOT, which stands for: P= Population of interest (nurses caring for patients diagnosed with a COVID-19 infection); I = Intervention (psychosocial support guidelines); Comparison (there was no comparison); Outcome = Increased support for the nurses caring for patients diagnosed with a COVID-19 infection and T= Timeframe of the intervention (2019- 2022 since the COVID-19 pandemic only started in 2019).

Keywords included in the final search strategy were corona, COVID-19, nurses, care, caring, experiences and psychosocial support. After an intense literature search, the researcher identified 22 articles that addressed the search question. The results of this ILR yielded two themes, which are psychological support and social support. The findings of this phase indicated the necessity of providing psychological support for nurses caring for patients diagnosed with a COVID-19 infection. In addition, the findings have shown that social support is necessary to decrease nurses' psychological distress.

Conclusions on manuscript two: The live experiences of nurses caring for patients diagnosed with a COVID-19 infection in the North West Province

Manuscript two has been published in the *Open Public Health Journal.* Citation: Dikobe, J.M., Moagi, M.M., Sehularo, L.A. Manuscript two provides a description of the experiences of nurses caring for patients diagnosed with a COVID-19 infection. The study was conducted in four

selected public hospitals caring for patients diagnosed with COVID-19 infections in the North West Province of South Africa. The four public hospitals are in the district of Bojanala, Ngaka Modiri Molema and two hospitals in Dr Kenneth Kaunda. Purposive sampling technique was used to select twenty-six nurses caring for COVID-19 patients (24 females and two males).

Unstructured virtual focus group discussion via Google meet was used to collect data. Descriptive phenomenological data analysis was used. The researcher and the independent co-coder analysed the transcribed interviews and reached a consensus on the themes and categories that emerged from the study. Two themes and several categories emerged from the study. The two themes were: Nurses' knowledge of COVID-19; and Nurses' experiences of caring for patients diagnosed with a COVID-19 infection. These themes were discussed in accordance with the categories, and quotations of participants' responses and literature that was used to support the findings.

The findings of this study revealed that nurses were physically, psychologically, and socially affected when caring for COVID-19 patients. Nurses further alluded that they are afraid of being infected and they felt that they would also die of COVID-19. Other nurses reported that they have developed co-morbidities, such as hypertension, since they started caring for patients diagnosed with a COVID-19 infection.

Conclusions on manuscript three: The psychosocial support needed by nurses caring for patients diagnosed with COVID-19 infection in the North West Province, South Africa

Manuscript three has been published in the *Gender & Behaviour Journal,* 20(4). Co- authored by Joan M. Dikobe, Miriam M. Moagi and Leepile A. Sehularo.

This manuscript provides a description of the psychosocial support needed by nurses caring for patients diagnosed with a COVID-19 infection in the North West Province, South Africa. The study was also conducted in four selected public hospitals caring for patients diagnosed with COVID-19 infections in North West Province of South Africa. Participants were the nurses caring for COVID-19 patients in the district of Bojanala, Ngaka Modiri Molema and two hospitals in Dr Kenneth Kaunda. Purposive sampling technique was used to select twenty-six nurses (24 females and 2 males). Unstructured virtual focus group discussions via Google meet were used to collect data. Descriptive phenomenological data analysis was used.

The researcher and the independent co-coder analysed the transcribed interviews and reached a consensus on the themes and categories that emerged from the study. Two themes and several categories emerged from the study. The two themes were: Nurses' challenges when caring for patients diagnosed with COVID-19 infection, and psychosocial support needed by nurses caring for patients diagnosed with COVID-19 infections. The findings of this study revealed that nurses experienced challenges such as not having specific treatment for COVID-19 patients and not knowing what to do because COVID-19 was a novel disease. The study further revealed that nurses need support from management in terms of providing them with personal protective equipment and vitamins to boost their immune systems. They also reported that they needed to see a psychologist.

Conclusions on manuscript four: Conceptual framework for the psychosocial support of nurses caring for patients diagnosed with COVID-19 infection in North West Province, South Africa

Manuscript four has been published in the *International Journal of Environmental Research and Public Health*. 2023, 20, 5078. Co- authored by Joan M. Dikobe, Miriam M. Moagi and Leepile A. Sehularo. Manuscript four focuses on the development of a conceptual framework to guide the development of psychosocial support for the nurses caring for patients diagnosed with COVID-19 infection in North West Province (NWP) using Dickoff et al.'s (1968) framework. The results of the integrated literature review and empirical phases were merged to develop a conceptual framework for the psychosocial support of nurses caring for patients diagnosed with COVID-19 infections in NWP. The conceptual framework was deduced from the themes and categories of the integrated literature review and empirical phases by asking and answering the six questions proposed by Dickoff *et al*. (1968:422) according to Practical Orientation Theory.

In this study, the agent comprised hospital management, psychologists, social workers, nurses in non-COVID wards and family members of nurses, while recipients were nurses caring for patients diagnosed with COVID-19 infections. The context of the conceptual framework was public hospitals caring for patients diagnosed with COVID-19 infections. The procedure involved mobilising effective managerial support, the provision of adequate human and material healthcare resources, mobilising support from nurses working in non-COVID wards and the family of nurses and providing psychological support systems. The dynamics involved in in-service training,

occupational and financial security, teamwork, motivational programmes, provision of immune boosters and follow-up treatment of nurses. The terminus of the conceptual framework is to support nurses caring for patients diagnosed with COVID-19 infections and improve their wellbeing in NWP.

Conclusions on manuscript Five: Psychosocial support guidelines for nurses caring for patients diagnosed with COVID-19 infections in North West Province, South Africa.

Manuscript five on psychosocial support guidelines has been submitted to *Qualitative Health Research Journal.* Citation: Dikobe, J.M., Moagi, M.M., Sehularo, L.A.

Manuscript five focuses on the development and validation of the psychosocial support guidelines for nurses caring for patients diagnosed with COVID-19 infections in North West Province. The findings from the integrated literature review, empirical phase and the conceptual framework were merged to develop the psychosocial support guidelines for nurses caring for patients diagnosed with COVID-19 infection using Donabedian's (1966) model of structure, process and outcome.

The psychosocial support guidelines for nurses caring for patients diagnosed with COVID-19 infections were validated by experts using an e-Delphi technique. The researcher e-mailed the preliminary guidelines to the experts with an instrument to evaluate the validity of the guidelines, according to a Likert scale, as well as open-ended comments. Experts involved in the validation of the guidelines were psychologists, social workers, advance psychiatric nurses with experience in the field of psychosocial support guidelines for the nurses caring for patients diagnosed with COVID-19 infections, as well as the researcher, who are all skilled and experienced in qualitative research, policy and guideline development. The guidelines were confirmed by experts to be comprehensive and stated that "The guidelines are well researched, thought out and comprehended, they will certainly add value in the body of knowledge in combating the spread of COVID-19".

3.2 GENERAL CONCLUSIONS

This study confirms that it is significant to implement the psychosocial support guidelines for nurses caring for patients diagnosed with COVID-19 infections. It can be concluded that the

guidelines can be facilitated by hospital managers, psychologists, social workers, nurses in non-COVID wards and family members of nurses. The psychosocial support guidelines for nurses caring for patients diagnosed with COVID-19 infection can be implemented in the public hospitals caring for patients diagnosed with COVID-19 infection through mobilising effective managerial support, provision of adequate human and medical healthcare resources. The psychosocial support guidelines for nurses caring for patients diagnosed with COVID-19 infections are confirmed to be clear, understandable and easily deciphered.

3.3 LIMITATIONS

Despite the fact that this study was conducted with nurses working in North West Province, the results of this study can only be generalised to the individuals included in the study. This makes it difficult to compare the experiences of nurses and the psychosocial support needed by nurses based on their culture, with other provinces, and in other countries. The study was conducted in four public hospitals in the NWP. Furthermore, the development of the guidelines was based on a qualitative study. Thus, the guidelines cannot be generalised, rather they can be transferred or applied in other provinces or different contexts.

The sampling criteria included only nurses who had at least one month's experience and who are currently employed in COVID-19 sites in NWP. The researcher believes that they are other nurses who have more experience and worked in COVID-19 wards for more than one month and are currently not employed in COVID-19 wards due to allocation, who could provide rich data on the topic.

The problem was based on the COVID-19 pandemic-the data reflect the peak of the pandemic, which is no longer a pandemic as declared by WHO. The study will provide solutions for healthcare institutions to respond effectively to similar pandemics in the future, improving the psychosocial wellbeing of nurses.

3.4 RECOMMENDATIONS

The study recommends the following:

3.4.1 Recommendations for nursing practice

- Based on the fact that there are no psychosocial support guidelines of nurses caring for patients diagnosed with COVID-19 infections in NWP, it is recommended that the newly developed guidelines be adopted and implemented by hospitals admitting and caring for infected patients.
- Hospital managers should motivate for the construction or renovation of isolation wards in public hospitals for hospitals to have enough isolation wards for hospitalised patients to reduce overcrowding with infected patients.
- There should be infrastructure for wellness centres to offer wellness activities for nurses and for nurses to unwind from stressful work-related issues, such as depression due to witnessing patients suffering and the trauma related to sudden and multiple deaths of infected patients.
- During data collection, it was revealed that medical resources that are used to care for infected patients are inadequate, therefore hospitals should provide adequate medical resources that are in good working condition.
- Ensure that posts are advertised, nurses are recruited and appointed so that the number of nurses caring for infected patients may increase and prevent burn-out, staff shortages and being overworked.
- Hospital managers should provide psychosocial support by visiting isolation wards, recognising and listening to nurses' experiences, and also appreciate their contributions in caring for infected patients.
- Ensure that nurses are provided with in-service training regarding the infectious disease and the usage of medical equipment to acquire more knowledge, skills and attitude to care for infected patients.
- Nurses should be encouraged to visit Occupational Health and Safety (OHS) regularly for investigations and follow-up. Prophylactic treatment should be provided to nurses who are willing to receive this, as appropriate, according to evidence-based practice.

- Hospital managers should encourage flexible working schedules for nurses to have enough rest and to avoid fatigue or exhaustion.
- Arrange motivational talks or support programmes for nurses, so that nurses are motivated to provide quality nursing care and remain in the profession.
- Ensure that psychological support is readily available and that nurses are aware of how to access support. Refer nurses who are under stress and provide weekly debriefing sessions and counselling for all nurses working in isolation wards.
- Nurses should be provided with proper Personal Protective Equipment.
- There is a need for hospital managers to advocate to governance structure for nurses caring for infected patients to receive risk or danger allowances because it will serve as a retention strategy to motivate and retain nurses caring for infectious patients.
- The hospital can create a post for a Hospital Chaplain to address spiritual issues in the workplace, because during data collection, nurses mentioned that when they felt weak, they received strength from prayer.
- Ensure that nurses are offered support when they are in isolation, quarantined or admitted due to an infectious disease.

3.4.2 Recommendations for nursing research

- There is a need to conduct further research on the psychosocial support guidelines for nurses caring for patients diagnosed with infectious diseases in other provinces of South Africa, as such studies may reveal new data since this study was conducted only in the North West Province.
- There is a need for these guidelines to be continuously revisited by researchers in line with the psychosocial support for nurses caring for patients diagnosed with infectious diseases. This will allow for more research updates with the latest information that can support nurses caring for infected patients.
- It is recommended that a quantitative study be conducted because in a qualitative study, researchers are guided by data saturation, while in a quantitative study, the sample size could be increased.

3.4.3 Recommendations for nursing education and training

- In order to provide psychosocial support to nurses caring for patients diagnosed with infectious diseases, there is a need to evaluate the curriculum for nurses. To achieve this feat, there is a need for nursing educators, preceptors and nursing managers to collaborate and work together.
- Online teaching and learning should be introduced to the nursing education institutions such as nursing colleges that have not yet introduced them, so that nursing students could conveniently access lecturers and continue with education and training during pandemics, so that they are not left behind with the curriculum.
- Infectious diseases such as COVID-19 should form part of the recommended reading materials for nursing students. This will equip student nurses to acquire relevant knowledge, skills and the attitude needed to care for patients diagnosed with infectious diseases.

3.5 SUMMARY

The aim of this study was to develop and validate the psychosocial support guidelines for nurses caring for patients diagnosed with COVID-19 infections in the North West Province, South Africa. To achieve the aim of the study, the objectives were addressed in four phases. The study was divided in three sections. Section 1 A: focused on the overview of the study, section 1 B: focused on the literature review, section 2 A: focused on manuscripts/articles, section 2 B: focused on development and validation of the psychosocial support guidelines, section 3: focused on conclusions, limitations and recommendations. The psychosocial support guidelines for nurses caring for patients diagnosed with COVID-19 infection were developed and validated. The validation of the guidelines revealed that the guidelines are clear, understandable and easily deciphered. Furthermore, conclusions were made, limitations of the study presented, and recommendations made for nursing practice, nursing education, as well as nursing research.

ANNEXURE A: NORTH WEST UNIVERSITY ETHICS APPROVAL LETTER OF THE STUDY

NWU®
NORTH-WEST UNIVERSITY
NOORDWES-UNIVERSITEIT
YUNIBESITI YA BOKONE-BOPHIRIMA

Private Bag X1290, Potchefstroom
South Africa 2520

Tel: 086 016 9698
Web: http://www.nwu.ac.za/

North-West University Health Research Ethics Committee (NWU-HREC)

Tel: 018 299-1206
Email: Ethics-HRECApply@nwu.ac.za (for human studies)

26 April 2022

ETHICS APPROVAL LETTER OF STUDY

Based on approval by the North-West University Health Research Ethics Committee (NWU-HREC) on 26/04/2022, the NWU-HREC hereby approves your study as indicated below. This implies that the NWU-HREC grants its permission that, provided the general and specific conditions specified below are met and pending any other authorisation that may be necessary, the study may be initiated, using the ethics number below.

Study title: Psychosocial support guidelines for nurses caring for patients diagnosed with COVID-19 infection in the North West Province
Principal Investigator/Study Supervisor/Researcher: Prof MM Moagi
Student: JM Dikobe - 16515080

Ethics number:

N	W	U	-	0	0	3	0	9	-	2	1	-	A	1
Institution				Study Number						Year			Status	

Status: S = Submission; R = Re-Submission; P = Provisional Authorisation; A = Authorisation

Application Type: Single study
Commencement date: 26/04/2022
Expiry date: 30/04/2023
Risk: **Medium**

Approval of the study is provided for a year, after which continuation of the study is dependent on receipt and review of a six-monthly monitoring report and the concomitant issuing of a letter of continuation. Monitoring reports are required at the end of October and April annually until completion of the study.

General conditions:

While this ethics approval is subject to all declarations, undertakings and agreements incorporated and signed in the application form, the following general terms and conditions will apply:

- *The principal investigator/study supervisor/researcher must report in the prescribed format to the NWU-HREC:*
  - *six-monthly on the monitoring of the study, whereby a letter of continuation will be provided annually, and upon completion of the study; and*
  - *without any delay in case of any adverse event or incident (or any matter that interrupts sound ethical principles) during the course of the study.*
- *The approval applies strictly to the proposal as stipulated in the application form. Should any amendments to the proposal be deemed necessary during the course of the study, the principal investigator/study supervisor/researcher must apply for approval of these amendments at the NWU-HREC, prior to implementation. Should there be any deviations from the study proposal without the necessary approval of such amendments, the ethics approval is immediately and automatically forfeited.*
- *Annually a number of studies may be randomly selected for active monitoring.*
- *The date of approval indicates the first date that the study may be started.*
- *In the interest of ethical responsibility, the NWU-HREC reserves the right to:*
  - *request access to any information or data at any time during the course or after completion of the study;*

- *to ask further questions, seek additional information, require further modification or monitor the conduct of your research or the informed consent process;*
- *withdraw or postpone approval if:*
  - *any unethical principles or practices of the study are revealed or suspected;*
  - *it becomes apparent that any relevant information was withheld from the NWU-HREC or that information has been false or misrepresented;*
  - *submission of the six-monthly monitoring report, the required amendments, or reporting of adverse events or incidents was not done in a timely manner and accurately; and/or*
  - *new institutional rules, national legislation or international conventions deem it necessary.*
- *NWU-HREC can be contacted for further information via Ethics-HRECApply@nwu.ac.za or 018 299 1206*

Special conditions of the research approval due to the COVID-19 pandemic:

Please note: Due to the nature of the study i.e. (online collection of qualitative data via focus group discussions and an eDelphi technique with nurses in the public health arena and subject experts, respectively), this study will be able to proceed during the current alert level, following receipt of the approval letter. No additional COVID-19 restrictions have been placed on the study except that the researcher must ensure that before proceeding with the study that all research team members have reviewed the North-West University COVID-19 Occupational Health and Safety Standard Operating Procedure.

Special in process conditions of the research for approval (if applicable):

a. Please provide the NWU-HREC with copies of the goodwill permission letters from the CEOs of the different hospitals to be included in the study, granting access to these facilities.

As the study progresses the aforementioned conditions should be submitted to Ethics-HRECProcess@nwu.ac.za with a cover letter with a specific subject title indicating "Outstanding documents for approval: NWU-XXXXX-XX-XX." The letter should include the title of the approved study, the names of the researchers involved, that the documents are being submitted as part of the conditions of the approval set by the NWU-HREC, the nature of the document i.e. which condition is being fulfilled and any further explanation to clarify the submission.

The *e-mail*, to which you attach the documents that you send, should have a *specific subject line* indicating the nature of the submission e.g. "Outstanding documents for approval: NWU-XXXXX-XX-XX". The e-mail should indicate the nature of the document being sent. This submission will be handled via the expedited process.

The NWU-HREC would like to remain at your service and wishes you well with your study. Please do not hesitate to contact the NWU-HREC for any further enquiries or requests for assistance.

Yours sincerely,



Digitally signed by
Prof Petra Bester
Date: 2022.04.26
14:39:16 +02'00'

Chairperson NWU-HREC

ANNEXURE B: APPROVAL OF DOCUMENTS SUBMITTED DURING THE PROGRESS OF THE STUDY

NWU®
NORTH-WEST UNIVERSITY
NOORDWES-UNIVERSITEIT
YUNIBESITI YA BOKONE-BOPHIRIMA

Private Bag X6001, Potchefstroom
South Africa 2520

Tel: 018 299-1111/2222
Web: http://www.nwu.ac.za

Health Sciences Ethics Office for Research, Training and Support

North-West University Health Research Ethics Committee (NWU-HREC)

Tel: 018-299 2092
Email: wayne.towers@nwu.ac.za

Prof MM Moagi
Nursing sciences
NuMIQ

26 August 2022

Dear Prof Moagi

APPROVAL OF DOCUMENTS SUBMITTED DURING THE PROGRESS OF THE STUDY

Ethics number: NWU-00309-21-A1

Kindly use the ethics reference number provided above in all future correspondence or documents submitted to the administrative assistant of the North-West University Health Research Ethics Committee (NWU-HREC).

Study title: Psychosocial support guidelines for nurses caring for patients diagnosed with COVID-19 infection in the North West Province

Study leader: Prof MM Moagi

Student: JM Dikobe - 16515080

Application type: Single study

Risk level: Medium

You are kindly informed that the documentation related to the in-process requirement (as indicated below), as was submitted to the NWU-HREC, was reviewed by the designated reviewers:

a. Copies of the goodwill permission letters from the CEOs of the different hospitals to be included in the study, granting access to these facilities.

The reviewers have indicated that the submitted documentation is acceptable and that you as the researcher can proceed with implementing the documentation in your approved project, if you are able to proceed with your research under the current alert level (please see comment regarding the continuation of the research below). It should be noted that there are no more outstanding documents.

Please note: Due to the nature of the study i.e. (online collection of qualitative data via focus group discussions and an eDelphi technique with nurses in the public health arena and subject experts, respectively), this study will be able to proceed during the current alert level, following receipt of the approval letter. No additional COVID-19 restrictions have been placed on the study except that the researcher must ensure that before proceeding with the study that all research team members have reviewed the North-West University COVID-19 Occupational Health and Safety Standard Operating Procedure.

We wish you the best as you conduct your research. If you have any questions or need further assistance, please contact the Faculty of Health Sciences Ethics Office for Research, Training and Support at Ethics-HRECApply@nwu.ac.za.

Yours sincerely

Digitally signed by Wayne Towers
Date: 2022.08.26 15:26:51 +02'00'

Head of Health Sciences Ethics Office for Research, Training and Support

ANNEXURE C1: REQUEST LETTER TO THE NORTH WEST PROVINCIAL DEPARTMENT OF HEALTH TO CONDUCT RESEARCH

The Department of Health

North West Province

South Africa

Dear sir/Madam

Request for permission to conduct research

I am currently studying for PhD (Doctor of philosophy) in health sciences at the North West University, Mafikeng Campus. I am currently working on a research project for the completion of my studies and I am expected to conduct this research in fulfilment of the requirements for the degree.

The title of my study is: "Psychosocial support guidelines for nurses caring for patients diagnosed with COVID-19 infection in the North West Province". This study has been approved by the NuMIQ scientific review and Ethics committee of the North West University

The aim of the study is to:

Develop and validate psychosocial support guidelines for nurses caring for patients diagnosed with COVID-19 infection in the North West Province. This study might assist nurses in improving care for patients diagnosed with COVID-19 infection in nursing practice, education and research. The guidelines which will be developed and validated from the study findings, may assist nurses in caring for patients diagnosed with COVID-19 in the North West Province.

In order to achieve the objective of this study, semi-structured virtual focus group discussion via google meet will be conducted with professional nurses. Broad questions that will be asked to start the interview are as follows: "What are your experiences in caring for patients diagnosed with COVID-19 infection? And what type of support do you need when you care for patients diagnosed with COVID-19 in the NWP?"

Nurses will be selected based on the following inclusion criteria:

- Registration with the South African Nursing Council (SANC) during data collection;
- Possession of more than one-month experience in caring for patients diagnosed with COVID-19 infection
- Currently employed in COVID-19 sites in NWP
- Ability to communicate in English; and
- Willingness to voluntarily participate in the study
- Availability of a phone for data collection
- Willingness to be recorded

In order to achieve another objective of this study, e-Delphi technique will be used to validate a psychosocial support guidelines for nurses caring for patients diagnosed with COVID-19 infection in NWP. The e-Delphi technique aims to gain consensus among experts.

Experts will be selected based on the following inclusion criteria:

- Registration with the professional body such as Health Professions Council of South Africa (HPCSA), South African Nursing Council (SANC),South African Council for Social Service Professions (SACSSP) etc.
- Experts who are willing to participate voluntarily in the study
- Qualified experts from academic, private, government and non-government organisations in the area of qualitative research, policy and or guideline development, healthcare
- Participants need to have had at least three years' experience in an area of specialisation.

Your favourable consideration in the above matter and a response at your earliest convenience will be appreciated.

Yours faithfully

JMDikobe

Ms J.M Dikobe
PhD student

moagi

Promoter: Prof M.M Moagi

Co- promoter: Prof L.A Sehularo

ANNEXURE C2: APPROVAL LETTER FROM NORTH WEST DEPARTMENT OF HEALTH

health
Department of
Health
North West Province
REPUBLIC OF SOUTH AFRICA

Cnr Sekame & First Street
New Office Park
Mafiheng, 2745
Private Bag X2068
MMABATHO, 2735

Enq: Mr Mbulelo Tapa
Tel: 018 391 4501
MbuleloT@nwpg.gov.za
www.nwhealth.gov.za

2030 NDP

RESEARCH, MONITORING AND EVALUATION DIRECTORATE

Name of researcher: **Ms J.M. Dikobe**
North West University

Physical Address (Work/ Institution) _____
_____
_____

HEAD OF DEPARTMENT
2022 -04- 25
NORTH WEST DEPARTMENT OF HEALTH
PRIVATE BAG X 2068, MMABATHO, 2735

Subject: **Research Approval Letter – Psychosocial support guidelines for nurses caring for patients diagnosed with COVID-19 infection in the North West Province.**

This letter serves to inform the Researcher that permission to undertake the above mentioned study has been granted by the North West Department of Health. The Researcher must arrange in advance a meeting with the District Chief Director and District Director to introduce their research team/members on the proposed research to be undertaken. Further to the above the researcher must produce this letter to the District and chosen facilities as proof that the research was approved by the NWDoH.

This letter of permission should be signed and a copy returned to the Department. By signing, the Researcher agrees, binds him/herself and undertakes to furnish the Department with an electronic copy of the final research report. Alternatively, the Researcher can also provide the Department with electronic summary highlighting recommendations that will assist the Department in its planning to improve some of its services where possible. Through this the Researcher will not only contribute to the academic body of knowledge but also contributes towards the bettering of health care services and thus the overall health of citizens in the North West Province.

Below are the contact details of Office of the Chief Director and District Director of Dr Kenneth Kaunda, Bojanala, and Ngaka Modiri Molema districts.

Dr Kenneth Kaunda District

Office of the Chief Director	Office of the District Director
Mr. Ishmael Moloi Ms. Stokie Skhosana (PA)	Mr. Burl Redlinghys Mr. Calvin Mmisele (PA)
IMoloi@nwpg.gov.za SRoffice@nwpg.gov.za 018 462 5744 (076 775 0377)	Bredlinghys@nwpg.gov.za CMmisele@nwpg.gov.za 018 462 5744

Bojanala District

Office of the Chief Director	Office of the District Director
Ms. Maggy Mere Goitsemang Khumalo (PA)	Mr. P.M. Dikobe Goitsemang Alitah Senbeta (PA)
MMere@nwpg.gov.za/ebonye938@gmail.com KhumaloG@nwpg.gov.za 014 592 8906/ 159	PMDikobe@nwpg.gov.za GSenbeta@nwpg.gov.za 014 592 8906/ 159

Ngaka Modiri Molema District

Office of the Chief Director	Office of the District Director
Ms. Mosela Kaudi Ms. Boitumelo Sethaiso (PA)	Ms. Nomvula Legobye Kealeboga Lobega (PA)
MKaudi@nwpg.gov.za BSethaiso@nwpg.gov.za 018 384 0240	NLegobye@nwpg.gov.za LobegaK@nwpg.gov.za 018 384 0240

Kindest regards.

Dr F.R.M. Reichel
Director: RM&E

25/4/2022
Date

Researcher

25/04/2022
Date

ANNEXURE D: REQUEST LETTER TO JOB SHIMANKANA TABANE HOSPITAL

NWU®
NORTH-WEST UNIVERSITY
NOORDWES-UNIVERSITEIT
YUNIBESITI YA BOKONE BOPHIRIMA

The Chief Executive Officer (CEO)

Job Shimankana Tabane Hospital

North West Province

South Africa

Dear sir/Madam

Request for permission to conduct research

I am currently studying for PhD (Doctor of philosophy) in health sciences at the North West University, Mafikeng Campus. I am currently working on a research project for the completion of my studies and I am expected to conduct this research in fulfilment of the requirements for the degree.

The title of my study is: "Psychosocial support guidelines for nurses caring for patients diagnosed with COVID-19 infection in the North West Province". This study has been approved by the NuMIQ scientific review and Ethics committee of the North West University

The aim of the study is to:

Develop and validate psychosocial support guidelines for nurses caring for patients diagnosed with COVID-19 infection in the North West Province. This study might assist nurses in improving care for patients diagnosed with COVID-19 infection in nursing practice, education and research. The guidelines which will be developed and validated from the study findings, may assist nurses in caring for patients diagnosed with COVID-19 in the North West Province.

In order to achieve the objective of this study, semi-structured virtual focus group discussion via google meet will be conducted with professional nurses. Broad questions that will be asked to start the interview are as follows: "What are your experiences in caring for patients diagnosed with COVID-19 infection? And what type of support do you need when you care for patients diagnosed with COVID-19 in the NWP?"

Nurses will be selected based on the following inclusion criteria:

- Registration with the South African Nursing Council (SANC) during data collection;
- Possession of more than one-month experience in caring for patients diagnosed with COVID-19 infection
- Currently employed in COVID-19 sites in NWP
- Ability to communicate in English; and
- Willingness to voluntarily participate in the study
- Availability of a phone for data collection
- Willingness to be recorded

Your favourable consideration in the above matter and a response at your earliest convenience will be appreciated.

Yours faithfully

Ms J.M Dikobe
PhD Candidate

Promoter: Prof M.M Moagi

Co- promoter: Prof L.A Sehularo

ANNEXURE D1: APPROVAL LETTER FROM JOB SHIMANKANA TABANE HOSPITAL

health
Department of
Health
North West Province
REPUBLIC OF SOUTH AFRICA

Cnr Heystek & Bosch Str.
Private Bag X 82079
RUSTENBURG
0300
Tel: (014) 590-5100
Ext5401
Fax: (014) 590-5
omonageng@nwpg.gov.za

Job Shimankana Tabane Hospital

JOB SHIMANKANA TABANE HOSPITAL: OFFICE OF THE CEO

To: **Ms. J.M. Dikobe**
North West University

From: **Ms. GT Tlhapi**
Acting Chief Executive Officer
Job Shimankana Tabane Hospital

Date: **09 May 2022**

Re: **Approval to conduct research: Psychosocial support guidelines for nurses caring for patients diagnosed with COVID-19 infection in the North West Province**

This letter serves to inform you (Ms. JM Dikobe) that permission to undertake the above mentioned study has been granted by Job Shimankana Tabane Hospital Management as per approval from North West Department of Health Provincial Office. You are expected to arrange in advance with the units and issue this letter as proof that permission is granted by the Institution (Hospital).

This letter of permission should be signed and a copy returned to the hospital as a proof that you agree, bind yourself and undertakes to furnish the hospital with final research report.

Approved/~~not approved~~

Ms. GT Tlhapi
Acting CEO-JST Hospital

10/05/2022
Date

I JM Dikobe ---------- (Researcher) agree with the contents of this letter.

ANNEXURE D2: APPROVAL LETTER FROM KLERKSDORP/TSHEPONG HOSPITAL COMPLEX

health
Department of
Health
North West Province
REPUBLIC OF SOUTH AFRICA

All correspondence to be directed to:
The Clinical Manager
Dr. I.R. Mahume
K/T Hospital Complex
Private Bag A14
KLERSKDORP 2570
Tel: (018) 406 4750
Fax: (018) 462 5923
E-mail: sbooi@lnwpg.gov.za

2030 NDP

KLERKSDORP/TSHEPONG COMPLEX – CLINICAL MANAGER'S OFFICE

02nd June 2022

To who it may concern

Dear Sir/ Madam,

Re : Psychosocial support guidelines for nurses caring for patients diagnosed with COVID-19 infection in the North West Province

Presented by: M.J. Dikobe

This letter serves to confirm that permission has been granted by K/T Hospital Complex Patient Safety Group (PSG) for study approval letter for study title: Psychosocial support guidelines for nurses caring for patients diagnosed with COVID-19 infection in the North West Province in Klerksdorp-Tshepong Hospital complex a tertiary level hospital in North west at Klerksdorp-Tshepong Hospital Complex. The researcher is requested to submit regular study progress reports and final study report upon completion of the project. The permission is subject of approval of the Ethics Committee.

Kind Regards,

.....

Dr. R.I. Mahume
Clinical Manager
Klerksdorp/Tshepong Hospital Complex

ANNEXURE D3: APPROVAL LETTER FROM MAFIKENG PROVINCIAL HOSPITAL

health
Department of
Health
North West Province
REPUBLIC OF SOUTH AFRICA

MAHIKENG PROVINCIAL HOSPITAL
Care and effeciency

2030 NDP

Lichtenburg road
Cnr. Danville,
Mafikeng
Private bag x 2031

Tel: (018) 596 1100
Tel: (018) 383 6924
Fax: 018 383 3503

MAFIKENG PROVINCIAL HOSPITAL

TO : MS DIKOBE J

FROM : MS MENDELA NS
: CEO – MPH

RE : PERMISSION TO CONDUCT RESEARCH

This communique serves to grand you permission to conduct your research as per your request.

Regards;

Ms. Mendela NS
CEO – MPH

ANNEXURE D4: APPROVAL LETTER FROM POTCHEFSTROOM HOSPITAL

health
Department of
Health
North West Province
REPUBLIC OF SOUTH AFRICA

Cnr. Chris Hani &
Kruis Street
Private Bag X 938
Potchefstroom
2520
Tel: (018) 293 4584
lsekano@nwpg.gov.za

POTCHEFSTROOM HOSPITAL

POTCHEFSTROOM HOSPITAL

TO : **Ms. J. M. Dikobe**
House no 10487
Setumo Park
Mafikeng

From : **Dr. JMM Shakung**
Medical Manager
Potchefstroom Hospital

Date : **08 June 2022**

Subject: **APPROVAL FOR RESEARCH PROPOSAL: RS01/ 06/ 2022**

Topic: PSYCHOSOCIAL SUPPORT GUIDELINES FOR NURSES CARING FOR PATIENTS DIAGNOSED WITH COVID-19 INFECTION IN THE NORTH WEST PROVINCE.

The research committee had a meeting with the candidate on the 01 June 2022. The research proposal was accepted as she met all the requirements. Hence she is permitted to collect data.

Kind regards

Ms.L. M Sekano
Social Work Supervisor
Committee Secretary

Dr. M Shakung
Clinical Manager
PSG Chairperson

ANNEXURE E1: INTERVIEW SCHEDULE (PHASE 2)



TITLE: Psychosocial support guidelines for nurses caring for patients diagnosed with COVID-19 infection in the North West Province

ETHICS REFERENCE NUMBERS: NWU-00309-21-A1

PRINCIPAL INVESTIGATOR: Prof MM Moagi & Prof L A Sehularo

POST GRADUATE STUDENT: Joan Mologadi Dikobe

ADDRESS: House no 10487

Setumo Park

Mafikeng

CONTACT NUMBER: 072 205 1723/072 573 9541

- What do you know about COVID-19?
- What are your experiences in caring for patients diagnosed with COVID-19 infection?
- What type of psychological and social support do you need when you care for patients diagnosed with COVID-19 infection in NWP?

Communication skills such as clarification, probing and paraphrasing will be used as needed to facilitate the interview process

Principal Investigator's Signature: …….. Date: …….

ANNEXURE E2: INTERVIEW SCHEDULE OF EXPERTS- LIKERT SCALE



	1	**2**	**3**	**4**	
Statement	**Strongly Agree**	**Agree**	**Disagree**	**Strongly Disagree**	**Likert Score**
Validity					
Reliability					
Applicability					
Clarity					
Relevance					
Comprehensiveness & Effectiveness					
Flexibility &					
Acceptability					

ANNEXURE F: EXAMPLE OF DATA TRANSCRIPTS FROM PARTICIPANTS

Online Focus group discussion 1:

Researcher: Good morning ladies and gentlemen!

Participants: Good morning mam!

Researcher: My name is Joan Dikobe, you are all welcome. As you have already completed the informed consent form, the purpose of this study is to develop and validate the psychosocial support guidelines for nurses caring for patients diagnosed with COVID-19 infection in the North West Province. Feel free to participate, your name will not be disclosed for identification purpose. You have the rights to withdraw from the study at any time without any penalty. I also need to inform you that this interview will be recorded so that I can refer it later because I cannot memorise everything.

Researcher: Do you have any question?

Participant**:** Do we have to answer in English only or can we mix with Setswana?

Researcher**:** You can mix

Researcher: Can I proceed?

Participants: Yes mam.

Researcher**: Let us set ground rules.**

- The information discussed in this meeting will not be shared with anyone who is not part of this meeting, in other words there will be confidentiality
- Let us respect one another
- Speak one at a time
- When you respond you can say I am participant number 1, number 2 or number 3 etc.

Researcher: What do you know about COVID-19?

Participant no 3**:** Mam what I know about COVID-19 is that is an airborne disease that affect the upper respiratory like the lungs, let me explain it this way, first when you get COVID-19, mam can you please pass. I will answer the next one.

Researcher: Just relax participant no 3, I will come back to you.

Participant no1**:** COVID-19 is the virus that can spread from an infected person's mouth or nose in small liquid particles when they cough, sneeze, speak, see or breath; so these particles range from larger respiratory droplets to smaller aerosols.

Researcher: Okay, thank you.

Participant no 2: COVID-19 is a respiratory disease that is spread, it is a droplet infection that is spread from close contact with the secretions or body fluid of an infected person. It originates from the bird, it started in china in Wuhan and then it was spread across all the country.

Researcher: Thank you.

Participant 3: COVID-19 is an airborne disease that can spread from one person to another, like my colleagues have said and it affects your lungs and the upper respiratory system in most cases some of the patients will struggle with insufficient oxygen to the lungs and to the brain that is when they get hypoxia, to be hypoxic.

Researcher: Thank you.

Participant no 4: COVID-19 is an infectious disease that is caused by SARS-Cov2 virus

Researcher: Thank you very much.

Participant no 5: COVID-19 is an infection that everyone is very afraid of it. It is a serious disease and everyone is afraid of it.

Researcher: Thank you very much

Participant no 6: I know that COVID-19 killed lots of people. It is still traumatic and I still remember when it started, even though I was not employed by that time but since those numbers going up like Yoo….It was so hectic, I do not want to lie.

Researcher: Thank you.

Participant no 7: COVID-19 is the disease that came from China, the disease that was discovered in China and affected the whole world.

Researcher: Thank you.

Researcher: What are your experiences in caring for patients diagnosed with COVID-19 infection?

Participant no 3: Yes mam, it wasn't easy to care for patients with Covid-19 because it affected us psychologically because most of us… Yes mam as I have said it wasn't easy for us caring for patients with covid-19, it affected us psychologically because it is not nice to nurse somebody, for example the patient would be ventilated and you would be giving that patient 100% oxygen, and the patient would be asking for more oxygen of which you cannot give, you are on 100%. Most of our patients were elderly patients and for my side, I would think of my father, my mother, when I knock off I would ask myself questions whether I should go back there again or what because it is not easy, we would be taking three to four corpse per day of which it is not nice, for my side it wasn't a good experience, it was very bad.

Researcher: What do you mean when you say it has affected you psychologically?

Participant 3: It affected me psychologically because you would be caring for patients and you would be seeing that this patient is dying and there is nothing that you can do for that patient, like the patient would be on 100% oxygen via the ventilator, would be mechanically ventilated, but for your side there is nothing you can do, so it wasn't easy because you would want to help that patient but you do not have the powers for anything because the patient is ventilated and on 100% oxygen.

Researcher: what did you do when the patient requested more oxygen that you were unable to give?

Participant 3: In that case, I would tell my supervisor or the shift leader and if there is a doctor in the unit, I would call the doctor and explain to the doctor that the patient is no longer getting enough oxygen according to him or her and he/she is on 100% oxygen.

Researcher: Okay. You also mentioned that you had 3 to 4 corpses per day, can you elaborate more on that.

I was not a good feeling seeing 3-4 corpses per day, I was scared for my life and I was scared for my parents and it takes you back like should my father or mother be in this situation what would I do because I can't even do anything for these patients.

Researcher: you mentioned that you were scared, can you tell me more about that.

Participant 3: It wasn't easy seeing people corpsing day in and day out in your hands, we would be resuscitating patients with covid-19 and some of us, and most of us ended up having covid-19. I was one of them.

Participant no1: I am caring for patients with covid-19, psychologically it affected me in this way, because of seeing patients fighting for their lives every now and then and people are dying now and then in our hands. I have been diagnosed with depression so I was depressed, not knowing what to do, thinking we are all going to die especially when we admit our colleagues in COVID-19 ICU and they lost their lives in our hands. We could not do anything about it, so it affected me too much to lead to depression. I have been taking medications for depression and I had acid reflux because of stress, so I would like to say it affected me so much. I could not handle the pressure, I could not handle the situation. It wasn't easy looking at our colleagues not knowing who is gonna be in the ward, who is gonna be admitted tomorrow, it wasn't easy, it wasn't easy at all, so 'go ne gole thata' (it was difficult). Thinking of your families, thinking of your parents and staff like it might be to them tomorrow, so we were in situation where we don't know what to do actually because we can give 100% oxygen to these patient and not surviving COVID, so it wasn't easy at all. We were afraid, we were overwhelmed with the situation, each and every day we had to pack corpse, 3 or 4 corpses each and every day, so it wasn't an easy road.

Researcher: You mentioned that you would be seeing patients fighting for their lives, how did you feel about that?

Participant 1: I would say with the help of our doctors and seniors, it wasn't easy but we had hope each and every day, we gave ourselves hope that we will nurse these patients and then they will be out of ICU after fighting for their lives but it wasn't easy. Sometimes I would move away from the patient after resuscitating the patient and not successful and I would leave that side and go to somewhere in private, cry and come back, you understand… it wasn't easy, for myself I was like crying each and every time when I see a patient dies so it was not easy at all.

Researcher: Okay, thank you very much. You mentioned that you were thinking of dying when you saw patients dying. Did I hear you correctly?

Participant 1: Yes, I was thinking of drying, the reason of thinking of dying is like you know when you enter ICU when they send you to ICU that is where you will be fighting for your life and win, but with covid-19 people were dying in our hands and we could not do anything more to keep them alive, we were failing in most of the times because sometimes it was lack of resources and staff, but then we could not do anything about it, so we were thinking if tomorrow, it might be me tomorrow lying in this bed fighting for my life because there was no way. I was like this is the end of the world, the way I was thinking, I thought this is the end of the world because there was no day passing without any corpse.

Researcher: Thank you very much participant no 1. You mentioned that you lost colleagues, how did you feel, can you tell me more about that?

Participant 1: I felt that we were all going down, that was the feeling. I felt like we are all going to die. The day we lost one of our colleague I even spoke to my mother that I am leaving this job now because I see we are all going to die and we are deep in the fountain of covid now, our colleagues are drying, it was overwhelming and it was so hard, I thought we are all going to die. That is what I was thinking by that time that everyone is going die.

Researcher: You mentioned about the lack of resources, can you tell me more about that?

Participant 1: At first when we started working in ICU we did not have enough ventilator machines, people needed ventilators. There was time were there was this rule saying that if you are above 60 and you are on ventilator, so if we admit a patient who needs ventilator below 60, the patient that is above 60 needs to get off the ventilator so that we can give the below 60 one, so it was

because of lack of resources, so I think that could be the reason some of our parents, or grandfathers or grandmothers died of covid-19.

Researcher: You mentioned the lack of staff, can you tell me more about that.

Participant 3: Mam can I please answer that?

Researcher: I will come back to you, you will be given the opportunity to answer that question participant no 3.

Participant 1: Shortage of staff, at first we were about 6 nurses in COVID ICU with 15 or 16 bedded ward, that is an ICU with 16 patients with 6 nurses only, so imagine in ICU nursing 3 or 4 patients or maybe you are nursing 2 intubated patients and you have another CPAP patient. How do you nurse three patients? In ICU we have to go one on one, but by that time we had to nurse 4 or 3 patients alone, so that was the problem, maybe that could be the problem that caused more death because we were short staffed and mostly in ICU we were not ICU trained or experienced.

Researcher: Thank you very much participant no 1.

Researcher: Participant no 3, you wanted to say something, you can do so.

Participant 3: Yes mam, actually when we started we were working with only 1 PN (professional nurse), 1 EN (enrolled nurse) and 2 ENAs (enrolled nursing assistants) with 21 patients and for some of us it was new experience, we did not know anything about ICU or ventilated patients, so it was very hard on the professional nurse because he/she would do most of the things alone. As times goes by, they have found staff for us even though we were all not… we do not have experience most of us and then they started asking from the main ICU in the hospital,1 or 2 nurses to come and orientate us, help us, educate us about the ventilators and everything because some of the diseases we did not know because the patient would come to COVID ICU with COVID, some will be having some other comorbidities ,like the patient would come with the DKA and would be swabbed they find out that he/she has COVID-19 also, so you would be treating COVID-19 and DKA at the same time, so it wasn't easy.

Participant no 4: Firstly when it started people were very afraid of it and we lost lots of lives because of COVID-19,but as time went it got better that people got used of the infection that it is

there and as people started vaccinating against it and things got better but really it was very difficult in the beginning nursing patients with COVID-19 because it was a new thing for us especially as nurses, the way people were losing their lives it was very traumatic to us, it was a bad experience, but as time went I think even with the researches, with the information we got things got better.

Researcher: Participant no 4, you said it is difficult to nurse patients with COVID-19. Can you explain more about that?

Participant no 4: Yes, because the fear that people had, the fear that patients had especially that it is a new thing, I think we only started hearing of it on the news and when it finally came to us people were very afraid, so nursing those patients seeing how difficult it was, the symptoms they were experiencing it was not a nice feeling, it was even not a nice thing to watch so the fear from the patients eyes, even the way we lost lives it was very difficult. At first we didn't have much information, but as time went we learned how to live with it like now it is like a norm, like COVID is there, we just made peace with it that COVID is there and now we are learning how to deal with it better.

Researcher: Okay, you also mentioned that it is so traumatic. Can you elaborate on that?

Participant 4: It was traumatic in a way we were losing patients, for us it was a new thing especially for me as a young nurse. I have never really experienced something like that, it was really difficult, in the beginning I had to be hospitalised for depression for about two (2) times in the hospital because I could not deal with the way people were leaving us, so yes like I said as time went we learned how to deal with it, we learnt to accept, got better ways of helping the patient, even the death rate as it decreased, we also got better emotionally.

Researcher: Okay, thank you very much. You said you were admitted twice because of depression, can you tell us more?

Participant 4: Since I am working in ICU so it was worse for us, like we just saw patients coming in, after 2 days patients gone, we were just discharging, we had lots of deaths like it was just too much to can handle since we were not used to so much death rate, so it was really difficult. The patients were dying without their families being able to see them. We did not know how to help them, it was very traumatic for me. It was a very traumatic experience to be honest. I really felt

hopeless, I felt helpless, like we always encourage families to come and see their patients for them to get better, but with COVID people could not visit their families and Yoo…imagine having to die alone in a hospital bed without no one. Even for us in the beginning we were so scared and the way we were told, even if there is a resuscitation, even if a patient collapse we do not go there if you do not have proper kit. It was terrible because you see that the patient is dying, I can't help them, and I have to quickly put on my PPE before going in to help the patient, and by the time you get there it is too late. So, it was very difficult.

Researcher: You mentioned that patients were dying without their family members, can you tell us more about that?

Participant no 4: The only thing that you can do at that moment when patient is dying without family members is to reassure the patient like if you can just hold their hands even though you have gloves on just whisper in their ears that their families are calling, their families are thinking of them, but there is really nothing you can do. There was nothing you can do more than just reassure them like their last time, that at least they have gone knowing that their family did not abandon them, it was that due to the COVID-19 that they are not there, it is not that they are alone.

Researcher: Thanks mam, you said something about not having proper kit.

Participant 4: When a patient crashes or something like that you cannot go help at that moment if you don't have your kit on, if you don't have your PPE on like you can't go in that room, so we always had proper kit and we were taught in the beginning how to use it on properly, how to undress and everything, but the problem was at that moment when the patient is not doing well and you are not dressed you cannot go without being dressed first and that takes a lot of time to dress first, make sure that you have proper kit on before attending the patient. I think for me it was the most difficult part. Where I was working first in a private institution before I went to public, our ICU when you go out for tea break and everything is outside and the rooms had glasses in between, so before you go inside the patients rooms you need to dress first, but when going out of the room you undress, you go sit at the duty station, it wasn't inside the ward, you could see the patient all the time but there is glass that is protecting you. For me a have experienced that a patient complicates while you are undressed and you have to dress first before going in the room and sometimes it was too late.

Researcher: Thank you very much participant no 4.

Participant no 5: I was listening to what she (participant no: 4) was saying, what she was saying is very much true. When I started hearing of the word COVID-19, I felt like I am going to die before three months, but when I came here it was different because I used to tell myself that if God wants us to save people we will do so. Here in MDR-COVID what I saw is that we were having all suitable PPEs but our site of resting is outside and you can't hear people when they need help if you stay outside for a long period. What we were doing is that we keep on checking on them and the experience I saw was very traumatic because I remember one day a young lady came here in our ward, after two days the patient changed the condition, she came walking by herself but after that she changed the condition and I was so depressed by that situation and we lost her because of that. Her saturation dropped and everything went down, it was so traumatic, even now when I think of that thing eish…I do not want to explain that thing but fortunately people get vaccinated and now we do not have COVID like before, it is just like these days you only have it for 5 days rather than before, not like before. I can't say much.

Researcher: Thank you participant no 5, you talked about proper PPE, can you tell me more about that?

Participant no 5: We were having all proper PPEs such as overalls, caps, shoes, gloves and the plastic gowns, sanitizers and the soaps, everything because where we work we are supposed to have those things.

Researcher: You talked about traumatic experience, can you tell me more about that?

Participant no 5: What happened is that after the trauma of losing that lady after 2 days I felt like I would resign but my mind served me otherwise and I told myself that if God wants me here I will do the best thing to save other patients. My main problem is that when people are admitted here they do not see their families and I think if it was me dying without seeing my family, all those thoughts. That is the thing that hurts the most. But right now because most people are vaccinated I think COVID is controlled.

Researcher: Thank you. You said you were depressed, can you tell me more about that?

Participant no 5: When I was depressed I felt so down, when you wake up in the morning and tell yourself that you are going to save people's lives and you fail that thing is so hard for a person. But what can we do. What makes me strong is that there is nothing that can come to the world without treatment, three years cannot pass by without getting treatment. People were dying like cockroaches, but I think by the will of God it happened. I do not want to remember that thing. I do not want to remember it, you know when you go to work and pack the corpses as if they are not people it is not good. Each and every nurse including the doctors want to see each and every patient who comes to the hospital to go out with his/her feet not with a coffin, we do not want that. What we want is patients to be healed and go back home to their families.

Researcher: Thank you participant no 5

Participant no 6: That was the worst experience ever, looking at your patient helpless, dying one patient one after another. You know when we came here usually we pray and after praying we would go to the wards. When we came to the wards maybe room no1, you greet the patient. When you look at the patient you see, I still remember one day when I came to the room as usual I always greet my patients, so when I greet the patient no response, the next one no response. I think there were three and only one patient was remaining on that day. That day I felt like Yoo...Yoo...Yoo...Yoo...I was going crazy, having to lay the patients one after..., the corpse one after another Yoo…Yoo... mhmh…mhmh… I don't know which mhmh… mhmh. Sister you are bringing those terrible memories. The once I thought I could forget about them serious.

Researcher: You mentioned that it was so hectic, can you tell me more about that?

Participant 6: It was hectic because the full ward normally it was 36 patients, the doctors are busy, the nurses, it was up and down. When you are busy maybe doing vital or helping the patient, the doctor will call you and say sister come this side, you must help me with this one. It was up and down, it was hectic and then when I looked at the staff it was not enough, for me it was not enough because all people needed our attention like at the same time.

Researcher: You mentioned that patients were dying one after another, can you tell me more?

Participant 6: When patients were dying one after another obvious you can't be with all of the patients at the same time. You will be nursing the other one, maybe the doctor will say the saturation is dropping, just go take the mask, do the vital signs even reassuring the patient. You

can't do everything at the same time for all the patients. Obviously you will look at the most sick ones, even though all of them because we have ICU room. Even if one nurse can be allocated to one room, maybe it will be enough but having 36 patients, having to look all of them one by one, the other one is desaturating, the other one is taking off the mask because it was irritating for them with mask, so that is what I can say, this is what I have experienced, it was so hectic I do not want to lie.

It is a full ward, cubicle by cubicle, the other room will be having 4 beds but for us we are supposed to attend all of the patients unlike maybe some other wards they will be allocated 2 who are going to be responsible for this ward only, but for us when you come to the ward having full ward i.e. 36 patients you are supposed to care for all of them.

Researcher: Thank you. Do you still have something to say before I ask another question?

Participant no 6: Yes, I would like to mention something that the department can do to make our job easier maybe psychological support. Let me wait. I wanted to say something but I will say it.

Researcher: Okay, thank you participant no 6.

Participant no 7: My experience is that it was very scary because it is a very dangerous disease, very scary and very traumatising, the most dangerous disease I have ever came across since I was working as a nurse. It was very very dangerous and painful towards people who are affected by Covid-19. It was very dangerous, painful, traumatizing and all that.

Researcher: Okay mam, can you explain why you say are saying it was scary?

Participant no 7: It was scary because people came with shortness of breath, struggling to breathe and you see that the person is not going to survive. It was scary because people were dying. It was traumatizing because if the person is healthy and doesn't show, young and beautiful lady and here she is coming struggling to breathe. Eish… it was very scary situation. At the same time we were fearing for our health also if I can be infected. Families were unable to see their patients, you have to explain, they would ask you how their mother is or sister and I you don't know what to explain, and you don't know what to say to them because you can see that the person is going to die. I can't tell them. People were not able to see their families.

Researcher: Okay mam, you said patients were struggling to breathe, can you tell me more about that?

Participant no 7: When the patient was struggling to breathe we would report to the doctor and the doctor would try to change from nasal cannula to ventilation, all those things. We would try all those oxygen suppliers just to help the person.

Researcher: You said families were not allowed to see their patients. Can you tell me more about that?

Participant no 7: People who were COVID positive were in isolation then visitors were not allowed to see the patients.

Researcher: You mentioned that you could see that patients were not going to survive, can you tell me more?

Participant no 7: I would be thinking of those situations when I am at home, you will have to go back to work and the saturation was down. People from x-ray department would come to the ward wearing PPEs, cover the machine.

Researcher: You mentioned that you would not tell family members when they ask you about the condition of the patient, can you elaborate on that?

Participant no 7: If the patient's condition is at the last stage, the doctor is the only one who is allowed to explain more to the relatives, we as nurses there are things we can't say because the doctors are the ones who are allowed to tell the family members about the condition of the patient. If they see that the patient is not going to survive, they are the ones who are allowed to speak to the family. Some families would come as requested by the doctor and the doctor will explain to them outside, maybe in the office or some they inform them telephonically.

Researcher: Thank you very much. Do you still have something to say about your experiences?

Participant no 7: No, I think I have said them all.

Researcher: Question 3 is what type of psychological and social support do you need when you care for patients diagnosed with COVID-19 infection?

Participant no1: I am not sure if I did get the support or I am still getting it, like the psychologically support, but there was a time where I could see myself that I am no longer okay, I feel angry, I've got a short temper and I am no longer used to be the way I was before I am in Covid-19 ward, so I personally went to psychologist and they would give me enough support. I would say I got the support from the psychological department, they diagnosed me with the depression and they gave me medication, and now I am now out of the medication, but the problem is that I cannot get rid of these acid reflux anymore, I am depending on medication now due to the stress of covid-19, so I am not sure if I am getting enough support about the psychological site.

Researcher: What type of support do you still need?

Participant 1: Maybe social support will help

Researcher: In which way?

Participant 1: Maybe social support will help like managers or 'matona' to give us support and be with us, sometimes sit with us and ask how we feel because they do not know how we feel at this time, how we are at this time after all these, to speak to us, to appreciate, it's like now we do not know our stand point, where we stand because we were only contractors, we are having stress of covid-19.We have assisted but we are suffering because we do not know where we will be going tomorrow because, so it's like… I feel that we never receive the support we needed maybe in favour that we tried to save Setshaba 'the nation', so it is like they can treat us like their own children, to see where we are lacking and how they can continue with us. Most of Covid-19 nurses are not permanent, they are contractors, so we are still having that problem that we have worked so hard but still we are not appreciated.

Researcher: Thank you participant no 1. Do you still have anything to say about the support that you need?

Participant 1: No mam, I am fine.

Participant no 4: At least to know that there is someone you can always talk to or if you are not coping with pressure of working with COVID-19 patients to be referred to talk to someone about your feelings. You can be helped on how you can have coping mechanism. From where I come from, from the private sector at least what they had was every now and then they would pay for

us to go out maybe for breakfast, for team building. We sit and talk about the experiences of COVID-19 at least when you talk to people who understand it gets much better, and then at least the weight is much lighter, once in a while we were doing it as a kind of team building and coping mechanism also and interacting with other people you are working with and who are dealing with the same problem and it really helps and they would also refer you to the social worker you are under pressure with everything and you would go and talk to her and she would decide if you have to be seen by the psychologist, which was a key for me. I was referred to a psychologist and psychiatrist and I was admitted and at least I have learned to deal with the situation better. My family also gave me support with everything, they would also encouraged me and also the management now and then would appreciate, even the families of the patients would come and really appreciate us for the hard work that we are doing so it was really a blessing that at least people would appreciate us even though we were working under pressure, they would see the great job we are doing

Participant no 3: I am going to be honest with this one because at first they have sent us the psychologist to come and have sessions with us in a group form, so I felt like I do not need this kind of set up because I wanted to be in a one on one set up so they would be there, we would be busy, so we did not even have time to answer their questions from the psychologist, so they would be living without any change, so they suggested that we go the psychology department but, so to be honest Mam, I felt like for my site was useless because I am already deep in this, I am drowning, what has helped me is that I have been praying and the support of my mother of which I longed for that support from the management of which they could not give us. I know my mother would, eish…this is very sad… Oh mam 'crying', I would be calling my mom just wanting to hear her saying it will be okay my daughter, only that word kept me going. So mam we are, I think all of us are not in a good state of mind because of what has happened and what we have experienced and what we have seen in covid-19 times, like my colleague has said socially I am still struggling. Mam do you know when you have done something good you would want somebody to tap your shoulder and say you have done good, well done, keep it up, but there was nothing like that, instead we would keep on encouraging each other if one of us wants to quiet, we would ask please don't do that just come to work and lets help these people, God will be with us, so those were the words.

Researcher: Okay, what other type of support do you still need?

Participant 3: For my side I think psychologically I still need the support because I have done some self-introspection, am no longer the same person people used to know. It's like there is a creature living inside me, even though people would be asking me something nicely, I would like…I am always ready to fight. I am always emotional of which is not good. I have a son whom I am raising and I am putting my frustrations onto my son, of which is not good, so covid-19 has affected us mentally and physically it has drained us and it has left us with comorbidities, now I am hypertensive because of covid-19,of which I was not hypertensive, so now I have blood pressure that is always elevated and it is not nice mam, now the time has come, yes we did know that the contract was gonna end, so we were hoping, we were thinking that these people someday they will absorb us and see that we have helped so much, so they are ready to get us go just like that ,so it takes us back, it is not easy, it takes us back that now we have helped, we have sacrificed our lives, but now they are keeping out like, you known, so it is not nice.

Participant 1: Nobody is talking to us and says my children this is what is happening, it is like we hear from social media that this is what is happening and short notice 'you are all leaving' as if we have done something wrong and we have helped were we helped and the only thing that we received is the chronic diseases out of this..' crying'.

Participant 3: The contract nurses are not only helping in the COVID ward, they also work in non-covid ward. They have been replacing, beefing up their staff with us, it is not nice. There was a time that I was on night duty and we did not have many patients in COVID ward, they said I must go and work in ward 4, and then I went to ward 4. When I was in ward 4, the night super called and asked me to come back, she spoke to me and asked me that there is a patient coming in from another hospital COVID-ICU because there is no enough staff in ICU, so I must go and work there. So it was like I have worked for 24hours, working in 2 units in one night, so this is not nice at all.

Researcher: It is sad. Do you still have anything to say?

Participant 3: As for me I am very much emotional, I was not sure that I was gonna feel this way in this interview, but I am very emotional now.

Researcher: Thank you very much, sorry for what you have experienced.

Participant no 5: For me right now I don't need any psychological…I don't need any psychology. I am strong enough to nurse more than one thousand (1000). Now I am stronger than before because I can see that COVID is no longer a threat.

Researcher: You said you are now stronger than before, how were you before?

Participant no 5: Before I wasn't strong because this is my first job. I wasn't working like this. I was working at the pharmacy. At Pharmacy only walking people were coming to buy something but here it is different. I am strong, I don't need any psychologist now.

Researcher: Do you still have anything to say?

Participant no 5: What I want to add about the staff is that in other wards, they do have cubicles, It different from the wards. Our ward is like a room, you have to go room to room, not like other wards. Other wards they are at the nursing station and see all the patients. If management can say two people will nurse in this room; two people will nurse in this room ….just like that not one nurse nursing 36 patients because in our ward it is different you have to see all the patients.

Participant no 6: When I first came here as it was hectic for covid-19.I thought maybe there will be a room next to us, for social worker maybe if you experience something in the ward you will go straight to them to talk because even for us nurses, yes we are nurses but we are also human beings. I thought that maybe when I came to this ward we would be having social worker ready for the nurses, buy there were not there. I still remember one day I even asked one of the sister if she can book me to go and see the psychologist. I was even crying by that time. I won't mention her name but she tried to call the psychologist to talk to me but they said I must bring the file. I said I will stop it, I am not going to waste time because I needed the psychologist as in now. I felt like I wanted to talk right now, you want to vent out all.

Researcher: Did you manage to see the psychologist by the time you wanted to see her?

Participant 6: No, I did not see the psychologist because it was a distance from the ward to the psychologist hence I said I was hoping maybe there will be an office of psychologist next to us COVID ward. You have to walk, it is a distance, when you go there they will tell you about the file, go back to take the file because they won't help you without the file and I needed to talk like right now, I told the sister I want to go. I still remember and she tried her best, called that psychologist

that there is somebody who wants to see you like right now. When I go there remember you can take, it is like 20-25 minutes to go there and you will find other patients waiting. You have to wait for other patients to see the psychologist, so I never talked to the psychologist.

Researcher: You said the department should make job easier, can you tell me more about that?

Participant no 6: There should be more staff, more staff. That is what I can say more staff. I won't say the equipment's because we've got all equipment. I don't want to lie but the staff.

Researcher: Do you still have something to add participant no 6?

Participant no 6: I still remember, my father has already passed away. It is not a joke but that day I was so scared because that patient was looking exactly like my father, so I needed to give him all the attention. I even told one of my colleague that you see that man, he looks exactly like my father, so I even called my sister after work that there is a twin of your father here. He was so strong like my father, I even told the patient that you look exactly like my father, but deep down in my heart I was so scared that I am nursing my own father. It was so scary looking at … my father passed away in 2000 having to see the twin of your father nursing exactly. I won't forget it…never…never…never, but sister you know what, even if it is not part of our discussion, I feel like I could talk to the minister of health himself to tell him maybe one day I wish those people who are up there, "the big boss", you see the big boss can come here to feel what we felt by the COVID. I wish they can come and rotate one day only and see what we saw. Maybe they will feel what we felt. More staff is needed more…more... more and a little bit of appreciation from health ministers so because rumours are saying nurses were Hero's, now from hero to zero. That time even the president was praising nurses saying nurses we thank nurses. He was praising us nurses…soldiers…what what, but… Sister is goodbye for us next month we are going, it is a pity. We are no more Hero's, we are zeros. From Hero's to zero.

Researcher: It is so sad. You mentioned that you needed appreciation. Can you tell me more about that?

Participant no 6: I need money for appreciation. I know we were earning money, but more money is important. Maybe to say goodbye, thank you for your effort, thank you. I know it is our job to care for these patients but we were putting our lives at risk. More money, money…money……money. Money is everything. 'Laughing….'

Participant no 5: I am supporting my sister about what she was saying. For me I need the job, not the money. Money is the bonus. I need my job, not to go from hero to zero, no I don't want that. It is a pity because it is what it is. Maybe if they can change their decisions it will be better because we have put our lives in danger, now we are moved away like nothing. We were in danger and many nurses left their jobs and resigned because of COVID and us we went there, not knowing that one day we will die or not but with God's protection we are still alive. I think God wants to show them something but the way they are moving us, we know that we are on contract but what they are doing, next time when there is disease like this, they will say nurses come here, come here and when we are done they will just throw us away like nothing, but it is okay, but at least we did our best only God knows because it is not only about money, it is about caring, reassuring the patients. We have played our part. I wish one day you could connect me to the minister of health or I will write him a letter.

Researcher: Participant 5, you said that those big bosses could come, can you tell me more about that?

Participant no 5: When I was saying "Big bosses" I was referring to… maybe the CEO maybe if they can come even the minister of health to see what we went through because other big bosses are just sitting there looking for the mistakes. Since I came here I do not even know the CEO, we only know our bosses 'our matron' and our sisters

Participant no 7: I think we need counselling, they used to organize counselling for us but it was not done because of the time because they come, the psychologist would come and find us very busy, no one would be able to sit down and speak to the psychologist. They told us to make an appointment with the ward psychologist but still when you are off you need to rest, you don't want to go anywhere. With me I never went to the psychologist.

Researcher: What other type of support do you still need?

Participant no 7: We also need to be supported with PPEs and to have the equipment. If the equipment's can be available at all the time. If we do not have enough equipment 'di reetsetsa morwalo' (it becomes a burden to us). Sometimes we would find that there are no PPEs, there is no stock, then you have to compromise, sometimes there are no gowns or over sheet or no gloves, but most of the gowns would be finished. Shortage of PPEs was a problem. Things like

medications, swabs, needles are needed. Sometimes the doctors would prescribe certain medication for the patient and you find that it is out of stock at the pharmacy. Sometimes the pharmacy does not issue enough medication for the patient e.g. the doctor would order 1g of medication daily but at the pharmacy they only issue 1 g of medication for that day.

Researcher: Thank you. Do you still have anything to add?

Participant: No mam.

Researcher: Thank you very much for participating in the study

ANNEXURE G1: INFORMED CONSENT FOR NURSES

NORTH WEST UNIVERSITY
NOORDWES UNIVERSITEIT
YUNIBESITI YA BOKONE-BOPHIRIMA

NWU Health Research Ethics Committee
(NWU-HREC)
Faculty of Health Sciences
2022 -04- 26
NWU

For .....

TITLE: Psychosocial support guidelines for nurses caring for patients diagnosed with COVID-19 infection in the North West Province

ETHICS REFERENCE NUMBERS: NWU-00309-21-A1

PRINCIPAL INVESTIGATOR: Prof MM Moagi & Prof LA Sehularo

POST GRADUATE STUDENT: Joan Mologadi Dikobe

ADDRESS: House no 10487

Setumo Park

Mafikeng

CONTACT NUMBER: 072 205 1723/072 573 9541

You are being invited to take part in a **research study** that forms part of my doctoral degree. Please take some time to read the information presented here, which will explain the details of this study. Please ask the researcher or person explaining the research to you any questions about any part of the study that you do not fully understand. It is very important that you are fully satisfied that you clearly understand what this research is about and how you might be involved. Also, your participation is entirely voluntary and you are free to say no to participate. If you say no, this will not affect you negatively in any way whatsoever. You are also free to withdraw from the study at any point, even if you do agree to take part now.

This study has been approved by the Health Research Ethics Committee of the Faculty of Health Sciences of the North-West University (NWU-00309-21-S1) and will be conducted according to the ethical guidelines and principles of Ethics in Health Research: Principles, Processes and Structures (DoH, 2015) and other international ethical guidelines applicable to this study. It might be necessary for the research ethics committee members or other relevant people to inspect the research records.

NB: Participant is expected to have a person present to co-sign and witness the signing process and will be visibly undertaken over the video link.

1. **What is this research study all about?**

- This study will be conducted using virtual focus group discussions through google meet at the time that is convenient for the participants and this study will involve health researchers who are experienced and trained in health sciences. Nurses caring for patients diagnosed with COVID-19 infection will be included as the participants in this study.
- We plan to develop and validate psychosocial support guidelines for the nurses caring for patients diagnosed with COVID-19 infection in North West Province.

2. **Why have you been invited to participate?**

- You have been invited to be part of this research because you are a nurse
- You also fit in the research because you are:
  - Registered with the South African Nursing Council (SANC).
  - In possession of more than one-month experience in caring for patients diagnosed with COVID-19 infection
  - Currently employed in COVID-19 sites in NWP
  - Able to communicate in English; and
  - Willing to voluntarily participate in the study
  - Having a phone for data collection
  - You are willing to be recorded
- You will not be able to take part in this research if you:
  - Have never worked in COVID-19 ward

3. **What will be expected of you?**

- You are expected to participate using visual focus group discussions (FGDs) through google meet and you are expected to have internet access whereby the researcher will provide you with 1 Gigabytes of data to have access to internet

4. **Will you gain anything from taking part in this research?**

- The gains for you if you take part in this study will be contribution towards the advancement of science
- The other gain of the study is for you to be equipped to assess and implement evidence- based practice, to have the opportunity to verbalise you experiences regarding their experiences of caring for patients diagnosed with COVID-19 infection and Knowledge obtained from the research that may expand the participant understanding of some issues related to health

5. **Are there risks involved in you taking part in this research and what will be done to prevent them?**

- There are no risks in participating in the study
- All participants experiencing emotional discomfort will be referred to the counsellor or the psychologist if there is a need
- There are more gains for you in joining this study than there are risks.

6. **How will we protect your confidentiality and who will see your findings?**

- Anonymity of your findings will be protected by not linking the participant's identity to that participant's individual responses. Your privacy will be respected by assigning a code number and the names of participants will not be disclosed. Your results will be kept confidential by not sharing them with people other than the promoters and the co-coder. Only the researchers and co-coder will be able to look at your findings. Findings will be kept safe by locking hard copies in locked cupboards in the researcher's office and for electronic data it will be password protected. As soon as data has been transcribed it will be deleted from the recorders. Data will be stored for five years.

7. **What will happen with the findings?**

- The findings of this study will only be used for this study and will be made available in thesis for the doctoral degree at North-West University, Faculty of Health Sciences. Feedback will be given to all the participants of this study and to all relevant

stakeholders. The researcher will also publish articles and present the results of the study at conferences

How will you know about the results of this research?

- We will give you the results of this research when the study is completed by the researcher
- You will be informed of any new relevant findings by the researcher

Will you be paid to take part in this study and are there any costs for you?

No you will not be paid to take part in this study because this study is not funded. There will thus be no costs involved for you, if you do take part in this study.

Is there anything else that you should know or do?

- You can contact Joan Dikobe at 072 205 1723 if you have any further questions or have any problems.
- You can also contact the Health Research Ethics Committee via Mrs Carolien van Zyl at 018 299 1206 or carolien.vanzyl@nwu.ac.za if you have any concerns that were not answered about the research or if you have complaints about the research.
- You will receive a copy of this information and consent form for your own purposes.

Declaration by participant

By signing below, I..... agree to take part in research study titled: **Psychosocial support guidelines for nurses caring for patients diagnosed with COVID-19 infection in the NWP.**

I declare that:

- I have read this information/it was explained to me a trusted person in a language with which I am fluent and comfortable
- The research was clearly explained to me
- I have had a chance to ask questions to both the person getting the consent from me, as well as the researcher and all my questions have been answered
- I understand that taking part in this study is voluntary and I have not been pressurised to take part
- I may choose to leave the study at any time and I will not be handled in a negative way if I do so
- I may be asked to leave the study before it has finished, if the researcher feels it is in the best interest, or if I do not follow the study plan, as agreed to

Signed at (Place)..... On (date) .....20.....

....

Signature of participant Signature of witness

Declaration by person obtaining consent

I (name) ..... declare that:

- I clearly and in detail explained the information in this document to

.....

- I did/did not use an interpreter.
- I encouraged him/her to ask questions and took adequate time to answer them.
- I am satisfied that he/she adequately understands all aspects of the research, as discussed above
- I gave him/her time to discuss it with others if he/she wished to do so.

Signed at (place) ..... on (date) ..... 20....

.....

Signature of person obtaining consent

Declaration by researcher

I (name) ..... declare that:

- I had it explained by ..... who I trained for this purpose.
- I did not use an interpreter
- I encouraged participants to ask questions and took adequate time to answer them and was available should participant want to ask any further questions.
- The informed consent was obtained by an independent person.
- I am satisfied that he/she adequately understands all aspects of the research, as described above.
- I am satisfied that he/she had time to discuss it with others if he/she wished to do so.

Signed at (place) ..... on (date) ..... 20....

.....

Signature of researcher

ANNEXURE G2: INFORMED CONSENT FOR EXPERTS

NWU®
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YUNIBESITHI YA BOKONE-BOPHIRIMA

NWU Health Research Ethics Committee
(NWU-HREC)
Faculty of Health Sciences
2022 -04- 26
NWU

For.....

TITLE: Psychosocial support guidelines for nurses caring for patients diagnosed with COVID-19 infection in the North West Province

ETHICS REFERENCE NUMBERS: NWU-00309-21-A1

PRINCIPAL INVESTIGATOR: Prof MM Moagi & Prof L A Sehularo

POST GRADUATE STUDENT: Joan Mologadi Dikobe

ADDRESS: House no 10487

Setumo Park

Mafikeng

CONTACT NUMBER: 072 205 1723/072 573 9541

You are being invited to participate in a modified e-Delphi study which is a systematic polling of the opinions of expert panel knowledgeable about the psychosocial support guidelines for nurses caring for patients diagnosed with COVID-19 infection. This **research study** forms part of my doctoral degree. Please take some time to read the information presented here, which will explain the details of this study. Please ask the researcher or person explaining the research to you any questions about any part of the study that you do not fully understand. It is very important that you are fully satisfied that you clearly understand what this research is about and how you might be involved. Also, your participation is entirely voluntary and you are free to say no to participate. If you say no, this will not affect you negatively in any way whatsoever. You are also free to withdraw from the study at any point, even if you do agree to take part now.

This study has been approved by the Health Research Ethics Committee of the Faculty of Health Sciences of the North-West University (NWU-00309-21-A1) and will be conducted according to the ethical guidelines and principles of Ethics in Health Research: Principles,

Processes and Structures (DoH, 2015) and other international ethical guidelines applicable to this study. It might be necessary for the research ethics committee members or other relevant people to inspect the research records.

1. **What is this research study all about?**

- The discussion of the developed guidelines will be through google meet. Due to COVID-19 pandemic, there will be no face to face meeting between the researcher and experts.
- This study will be conducted at the time that is convenient for the participating experts and this study will involve health researchers who are experienced and trained in health sciences. Expert will be included in this study as the participants
- We plan to develop and validate psychosocial support guidelines for the nurses caring for patients diagnosed with COVID-19 infection in North West Province.

2. **WHO IS AN EXPERT?**

An expert is any individual who is qualified and who has tremendous knowledge and understanding in qualitative research, policy and guideline development such as advanced psychiatric nurses, psychiatrists, psychologists and social workers with experience in the field of psychosocial support guidelines for the nurses caring for patients diagnosed with COVID-19 infection.

3. **Why have you been invited to participate?**

- You have been invited to be part of this research because you are:
  - Registered with the professional body such as HPCSA, SANC, SACSSP etc.
  - An expert who is willing to participate voluntarily in the study
  - Qualified experts from academic, private, government and non-government organisations in the area of qualitative research, policy and or guideline development, healthcare
  - Having at least three years' experience in an area of specialisation.

- You will not be able to take part in this research if you are:
  - Non-experts

4. **What will be expected of you?**

You will be expected to respond to the validation of the preliminary guidelines formulated and you be given a period of about two weeks to respond.

5. Will you gain anything from taking part in this research?

- The gains for you if you take part in this study will be:
  - To be equipped to assess and implement evidence- based practice
  - The opportunity to make contribution towards nursing education, nursing practice and nursing research.
  - Knowledge obtained from the research that may expand the participant understanding of some issues related to health

6. Are there risks involved in you taking part in this research and what will be done to prevent them?

- There are more gains for you in joining this study than there are risks. The risks associated with participation in this study are minimal.
- If you feel uncomfortable about participating in e-Delphi study, you can discontinue study at any time without penalties/

7. How will we protect your confidentiality and who will see your findings?

- Anonymity of your findings will be protected by ensuring that there will be no identifying information on any of the data from the e-Delphi study. Your privacy will be respected by assigning a code number and the names of participants will not be disclosed. Your results will be kept confidential by not sharing them with people other than the promoters and the co-coder. Only the researchers and co-coder will be able to look at your findings. Findings will be kept safe by locking hard copies in locked cupboards in the researcher's office and for electronic data it will be password protected. As soon as data has been transcribed it will be deleted from the recorders. Data will be stored for five years.

8. What will happen with the findings?

- The findings of this study will only be used for this study and will be made available in thesis for the doctoral degree at North-West University, Faculty of Health Sciences. Feedback will be given to all the participants of this study and to all relevant

stakeholders. The researcher will also publish articles and present the results of the study at conferences.

How will you know about the results of this research?

- We will give you the results of this research when the study is completed by the researcher
- You will be informed of any new relevant findings by the researcher

Will you be paid to take part in this study and are there any costs for you?

No, you will not be paid to take part in this study because this study is not funded. There will thus be no costs involved for you, if you do take part in this study.

Is there anything else that you should know or do?

- You can contact Joan Dikobe at 072 205 1723 if you have any further questions or have any problems.
- You can also contact the Health Research Ethics Committee via Mrs Carolien van Zyl at 018 299 1206 or carolien.vanzyl@nwu.ac.za if you have any concerns that were not answered about the research or if you have complaints about the research.
- You will receive a copy of this information and consent form for your own purposes.

Declaration by participant

By signing below, I..... agree to take part in research study titled: **Psychosocial support guidelines for the nurses caring for patients diagnosed with COVID-19 infection.**

I declare that:

- I have read this information/it was explained to me a trusted person in a language with which I am fluent and comfortable
- The research was clearly explained to me
- I have had a chance to ask questions to both the person getting the consent from me, as well as the researcher and all my questions have been answered
- I understand that taking part in this study is voluntary and I have not been pressurised to take part
- I may choose to leave the study at any time and I will not be handled in a negative way if I do so
- I may be asked to leave the study before it has finished, if the researcher feels it is in the best interest, or if I do not follow the study plan, as agreed to

Signed at (Place)..... On (date) .....20.....

.....

Signature of participant

.....

Signature of witness

Declaration by person obtaining consent

I *(name)* ..... declare that:

- I clearly and in detail explained the information in this document to .....
- I did/did not use an interpreter.
- I encouraged him/her to ask questions and took adequate time to answer them.
- I am satisfied that he/she adequately understands all aspects of the research, as discussed above
- I gave him/her time to discuss it with others if he/she wished to do so.

Signed at (*place*) ..... on (*date*) ..... 20....

.....
Signature of person obtaining consent

Declaration by researcher

I *(name)* ..... declare that:

- I had it explained by ..... who I trained for this purpose.
- I did not use an interpreter
- I encouraged participants to ask questions and took adequate time to answer them and was available should participant want to ask any further questions.
- The informed consent was obtained by an independent person.
- I am satisfied that he/she adequately understands all aspects of the research, as described above.
- I am satisfied that he/she had time to discuss it with others if he/she wished to do so.

Signed at (*place*) ..... on (*date*) ..... 20....

.....
Signature of researcher

ANNEXURE H: RECRUITMENT MATERIAL

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YUNIBESITI YA BOKONE-BOPHIRIMA

INVITATION TO PARTICIPATE IN RESEARCH

TOPIC:

Psychosocial support guidelines for nurses caring for patients diagnosed with COVID-19 infection

INVITATION

You are hereby cordially invited to participate in the above research by Mrs Joan Dikobe from the North-West University

WHY IS THIS RESEARCH NEEDED?

COVID-19 pandemic has been spreading rapidly both internationally and locally and was considered a public health emergency by the World Health Organization (WHO). The aim of this research is to develop and validate psychosocial support guidelines for nurses caring for patients diagnosed with COVID-19 pandemic in North West Province.

WOULD THIS STUDY BE A GOOD FIT FOR ME?

This study might be a good fit for you if

- You are registered with the South African Nursing Council (SANC).
- In possession of more than one month experience in caring for patients diagnosed with COVID-19
- Currently employed in COVID-19 sites in North West Province (NWP)
- Ability to communicate in English; and
- Willingness to voluntarily participate in the study

WHAT WOULD HAPPEN IF I TOOK PART IN THE STUDY?

If you decide to participate in this study, you will be required to do the following:

- Be nominated by your hospital management
- Be willing to participate in a focus group discussion
- Use your phone or laptop to participate visually
- Have data in order to use phone or laptop
- To have 30- 60 minutes of participation

BENEFITS OF THE STUDY

Direct benefits for you if you participate in the research include that you will

- Be equipped to assess and implement evidence- based practice
- Have the opportunity to verbalise your experiences regarding caring for patients diagnosed with COVID-19 pandemic.
- Making contribution to nursing education, nursing practice and nursing research

DECLINE TO PARTICIPATE/PRIVACY

- You are free to decline to participate in the research and no penalty will be imposed on
- Your personal details will not be made available to anyone that is not part of the research team

THE RESEARCHER

- Mrs Joan Dikobe is the primary investigator of this research project. She is the Lecturer at the North West College of Nursing.

CONTACT DETAILS

Mrs Joan Dikobe
E-mail: joandik@gmail.com
Cell no: 072 205 1723/072 573 9541

COSTS

- You will be required to have internet access

ANNEXURE I: CONFIDENTIALITY AGREEMENT



CONFIDENTIALITY UNDERTAKING

Entered into between:

Co-Coder

I, the undersigned

Prof / Dr /Mr /Ms _____

Identity Number: _____

Address: _____

Hereby undertake in favour of the NORTH-WEST UNIVERSITY, a public higher education institution established in terms of the Higher Education Act No.101 of 1997

Address: Office of the Institutional Registrar, Building C1, 53 Borcherd Street, Potchefstroom, 2520

1. Interpretation and definitions

1.1 In this undertaking, unless inconsistent with, or otherwise indicated by the context:

1.1.1 "Confidential information" shall include all information that is confidential in its nature or marked as confidential and shall include any existing and new information obtained by me after the Commencement Date, including but not be limited in its interpretation to, research data, information concerning research participants, all secret knowledge, technical information and specifications, manufacturing techniques, designs, diagrams, instruction

manuals, blueprints, electronic artwork,samples,devices,demonstrations,formulae,know-how,intellectual property, information concerning materials, marketing and business information generally, financial information that may include remuneration detail, pay slips, information relating to human capital and employment conditions, ledgers, income and expenditures and other materials of whatever in which the NWU has an interest in being kept confidential; and

1.1.2 “Commencement Date” means the date of signature of this undertaking by myself.

1.2 The headings of clauses are intended for convenience only and shall not affect the interpretation of this undertaking

2. Preamble

2.1 In performing certain duties requesting by the NWU, I will have access to certain confidential information provided by the NWU in order to perform the said duties and I agree that it must be kept confidential

2.2 The NWU has agreed to disclose certain of this confidential information and other information to me subject to me agreeing to the terms of confidentiality set out herein.

3. Title to the confidential information

I hereby acknowledge that all right, title and interest in and to the confidential information vests in the NWU and that I will have no claim of any nature in and to the confidential information.

4. Periods of confidentiality

The provisions of this undertaking shall begin on the commencement date and remain in force indefinitely

5. Non-disclosure and undertakings

I undertake:

5.1 to maintain the confidentiality of any confidential information to which I shall be allowed access by the NWU, whether before or after the commencement date of this undertaking. I will not divulge

or permit to be divulged to any person any aspect of such confidential information otherwise than may be allowed in terms of this undertaking;

5.2 to take all such steps as may be necessary to prevent the confidential information falling into the hands of an unauthorised third party;

5.3 not to make use of any of the confidential information in the development, manufacture, marketing and/or sale of any goods;

5.4 not to use any research data for publication purposes;

5.5 not to use or disclose or attempt to use or disclose the confidential information for any purpose other than performing research purposes only and includes questionnaires, interviews with participants, data gathering, data analysis and personal information of participants/research subjects;

5.6 not to use or attempt to use the confidential information in any manner which will cause or be likely to cause injury or loss to a research participant or the NWU; and

5.7 that all documentation furnished to me by the NWU pursuant to this undertaking will remain the property of the NWU and upon the request of the NWU will be returned to the NWU.I shall not make copies of any such documentation without the prior written consent of the NWU.

6. Exception

The above undertakings by myself shall not apply to confidential information which I am compelled to disclose in terms of a court order

7. Jurisdiction

This undertaking shall be governed by South African law be subject to the jurisdiction of South African courts in respect of any dispute flowing from this undertaking

8. Whole agreement

8.1 This document constitutes the whole of this undertaking to the exclusion of all else

8.2 No amendment, alteration, addition, variation or consensual cancellation of this undertaking will be valid unless in writing and signed by me and the NWU

Dated at_____this_____20____

Witnesses:

1. ----------

2. ----------

(Signatures of witnesses)

(Signature)

ANNEXURE J: REQUEST TO ACT AS A CO-CODER IN RESEARCH



Dear sir/Madam

Request letter to the co-coder

I am currently studying for PhD (Doctor of philosophy) in health sciences at the North West University, Mafikeng Campus. I am currently working on a research project for the completion of my studies and I am expected to conduct this research in fulfilment of the requirements for the degree.

The title of my study is: "Psychosocial support guidelines for nurses caring for patients diagnosed with COVID-19 infection in the North West Province". This study has been approved by the NuMIQ scientific review and Ethics committee of the North West University, the Provincial Department of Health and Management of the hospitals.

The aim of the study is to:

Develop and validate psychosocial support guidelines for nurses caring for patients diagnosed with COVID-19 infection in the North West Province. This study might assist nurses in improving care for patients diagnosed with COVID-19 infection in nursing practice, education and research. The guidelines which will be developed and validated from the study findings, may assist nurses in caring for patients diagnosed with COVID-19 in the North West Province.

In order to achieve the objective of this study, semi-structured virtual focus group discussion via google meet will be conducted with professional nurses. Broad questions that will be asked to start the interview are as follows: "What are your experiences in caring for patients

diagnosed with COVID-19 infection? And what type of support do you need when you care for patients diagnosed with COVID-19 in the NWP?"

Kindly be informed that there will be confidentiality and that the names of participants will not be revealed for identification purposes.

Please find the research proposal enclosed.

Your favourable consideration in the above matter and a response at your earliest convenience will be appreciated.

Yours faithfully

Ms J.M Dikobe
PhD student

Promoter: Prof M.M Moagi

Co- promoter: Prof L.A Sehularo

ANNEXURE K: PROOF OF CO-CODING

RESEARCH DATA ANALYSIS REPORT

FOR: J M DIKOBE
16515080

STUDY: Psychosocial support guidelines for nurses caring for patients diagnosed with COVID-19 infection in the North West Province

INDEPENDENT CODER: Annatjie van der Wath

Saturation of data was achieved related to the major themes – The researcher conducted four focus groups

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

Qualitative Data Analysis

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

Psychosocial support guidelines for nurses caring for patients diagnosed with COVID-19 infection in the North West Province

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



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

ANNEXURE L: CERTIFICATE OF LANGUAGE EDITING

Caption COMMUNICATIONS

Unit 3 West Square Business Park
407 West Avenue
Randburg
2194

17 March 2023

TO WHOM IT MAY CONCERN

This serves to confirm that I have edited and made the necessary corrections and emendations to the study:

PSYCHOSOCIAL SUPPORT GUIDELINES FOR NURSES CARING FOR PATIENTS DIAGNOSED WITH COVID-19 INFECTION IN THE NORTH WEST PROVINCE

by

JOAN MOLOGADI DIKOBE

Sincerely

J Musi
Publisher, editor and translator

Tel: +27 84 513 3707• Fax: 086 532 6404• e-mail: caption@webmail.co.za • P O Box 1550 • Honeydew • 2040

ANNEXURE M: JOURNAL ACCEPTANCE LETTER OF MANUSCRIPT ONE

CENTER FOR PSYCHOLOGICAL STUDIES/SERVICES

(Publisher of Gender & Behaviour and IfePsychologIA)

IFE PsychologIA
Ile-Ife, Osun State
Nigeria

04 April 2023

Joan Mologadi Dikobe *(Corresponding author)*
School of Nursing Science
Faculty of Health Sciences
North-West University
South Africa

Dear Sir/Ma,

LETTER OF ACCEPTANCE

This is to inform you that your paper titled: **'Psychosocial support for nurses caring for patients diagnosed with COVID-19 infection: An integrated literature review'**, co-authoured by: *Miriam Mmamphamo Moagi & Leepile Alfred Sehularo,* submitted to us for possible publication in **Gender & Behaviour** Journal has been peer reviwed, corrected and accepted to be published in **Volume 21 (2)**, June 2023.

The decision of the editorial board is stated below:

(a) It has merit.

(b) It has been reviewed, edited and accepted for publication.

Kind regards,

Dr Josiah Ojo
Editorial Office,
Ife Centre for Psychological Studies (ICPS) Nigeria.
(Publishers of Gender & Behaviour and IfePsychologLA Journals)
www.ifepsychologia.org

ANNEXURE N: BMS-TOPHJ-2022-183 –MANUSCRIPT PROVISIONAL ACCEPTANCE LETTER OF MANUSCRIPT TWO

Gmail

Joan Dikobe <joandik@gmail.com>

Manuscript Provisional Acceptance letter | BMS-TOPHJ-2022-183

3 messages

The Open Public Health Journal <admin@bentham.manuscriptpoint.com> Mon, Jan 23, 2023 at 7:39 AM

Reply-To: The Open Public Health Journal <tophj@benthamopen.net>
To: joandik@gmail.com

Dear Dr. Joan Dikobe,

I am pleased to inform you that your article Reference No. BMS-TOPHJ-2022-183, entitled **"The lived experiences of nurses caring for patients diagnosed with COVID-19 infection in the North West Province"** has been provisionally approved for publication in **"The Open Public Health Journal"** journal.

You will now need to pay the processing fee, either via the online payment link in the invoice sent to you or, via a bank transfer (evidence of which would need to be sent to us), before your article is published.

Please note that the final acceptance of your article is subject to a detailed scrutiny and approval of the following:

a. The standard of English language in the articles should be suitable.

b. "IMRAD" Structure: Headings such as Introduction/background, Methods and Materials, Experimental, Result and Discussion are mandatory for research articles.

c. Abstract should be in the format of a STRUCTURED ABSTRACT, having explicit headings such as background, introduction, method, result and conclusion.

d. References should be in the correct format. This will vary from journal to journal.

e. All references mentioned in the reference list should be cited in the text, and vice versa.

f. Permission should have been obtained, for use of copyright material from the appropriate sources (including the Internet) and submitted to us.

g. There should be no difference in the list of Authors in the revised manuscript, from what was submitted at the time of submission of the article. Please remember that the author list cannot be modified at a later stage.

h. If your study involves human or animal subjects, you should have obtained ethical approval. Please state whether Ethical Approval was given, by whom and the relevant Judgement's reference number.

- Ethical Committee Name:
- Guidelines for Human or Animal:

Please ensure that all the above points have been properly taken care of to avoid delays in final acceptance and publication. For any further clarifications, please send your query to info@benthamopen.net

We wish to thank you for submission of the manuscript to **"The Open Public Health Journal"** and look forward to continued collaboration in the future.

Note: For complaints contact: complaint@benthamopen.net

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Joan Dikobe <joandik@gmail.com> Mon, Jan 23, 2023 at 8:23 AM
To: Miriam Moagi <12609439@nwu.ac.za>, Leepile Sehularo <Leepile.Sehularo@nwu.ac.za>

[Quoted text hidden]

Leepile Sehularo <Leepile.Sehularo@nwu.ac.za> Mon, Jan 23, 2023 at 9:55 AM
To: Joan Dikobe <joandik@gmail.com>, Miriam Moagi <Miriam.Moagi@nwu.ac.za>

Good morning,

This is great news.

Best regards,

Prof. LA Sehularo

[Quoted text hidden]

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http://www.nwu.ac.za/it/gov-man/disclaimer.html

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ANNEXURE O: JOURNAL ACCEPTANCE LETTER OF MANUSCRIPT THREE

CENTER FOR PSYCHOLOGICAL STUDIES/SERVICES

(Publisher of Gender & Behaviour and IfePsychologIA)

IFE PsychologIA
Ile-Ife, Osun State
Nigeria

24 November 2022

Prof Miriam Mmamphamo Moagi *(Corresponding Authour)*
Department of Nursing Science
School of Health Sciences
North West University
South Africa

Dear Sir/Ma,

LETTER OF ACCEPTANCE

This is to inform you that your paper titled: 'The Psychosocial Support Needed for the Nurses Caring for Patients Diagnosed with COVID-19 infection in the North West Province', co-authoured by *Joan M. Dikobe & Leepile A. Sehularo*, submitted to us for possible publication in Gender & Behaviour Journal has been peer reviwed, corrected and accepted to be published in Volume 20 (4), December 2022.

The decision of the editorial board is stated below:

(a) It has merit.

(b) It has been reviewed, edited and accepted for publication.

Kind regards,

Dr Josiah Ojo
Editorial Office,
Ife Centre for Psychological Studies (ICPS) Nigeria.
(Publishers of Gender & Behaviour and IfePsychologIA Journals)
www.ifepsychologia.org

ANNEXURE P: SUBMISSION ACKNOWLEDGEMENT OF MANUSCRIPT FOUR

Gmail

Joan Dikobe <joandik@gmail.com>

[IJERPH] Manuscript ID: ijerph-2207511 - Submission Received

2 messages

Editorial Office <ijerph@mdpi.com> Mon, Jan 23, 2023 at 10:38 PM
Reply-To: ijerph@mdpi.com
To: Joan Mologadi Dikobe <joandik@gmail.com>
Cc: Miriam Mmamphamo Moagi <12609439@nwu.ac.za>, Leepile Alfred Sehularo <leepile.sehularo@nwu.ac.za>

Dear Mrs. Dikobe,

Thank you very much for uploading the following manuscript to the MDPI submission system. One of our editors will be in touch with you soon.

Journal name: International Journal of Environmental Research and Public Health
Manuscript ID: ijerph-2207511
Type of manuscript: Article
Title: Conceptual framework for the psychosocial support of nurses caring for patients diagnosed with COVID-19 infection in North West Province
Authors: Joan Mologadi Dikobe *, Miriam Mmamphamo Moagi, Leepile Alfred Sehularo
Received: 23 January 2023
E-mails: joandik@gmail.com, 12609439@nwu.ac.za, leepile.sehularo@nwu.ac.za

You can follow progress of your manuscript at the following link (login required):
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If you have any questions, please do not hesitate to contact the IJERPH editorial office at ijerph@mdpi.com

Kind regards,
IJERPH Editorial Office
St. Alban-Anlage 66, 4052 Basel, Switzerland
E-Mail: ijerph@mdpi.com
Tel. +41 61 683 77 34
Fax: +41 61 302 89 18

*** This is an automatically generated email ***

Joan Dikobe <joandik@gmail.com> Mon, Jan 23, 2023 at 10:33 PM
To: Miriam Moagi <12609439@nwu.ac.za>

[Quoted text hidden]

ANNEXURE Q: QUALITATIVE HEALTH RESEARCH JOURNAL SUBMISSION-CONFIRMATION OF ACKNOWLEDGEMENT OF RECEIPT OF MANUSCRIPT FIVE

Gmail **Joan Dikobe <joandik@gmail.com>**

Qualitative Health Research QHR-2023-0198

2 messages

Qualitative Health Research <onbehalfof@manuscriptcentral.com> Fri, Feb 24, 2023 at 7:40 PM
Reply-To: QHR@sagepub.com
To: joandik@gmail.com, leepile.sehularo@nwu.ac.za, 12609439@nwu.ac.za, Leepile.Sehularo@nwu.ac.za

24-Feb-2023

Dear Mrs. Dikobe:

Your manuscript entitled "Psychosocial support guidelines of nurses caring for patients diagnosed with COVID-19 infection in North West Province,South Africa" has been successfully submitted online and is presently being given full consideration for publication in Qualitative Health Research.

Your manuscript ID is QHR-2023-0198.

You have listed the following individuals as authors of this manuscript:
Dikobe, Joan; Moagi, Miriam ; Sehularo, Leepile

Please mention the above manuscript ID in all future correspondence or when calling the office for questions. If there are any changes in your street address or e-mail address, please log in to ScholarOne Manuscripts at https://mc.manuscriptcentral.com/qhr and edit your user information as appropriate.

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Thank you for submitting your manuscript to Qualitative Health Research.

Sincerely,
Qualitative Health Research Editorial Office
QHR@sagepub.com

Joan Dikobe <joandik@gmail.com> Sat, Feb 25, 2023 at 11:11 AM
To: Joan Dikobe <joandik@gmail.com>

[Quoted text hidden]

ANNEXURE R: AUTHORS GUIDELINES FOR MANUSCRIPTS ONE AND THREE

Journal Name: Gender & Behaviour

Content:

GENDER & BEHAVIOUR welcomes scholarly manuscripts from authors all over the world on a wide array of subjects concerning psychological and behavioural aspects of gender in general. All manuscripts MUST respect the dignity of HUMANITY. Articles published or submitted for publication elsewhere are not accepted. Authors are solely and fully responsible for the statements and views contained in their articles. Neither the Editorial board nor the Ife Center for Psychological Studies/Services accepts responsibility for author's views and statements

Book Review: Two copies of the book/manuscript to be reviewed are to be submitted to the Project Coordinator. Gender and Behaviour Ife Centre for Psychological Studies and Service. P.O. Box 1548 Ile-Ife. Osun State, Nigeria. Or through Emails: ifepsy@yahoo.com or wanawake2002@yahoo.com.

Manuscript Preparation: Prepare manuscripts according to the Publication manual of the American Psychological Association (4th Edition, 1994; APA 750 First Street, NE, Washington, 20002-4242). Follow "Guidelines to reduce Bias in Language (pp. 46-60) Limit manuscripts to 25 pages of text, including references. On page 1, type article title, author name(s), affiliation(s) address phone and fax numbers, e-mail address (es) running head (abbreviated title, no more than 45 characters and spaces) name and address of the person to whom requests for reprints should be address; on page 2, type an abstract of no more than 150 words; type author notes/acknowledgements at the end of the article (just before references section). All copies must be double – spaced: The author name(s) should appear only on the title sheet.

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Cover letter: I on a cover letter, include the contact author's address and telephone and fax numbers and state that the manuscript includes only original materials test has not been published and that in not under review for publication elsewhere.
Manuscript and Disk submission: Submit two (2) manuscript copies to: Project Coordinator, Gender and Behaviour, Ife Centre for Psychological Studies/Service, P.O. Box 1548 Ile-Ife, Osun State, Nigeria.

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ANNEXURE S: AUTHORS GUIDELINES FOR MANUSCRIPT TWO

Journal Name: The Open Public Health

AIMS AND SCOPE

The Open Public Health Journal is an Open Access online journal which publishes original research articles, reviews, short articles and guest edited single topic issues in the field of public health. Topics covered in this interdisciplinary journal include: public health policy and practice; theory and methods; occupational health and education; epidemiology; social medicine; health services research; ethics; environmental health; adolescent health; AIDS care; mental health care. Each peer-reviewed article that is published in a Bentham *OPEN* Journal is universally and freely accessible *via* the Internet in an easily readable and printable PDF format.

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tables and images, to ensure that they appear in proper format.

References, figures, tables, structures, *etc.* should be referred to in the text at the place where they have been discussed. Figure legends/caption should also be provided. A successful electronic submission of a manuscript will be followed by a system-generated acknowledgement to the principal/corresponding author within **72** hours of the dispatch of the manuscript. Any questions with regards to the preparation of and submission of your manuscript to the journal should be addressed to tophj@benthamopen.net and copied to info@benthamopen.net

NOTE: Any queries therein should be addressed to oa@benthamopen.net and copied to Jalil@benthamopen.net

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Manuscripts Published:

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Manuscript Length:

Research Articles:

Research articles should be of 4000-6000 words with 75 or more references excluding figures, structures, photographs, schemes, tables, *etc.*

MANUSCRIPT SECTIONS FOR PAPERS

Manuscripts submitted for research, review articles and letters in the respective journal should be divided into the following sections:

- Title
- Title page
- Structured Abstract
- Keywords
- Text Organization
- Conclusion
- List of Abbreviations (if any)
- Consent for Publication
- Availability of Data and Materials
- Funding
- Conflict of Interest
- Acknowledgements
- References
- Appendices
- Figures/Illustrations (if any)
- Chemical Structures (if any)
- Tables (if any)
- Supportive/Supplementary Material (if any)

Title:

The title should be precise and brief and must not be more than 120 characters. Authors should avoid the use of non-standard abbreviations and question marks in titles. The title must be written in title case except for articles, conjunctions and prepositions. As recommended by the Reporting guidelines information about the study should be a part of the title (particularly for systematic reviews). Authors should also provide a short 'running title'. The title, running title, by line

correspondent footnote and the key words should be written as presented in the original manuscript.

Title Page:

Title page should include paper title, author(s) full name and affiliation, corresponding author(s) names complete affiliation/address, along with phone, fax and email.

Structured Abstract:

The abstract of an article should be its clear, concise and accurate summary, having no more than 250 words, and including the explicit sub-headings (as in-line or run-in headings in bold). Use of abbreviations should be avoided and the references should not be cited in the abstract. All the original research articles and systematic reviews must be accompanied with a structured abstract. All the original research articles and systematic reviews must be accompanied with a structured abstract. Ideally, each abstract should include the following sub-headings, but these may vary according to requirements of the article.

- Background
- Objective
- Methods
- Results
- Conclusion

The headings can vary, but must state the purpose of the study, details of the participants, measurements, methods, main findings and conclusion.

Keywords:

6 to 8 keywords must be provided. Choose important and relevant keywords that researchers in your field will be searching for so that your paper will appear in a database search. The keywords should be contained in the title and they should appear several times in the article. In biomedical fields, MeSH terms are a good 'common vocabulary' source to draw keywords from https://www.nlm.nih.gov/mesh/meshhome.html.

Text Organization:

The main text should begin on a separate page and should be divided into title page, abstract and the main text. The text may be subdivided further according to the areas to be discussed, which should be followed by the List of Abbreviations (if any), Conflict of Interest, Acknowledgements and Reference sections. For review, the manuscript should be divided into title page, abstract and the main text. The text may be subdivided further according to the areas to be discussed, which should be followed by the Acknowledgements and Reference sections. The Review Article should mention any previous important recent and old reviews in the field and contain a comprehensive discussion starting with the general background of the field. It should then go on to discuss the salient features of recent developments. The authors should avoid presenting material which has already been published in a previous review. The authors are advised to present and discuss their observations in brief.

For Research Articles the manuscript should begin with the title page and abstract followed by the main text, which must be structured into separate sections as **Introduction, Materials and Methods, Results, Discussion, Conclusion, Ethics Approval and Consent to Participate, Human and Animal Rights, Conflict of Interest, Acknowledgements and References**.

For case reports, the authors should follow the CARE guidelines. The CARE checklist should be submitted as a separate file.

The manuscript style must be uniform throughout the text and 10 pt Times New Roman fonts should be used. The full term for an abbreviation should precede its first appearance in the text unless it is a standard unit of measurement. The reference numbers should be given in square brackets in the text. Italics should be used for Binomial names of organisms (Genus and Species), for emphasis and for unfamiliar words or phrases. Non-assimilated words from Latin or other languages should also be italicized *e.g. per se, et al., etc*.

Section Headings:

Section headings should be numbered sequentially, left aligned and have the first letter capitalized, starting with the introduction. Sub-section headings however, should be in lower-case and italicized with their initials capitalized. They should be numbered as 1.1, 1.2, *etc*.

INTRODUCTION:

The Introduction section should include the background and aims of the research in a comprehensive manner.

MATERIALS AND METHODS:

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ANNEXURE U: AUTHORS GUIDELINES FOR MANUSCRIPT FIVE

Journal name: Qualitative Health Research Journal

This Journal is a member of the Committee on Publication Ethics

This Journal recommends that authors follow the Recommendations for the Conduct, Reporting, Editing, and Publication of Scholarly Work in Medical Journals formulated by the International Committee of Medical Journal Editors (ICMJE).

Please read the guidelines below then visit the Journal's submission site https://mc.manuscriptcentral.com/qhr to upload your manuscript. Please note that manuscripts not conforming to these guidelines may be returned. Remember you can log in to the submission site at any time to check on the progress of your paper through the peer review process.

Only manuscripts of sufficient quality that meet the aims and scope of Qualitative Health Research will be reviewed.

There are no fees payable to submit or publish in this journal.

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1.1 Aims & Scope Before submitting your manuscript to Qualitative Health Research, please ensure you have read the Aims & Scope.

1.2 Article types Each issue of Qualitative Health Research provides readers with a wealth of information —, commentaries on conceptual, theoretical, methodological and ethical issues pertaining to qualitative inquiry as well as articles covering research, theory and methods.

1.2.1 What types of articles will QHR accept? QHR asks authors to make their own decision regarding the fit of their article to the journal. Do not send query letters regarding article fit.

- Read the Mission Statement on main QHR webpage.

- Search the QHR journal for articles that address your topic. Do we publish in your area of expertise?

- Ask these questions: Does it make a meaningful and strong contribution to qualitative health research literature? Is it original? Relevant? In depth? Insightful? Significant? Is it useful to reader and/or practitioner?

- Note the sections: General articles, critical reviews, articles addressing qualitative methods, commentaries on conceptual, theoretical, methodological, and ethical issues pertaining to qualitative inquiry.

- QHR accepts qualitative methods and qualitatively-driven mixed-methods, qualitative metaanalyses, and articles addressing all qualitative methods.

- QHR is a multi-disciplinary journal and accepts articles written from a variety of perspectives including: cross-cultural health, family medicine, health psychology, health social work, medical anthropology, medical sociology, nursing, pediatric health, physical education, public health, and rehabilitation.

- Articles in QHR provide an array of timely topics such as: experiencing illness, giving care, institutionalization, substance abuse, food, feeding and nutrition, living with disabilities, milestones and maturation, monitoring health, and children's perspectives on health and illness.
- QHR does NOT publish pilot studies.

Look Out for These Regular Special Features

Pearls, Pith and Provocation: This section fosters debate about significant issues, enhances communication of methodological advances and encourages the discussion of provocative ideas.

Mixed Methods: This section includes qualitatively-driven mixed-methods research, and qualitative contributions to quantitative research.

Advancing Qualitative Methods: Qualitative inquiry that has used qualitative methods in an innovative way.

Evidence of Practice: Theoretical or empirical articles addressing research integration and the translation of qualitatively derived insights into clinical decision-making and health service policy planning.

Ethics: Quandaries or issues that are particular to qualitative inquiry are discussed.

Teaching Matters: Articles that promote and discuss issues related to the teaching of qualitative methods and methodology.

1.3 Writing your paper

The SAGE Author Gateway has some general advice and on how to get published, plus links to further resources.

1.1.1 Make your article discoverable For information and guidance on how to make your article more discoverable, visit our Gateway page on How to Help Readers Find Your Article Online 2.

Editorial policies

2.1 Peer review policy Qualitative Health Research strongly endorses the value and importance of peer review in scholarly journals publishing. All papers submitted to the journal will be subject to comment and external review. All manuscripts are initially reviewed by the Editors and only those papers that meet the scientific and editorial standards of the journal, and fit within the aims and scope of the journal, will be sent for outside review.

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- The reviewer should not have recently collaborated with any of the authors
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(ii) Drafted the article or revised it critically for important intellectual content,

(iii) Approved the version to be published,

(iv) Each author should have participated sufficiently in the work to take public responsibility for appropriate portions of the content.

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2.6 Research ethics and patient consent

Medical research involving human subjects must be conducted according to the World Medical Association Declaration of Helsinki

Submitted manuscripts should conform to the ICMJE Recommendations for the Conduct, Reporting, Editing, and Publication of Scholarly Work in Medical Journals:

- All papers reporting animal and/or human studies must state in the methods section that the relevant Ethics Committee or Institutional Review Board provided (or waived) approval. Please ensure that you blinded the name and institution of the review committee until such time as your article has been accepted. The Editor will request authors to replace the name and add the approval number once the article review has been completed

- For research articles, authors are also required to state in the methods section whether participants provided informed consent and whether the consent was written or verbal.

Information on informed consent to report individual cases or case series should be included in the manuscript text. A statement is required regarding whether written informed consent for patient information and images to be published was provided by the patient(s) or a legally authorized representative. Please do not submit the patient's actual written informed consent with your article, as this in itself breaches the patient's confidentiality. The Journal requests that you confirm to us, in writing, that you have obtained written informed consent but the written consent itself should be held by the authors/investigators themselves, for example in a patient's hospital record.

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Qualitative Health Research conforms to the ICMJE requirement that clinical trials are registered in a WHOapproved public trials registry at or before the time of first patient enrolment as a condition of consideration for publication. The trial registry name and URL, and registration number must be included at the end of the abstract.

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The relevant EQUATOR Network reporting guidelines should be followed depending on the type of study. For example, all randomized controlled trials submitted for publication should include a completed CONSORT flow chart as a cited figure and the completed CONSORT checklist should be uploaded with your submission as a supplementary file. Systematic reviews and meta-analyses should include the completed PRISMA flow chart as a cited figure and the completed PRISMA checklist should be uploaded with your submission as a supplementary file. The EQUATOR wizard can help you identify the appropriate guideline.

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- References: APA format. Use pertinent references only. References should be on a separate page. Additional Editor's Preferences:
- Please do not refer to your manuscript as a "paper;" you are submitting an "article."

- The word “data” is plural.

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- Include figures, charts, and tables created in MS Word in the main text rather than at the end of the document.

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Email: vshannonqhr@gmail.com