



Experiences of professional nurses in paediatric wards during the COVID-19 pandemic, North West Province

TY Kgongwane

 orcid.org/0000-0003-1097-1655

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Supervisor: Dr JM Sebaeng

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Student number: 22520465

DECLARATION

I, Tshepiso Yvonne Kgongwane, declare that this dissertation titled “**Experiences of professional nurses in paediatric wards during COVID-19 pandemic, North West Province**” is my original work and it has not been submitted before at any higher education institution other than North-West University, South Africa.

Tshepiso Yvonne Kgongwane

Date

DEDICATION

I dedicate this dissertation to my daughter, Omontle Maologela, and my mother, Elizabeth Kgongwane, for their patience when I was working on this study.

ACKNOWLEDGEMENTS

- I thank the Almighty, Jehovah, El Shaddai, for giving me the strength to complete this study. I thank my supervisors Dr Jeanette Sebaeng and Professor Salaminah Moloko-Phiri for their enormous support and guidance throughout the study.
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- My mother, Elizabeth Kgongwane for her support and for staying with my daughter while I was busy with this dissertation.
- Professor Leepile Sehularo for co-coding .
- Professor Muchativugwa Liberty Hove for editing my work.

LIST OF ACRONYMS

- HREC - Health Research Ethics committee
- NWP - North West Province
- NWU - North- West University
- PPE - Personal Protective Equipment
- WHO - World Health Organisation

ABSTRACT

BACKGROUND: Corona virus brought changes in paediatric wards globally. The changes included restrictions of caregivers as a measure to curb the spread of the virus, paediatric admissions decreased due to caregivers' delayed treatment seeking behaviour, resulting in late presentations to hospitals with complications already, COVID-19 infections in paediatric nurses which led to their absence in the wards due to isolation and quarantine. This increased professional nurses' workload in paediatric wards during the COVID-19 pandemic. The results of these changes were shortage of staff and burnout which led to disruption of paediatric services.

AIM: The study aimed to generate an understanding of the experiences of professional nurses in paediatric wards of NWP during the COVID-19 pandemic.

STUDY SETTING: The study was conducted at two public hospitals in North West Province. The first study setting was a Provincial hospital which receives referred patients from district hospitals and clinics. The second study setting was a district hospital which receives patients from clinics.

METHODS: A qualitative-exploratory-descriptive, contextual and phenomenological research design was used to achieve the objectives of the study. Qualitative research method assisted the researcher to answer the research question in this study. A total of eleven professional nurses, five from the Provincial hospital and 6 from the district hospital, were purposively selected to participate in the study. Data was collected using in-depth interviews by the researcher at the selected hospitals. Data analysis was done by the researcher using Colaizzi's seven steps method. Ethical issues and trustworthiness were maintained throughout the study.

RESULTS: Three themes emerged from the study namely: 1) Nurses' experiences of COVID-19 pandemic, 2) Development of resilience during COVID-19 pandemic and 3) Lack of human and material resources.

CONCLUSION: The findings of this study show that professional nurses were overwhelmed during the pandemic due to shortage of staff and resources. Conclusions were drawn that in future pandemics more nurses should be allocated to paediatric wards to enhance quality nursing care. Recommendations were made for nursing practice, research and education for future pandemics.

KEY WORDS: children, COVID-19, experience, paediatric ward, pandemic, professional nurse

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SECTION 1: OVERVIEW OF THE STUDY

1.1 Introduction

The virus which emerged in early December 2019 in Wuhan, Hubei Province, China, spread explosively (Parker *et al.*, 2020:2), creating a huge public health threat worldwide (Zamir *et al.*, 2021:1). It was declared a pandemic by the World Health Organisation on March 11th 2020 (Carroll *et al.*, 2020:1). Transmission of the SARS CoV-2 (COVID-19) in healthcare facilities became a serious concern, which led to unprecedented infection prevention and control measures such as improved screening and visitor restriction to curb its spread (Kitano *et al.*, 2020:1).

The paediatric health services were severely disrupted by the eruption of COVID-19 virus resulting in limited access to clinics and hospitals, disruptions in vaccination and other paediatric health programmes (Zar *et al.*, 2020:1). Nurses in paediatric wards experienced increased workload and a dire shortage of nursing staff which has become one of the major challenges facing South Africa (Dlamini & Visser, 2017:1). COVID -19 pandemic exacerbated the shortage of staff and that impacted on the nursing care for paediatric patients (Al Thobaity & Alshammari, 2020:1). The existing shortage of nurses in South Africa became even more exacerbated during COVID-19 pandemic as it also increased administrative duties such as screening of all staff members and visitors, as well as tracing contacts of all patients that had tested positive for COVID-19 (Moyo *et al.* ,2022:9).

1.2 Background to the study

During the COVID-19 pandemic, paediatric admissions decreased due to caregiver's delayed treatment seeking behaviours resulting in unavoidable morbidity and mortality (Roland *et al.*, 2020 :1). Reduced access to health care facilities and fear of being infected with COVID -19 resulted in delayed care seeking for sick children, a decrease in childhood immunization as well as severe illness at presentation at clinical facilities (Zar *et al.*,2020:2). Decline in admissions in tertiary paediatric hospitals of Israel was also noticed four weeks after COVID-19 was declared a national emergency (Gavish *et al.*, 2021:3). In Italy, only paediatric patients affected by emergency conditions such as diabetic ketoacidosis or status epilepticus were brought to the hospital for admission (Praticò, 2021:2). In another study, Rusconi *et al.* (2021:5) in Italy confirmed that there were hospital care delayed treatment seeking habits for most of the paediatric conditions during the COVID-19 pandemic. Similarly, a reduction in paediatric admissions was noted in Europe (Somekhet *et al.*, 2020:2). A decline in paediatric admissions leads to complications and severe illness as children were brought to the hospital

late. This increased the workload for professional nurses working in paediatric wards during the pandemic as they nursed these admitted children.

Childhood immunisations have significantly enhanced health and reduced deaths among children, especially in developing countries (Abbas *et al.*, 2020 :1). However, children could not be vaccinated routinely at the local clinics during the COVID-19 pandemic lockdown.

Routine immunisation programmes in Nepal were halted resulting in three million under-five children missing their vaccination doses (Khatiwada *et al.*, 2021:2). There was an outbreak of measles in Dhading and Gorkha districts of Nepal as a result, whereby 160 cases were reported (Khatiwada *et al.*, 2021:2). In Saudi Arabia it was reported that childhood immunisation coverage was lower in 2020, compared with 2017 and 2019 respectively (Silveira *et al.*, 2021:2). On the other hand, most children in Pakistan, Sindh province, missed their routine immunisations during the provincial COVID-19 lockdown period (Chandir *et al.*, 2020:1). Additionally, Sevalie *et al.* (2021:4) verified a 52.5% reduction in the daily childhood immunisation statistics in Pakistan. The number of unimmunized children increased during lockdown, heightening the susceptibility to communicable diseases (Chandir *et al.*, 2020:1). A study conducted by Silveira *et al.*, (2021:1) in Afghanistan showed that due to the rapid spread of COVID-19, the vaccine coverage of polio declined. The after effects of measles non-vaccination or low vaccine coverage led to the outbreak of measles in South Africa in June 2022 (Yousif *et al.*, 2022:7). As a result, professional nurses in paediatric wards had an increased workload as they had to give catch-up vaccinations before children were discharged and to take care of admitted children who had complicated measles.

Paediatric surgical services were also disrupted during COVID-19 pandemic. According to a study conducted in Italy (Leva *et al.*, 2020:2), paediatric elective surgeries were halted from the 6th of March, and only emergencies were attended. Moreover, in Italy, all elective surgeries and outpatient activities were temporarily suspended and surgical treatment was reserved for paediatric patients diagnosed with congenital malformations (Pelizzo *et al.*, 2020:2). In Canada the Ministry of Health instructed hospitals to decrease elective surgeries and other non-emergent surgical procedures on 15 March 2020 (Wang *et al.*, 2020:1). Elective surgeries in China were postponed as invasive procedures and anaesthetic agents could affect the children's immunity, increasing their risk of contracting COVID-19 (Zhou *et al.*, 2020:1). At the beginning of the strict lockdown in Pakistan, elective surgeries were affected due to knowledge deficit about the COVID-19 (Zamir *et al.*, 2021:3). Ode *et al.* (2021:1) in Nigeria confirmed that there was a decline in the elective surgical services at the beginning of the COVID-19 pandemic as compared to a corresponding period in the preceding year. Similarly, in South Africa, during the national hard lockdown, hospitals prepared for

COVID-19 by reducing elective surgical practices and this resulted in reduced access to surgical care in hospitals (Chu *et al.*, 2020:2). This led to an increased number of children with complications arising from delayed or postponed surgeries, and it became the responsibility of professional nurses who work in paediatric wards to take care of these children. Ahmad *et al.* (2017:1) argues that if surgical treatment such as tonsillectomy is performed early, there are lower chances of postoperative complications such as haemorrhage and pain as compared to when treatment is delayed.

As a measure to curb the COVID-19 virus spread, South Africa restricted movement and public transport during hard lockdown (Siedner *et al.*, 2020:2). The same authors argue that as a result of these restrictions, there was a reduction in clinic visitation which resulted in a decline in childhood immunisations, leading to adjustments not only for paediatric patients but for their caregivers as well (Parbhoo *et al.*, 2021:2). These adjustments included restriction of caregivers from visiting or staying in the wards with their admitted children and only children over the age of 3 years were able to communicate with their caregivers telephonically on specific days (Swanzen & Jonker, 2020:1). McIntosh *et al.* (2021 :1) further showed that daily paediatric admissions in South Africa declined during level 5 lockdown compared with the pre-lockdown period. The experiences of COVID-19 pandemic in paediatric wards was further expressed by a doctor from Chris Hani Baragwanath Hospital as follows:

“COVID-19 impacted negatively on paediatric patients as they had no one to play with because their mothers were not allowed to stay with them. Doctors and students could no longer play and comfort them due to fear of COVID-19 transmission” (Pather, 2020:1).

During COVID-19 pandemic, infection control measures were implemented to prevent the spread, such as restrictions of hospital visits (Bembich *et al.*, 2021:1). As a result, caregivers of admitted paediatric patients worldwide were not allowed to stay with their children (Van Bruwaene *et al.*,2020:1). Kitano *et al.* (2020:1) argues that excluding caregivers in paediatric wards is not feasible, because it leads to increased nursing care for hospitalized children. Professional nurses working in paediatric wards had to do all the chores for admitted children, including duties that are usually performed by caregivers such as bathing and feeding. North *et al.* (2020:2) indicated that it is significant to involve caregivers in the care of their admitted children because they assist in maintaining the patient's comfort and hygiene as well as assessing the patient's condition. COVID-19 pandemic impacted not only on the care rendered to paediatric patients but also on the professional nurses in these wards. It is against this background that this study sought to describe and explore the experiences of professional nurses in paediatric wards of North West province during the COVID-19 pandemic.

1.3 Statement of the Problem

The statement of the problem is based on paediatric wards of two hospitals in North West Province. The two hospitals admit children who are aged below 12 years with surgical and medical paediatric conditions. The high care area in these hospitals is for admission of critically ill children and those with serious conditions such as congenital heart diseases are transferred to a tertiary hospital in Gauteng province. A more detailed context is provided in Section 1.8.2.1. The number of paediatric hospital admissions in the two selected hospitals decreased due to fear of being infected with COVID-19. The researcher observed this as she was working in paediatric ward during the COVID-19 pandemic. This had resulted from delayed treatment seeking behaviour because when children are brought to the hospitals late they already have some medical complications. This is what the researcher has observed during the COVID-19 pandemic in paediatric ward. Delayed treatment seeking behaviour is associated with serious consequences because patients do not access care timeously during the onset of symptoms (Sutherland *et al.*, 2020:7). During the COVID-19 pandemic, severe illness and mortality were reported in the United Kingdom and Italy due to delayed paediatric presentation to hospitals (Watson *et al.*, 2021:1). The selected hospitals receive referred patients from the sub-district hospitals, community health care centres, local clinics as well as from private practising doctors. There were times where some clinics and health centres were closed for some time due to COVID-19 cases that were identified in such clinics. As a result, children could not be immunised as per their schedule. Professional nurses were obliged to give catch-up immunisations as hospitalization gives children another opportunity to be vaccinated or to be given catch-up doses (Mihalek & Pannaraj, 2019:1), thus professional nurses in paediatric wards of the selected hospitals had to give catch-up doses for those children who had missed their routine vaccines due to lockdown and non-operating facilities because routine immunisation is important in reducing child mortality by preventing communicable diseases (Galadima, *et al* 2021:2).

The operating theatres of the selected hospitals were only open for emergency surgical cases and the elective surgeries were postponed during hard lockdown level. Halting elective surgical procedures was important because it assisted hospitals to prepare for the COVID-19 pandemic (McGuire *et al.*, 2020:1). The selected hospitals experienced a backlog of postponed operations and thus a need for children to be booked daily for operations. One of the strategies of curbing the spread of COVID-19 in the selected hospitals was restricting caregivers to stay with their admitted children unless the child was critically ill. During the period of hard lockdown caregivers' were not present in paediatric wards to provide basic care to their children such as feeding, bathing and reporting of any change that they would have noticed in their children's conditions. All the above mentioned changes in paediatric wards due

to the COVID-19 pandemic, led to professional nurses' negative experiences. It is against this background that this study sought to describe and explore the experiences of professional nurses in paediatric wards during COVID-19 pandemic in the North West Province.

1.4 Research Questions

- What are the experiences of professional nurses in paediatric wards during COVID-19 pandemic in the North West Province?

1.5 Research aim and objectives

1.5.1 Research aim

The aim of this study was to generate a deep understanding of the experiences of professional nurses in paediatric wards of North West province during the COVID-19 pandemic.

1.5.2 Research objective

The objectives were designed to:

- Describe and explore the lived experiences of professional nurses in paediatric wards of North West province during the COVID -19 pandemic.

1.6 Significance of the study

- **Children** – The results of this study may bring recommendations that addressed the challenges of professional nurses working in paediatric wards. Nursing services that were provided to children during the COVID-19 pandemic have been enhanced and child mortality and morbidity rate will be reduced in future pandemics.
- **Nursing practice** – From the background above, it is evident that the COVID-19 pandemic brought changes in how nursing care was rendered in paediatric wards. The results of this study assisted in improving provision of quality nursing services in paediatric wards provided by professional nurses.
- **Policy makers**- Based on the results of this study, policies may be drawn to assist in addressing the challenges that professional nurses working in paediatric wards faced, thus improving nursing management in the post-COVID-19 era.
- **Nursing research** - The findings of this study extended the body of knowledge and has led to further research on strategies designed for the improvement in the provision of nursing services in paediatric wards during the COVID-19 pandemic.

1.7 Conceptual definition

- **Coronavirus (COVID-19)** is a zoonotic virus that has crossed species to infect human populations. It was first identified in Wuhan, China (Perlman, 2020:1). In this study COVID-19 refers to an infectious disease that led to changes in the operations of paediatric wards and care of children who were admitted at two selected hospitals from 11 March 2020 when it was declared a pandemic.
- **Experience** is an event that a person has accumulated as a whole and is sometimes called a lived experience (Alhahen, 2018:17). In this study experience refers to the experiences of professional nurses who worked in paediatric wards of the two selected hospitals during the COVID-19 pandemic.
- **Nurse** is a person registered in a category under section 31(1) to practice nursing or midwifery (Nursing Act, 2005:6). In this study a nurse refers to both gender who were working as professional nurses in paediatric wards of the selected hospitals during the COVID-19 pandemic.
- **Paediatric ward:** A part in the hospital that deals with the development and care of the child and with the diseases of children and their treatment (Blackwells ,2005:488). In this study, paediatric ward refers to a place in the two selected hospitals where admitted children under the age of 12 are taken care of during the COVID-19 pandemic.
- **Pandemic** is an epidemic that spreads globally, an outbreak that spreads over a large geographical area (Grennan, 2019:1). In this study, a pandemic refers to the infectious disease that affected the whole world and have changed the expected care for children who are admitted in paediatric wards of the selected hospitals from 11 March 2020 to date.

1.8 Research design and methods

1.8.1. Study Design

Study design refers to a structured approach followed by researchers to answer a particular research question (Joubert & Ehrlich, 2014:78). Polit and Beck (2017: 247) indicate that a study's research design spells out the basic strategies that are used by the researcher to develop accurate and interpretable evidence. To explore and describe the experiences of professional nurses working in paediatric wards at the selected hospitals during the COVID-19 pandemic, a qualitative, phenomenological, exploratory, descriptive and contextual design was used.

Qualitative research method is essential for the study of those features of healthcare which depend upon the social interactions between individuals or groups (Daly *et al.*, 2020:8). The impact of qualitative research methods is made principally on how patients and healthcare workers describe their experience of health care and the importance which this has for the way in which the health care system functions (Daly *et al.*, 2020:8). Additionally, qualitative research is an approach used in exploring the meanings individuals or groups ascribe to a social or human problem (Joubert & Ehrlich, 2014:349). Qualitative research approach refers to a broad range of research designs and methods used to study phenomena of which we do not have an adequate understanding (Brink *et al.*, 2016:121). The researcher chose a qualitative approach to obtain an in-depth description and understanding of experiences of professional nurses working in paediatric wards during the COVID-19 pandemic.

Phenomenology is an approach to research that seeks to describe the essence of a phenomenon by exploring it from the perspective of those who have experienced it (Neubauer *et al.*, 2019:2). The goal of phenomenology is to describe the meanings of this experience both in terms of what was experienced and how it was experienced (Neubauer *et al.*, 2019:2). In phenomenological studies, the main data source are in-depth conversations between researchers and informants as co-participants (Polit & Beck, 2017:666). Researchers elicit informants to describe lived experiences without leading the discussion (Polit & Beck, 2017: 666). Descriptive phenomenological research design was the most suitable for this research as the research study aimed to generate a deep understanding of the experiences of professional nurses in paediatric wards during the COVID-19 pandemic.

Descriptive phenomenologists insist on the careful description of ordinary conscious experience of everyday life, a description of “things” as people experience them (Polit & Beck 2017:667). In this study, participants were interviewed individually and the researcher asked them about their experiences as they took care of paediatric patients during the COVID-19 pandemic. The method assisted the researcher to provide the thick descriptions of experiences of professional nurses during the COVID-19 pandemic. The researcher worked as a professional nurse at one of the selected and is currently working as a nurse educator. Her interest in investigating the phenomenon was sparked by her experience of working in paediatric ward for the period of six (06) years including the COVID-19 pandemic. She wanted to explore what professional nurses in other settings experienced during the COVID-19 pandemic. The following four (04) descriptive phenomenological steps as outlined by Polit & Beck (2017:667) were applied to explore experiences of professional nurses in paediatric wards during the COVID-19 pandemic: bracketing, intuiting, analysing, and describing.

Bracketing

Bracketing is the process of identifying and holding in abeyance preconceived beliefs and opinions about the phenomenon under study (Polit & Beck., 2017:667). The researcher worked in a paediatric ward of one of the hospitals in North West Province during the COVID-19 pandemic and she therefore suspended any bias that she had regarding her experiences of taking care of admitted children during the pandemic. By so doing, the researcher prevented her own experiences from clouding those of participants and that helped her to get real results. Any thoughts, feelings, and ideas that arose from the researcher due to her previous experiences in paediatric wards during the COVID-19 pandemic were bracketed. This facilitated the exploration of the phenomenon as experienced by study participants themselves.

- **Intuiting**

Intuiting occurs when researchers remain open to the meanings attributed to the phenomenon by those who have experienced it (Polit & Beck., 2017:667). In this study the researcher remained open to the meanings attributed to the phenomenon under study by concentrating on what professional nurses said regarding their experiences during the COVID-19 pandemic.

- **Analysing**

Analysing refers to extracting significant statements, categorising, and making sense of the essential meanings of the phenomenon (Polit & Beck., 2017:667). As the researcher listened to the experiences of professional nurses during interviews, important themes were identified.

- **Describing**

Describing occurs when researchers come to define and understand the phenomenon (Polit & Beck 2017:667). Important elements of experiences of professional nurses were identified and described by the researcher to gain deep-seated meanings from the encounters and the experiences of these professional nurses.

- **Exploratory design**

De Vos *et al.* (2011:96) indicated that exploratory design is conducted to gain insight into a situation, phenomenon, community or individual. COVID-19 is a new pandemic (Chidini *et al.*, 2020:1), therefore little is known about the experiences of professional nurses working in paediatric wards during the COVID-19 pandemic. This compelled the researcher to explore the experiences of professional nurses working in paediatric wards since COVID-19 was declared a pandemic. Furthermore, the researcher chose an exploratory design because

information was obtained directly from professional nurses to explore their experiences while working in paediatric wards during COVID-19 pandemic.

- **Descriptive design**

Descriptive design refers to a more intensive examination of phenomena and their deeper meanings, thus leading to thick descriptions (De Vos *et al.*, 2011:96). This study is descriptive because experiences of professional nurses who were working in paediatric wards were described in words thus enabling the researcher to provide thick descriptions of those experiences.

- **Contextual design**

Qualitative researchers may deliberately study phenomena in various natural contexts (Polit & Beck, 2018:184). Burns and Grove (2017:353) indicate that setting is the location where a study is conducted. Furthermore, a natural setting, or field setting, is an uncontrolled, real-life situation or environment (Burns & Grove, 2017: 353). This study was conducted in a natural context, that is, in two public hospitals in North West province where the researcher accessed professional nurses working in paediatric wards. The findings of the study are contextualised and cannot be generalised to other settings or hospitals. The selected hospitals admit paediatric patients who are diagnosed with medical and surgical problems. A more detailed context is provided in Section 1.8.2.1.

1.8.2. Research methods

The research methods are the strategies used by the researcher to structure a study and to collect and analyse data (Polit & Beck, 2017:743). In this section, study methods are explained as follows: study context, population and sampling, recruitment of participants, process of obtaining informed consent, data collection, and data analysis.

1.8.2.1. Study Context

This study was conducted within two public hospitals of the North West Province. The first hospital is a provincial hospital situated in Ngaka Modiri Molema district, North West province. The hospital has three hundred and ninety-three (393) beds with sixty-five (65) beds allocated for paediatric ward where children with medical and surgical conditions are admitted. There are approximately two hundred and-thirty-four (234) professional nurses in the selected hospital and the paediatric ward has eleven (11) professional nurses, six (6) enrolled nurses and ten (10) enrolled nursing assistants for both day and night shifts. The hospital receives patients from other hospitals and clinics within Ngaka Modiri Molema district and it refers patients to two hospitals in North West province and other hospitals in Gauteng. The second study context is a district hospital situated within the Dr Ruth Segomotsi Mompati district. The

hospital has a bed capacity of one hundred and-twenty (120) with nineteen (19) beds allocated for paediatric ward. The ward comprises of surgical, medical and high care areas. There are approximately one hundred and-fourteen (114) professional nurses in this hospital and ten (10) of them are allocated for paediatric ward for both day and night shifts. The hospital receives patients from other hospitals and clinics within Dr Ruth Segomotsi Mompati district and it refers patients to two hospitals in North West province.

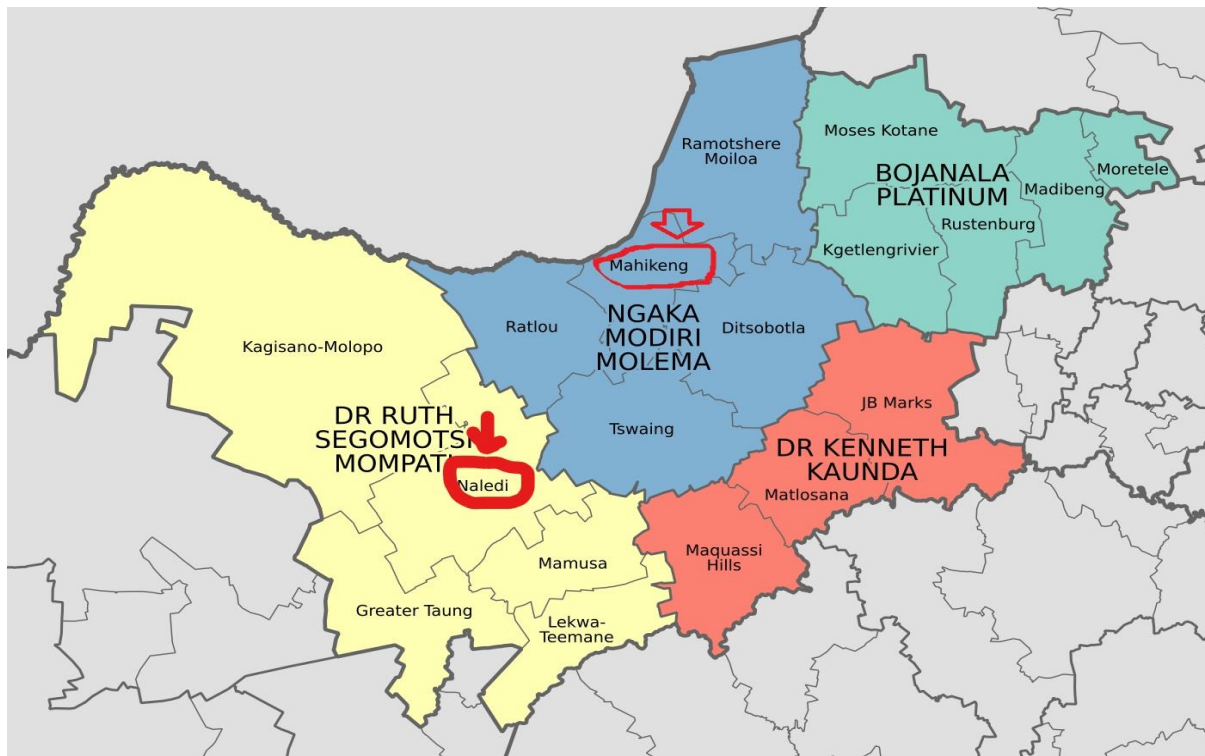


Figure 1.1. Map showing the location of the study settings (Source: North West Province, 2020)

1.8.2.2. Population and sampling

1.8.2.2.1. Population

A study population is defined as a set of all members of a defined group (Burns & Groves , 2017:53). The population contains the elements, humans or subjects that share at least one or more characteristics (Brink *et al.*, 2016:131). A population is further defined as the entire group of persons that is of interest to the researcher (Brink *et al.*, 2016:131) or that meets the criteria that the researcher is interested in studying (Brink *et al.*, 2016:131). The population in this study comprised all professional nurses in paediatric wards of two (2) selected hospitals

in Ngaka Modiri Molema and Dr Ruth Segomotsi districts during the COVID-19 pandemic in the North West province.

1.8.2.2.2. Sampling

A sample is a part, or fraction, of a whole, or a subset or a larger set selected by the researcher. It consists of a selected group of the elements or units of analysis from a defined population (Brink *et al.*,2018:117). In this study, the researcher used non-probability sampling approach. Non-probability sampling required the researcher to assess and select participants who know the most about the phenomenon and who could articulate and explain nuances (Brink *et al.*, 2018:124). Non-probability sampling method was used to select professional nurses in paediatric wards of Ngaka Modiri Molema and Dr Ruth Segomotsi districts, North West province during the COVID-19 pandemic.

1.8.2.2.3. Sampling technique

Sampling technique is defined as the method used to select the real participants (Brink *et al.*, 2018:126) and in this study, purposive sampling was used. Polit and Beck (2017:696) argue that in purposive sampling technique, the researcher chooses cases that would most benefit the study. Furthermore, in purposive sampling, qualitative researchers choose information-rich participants who know the problem under study (Burns & Groves , 2017:342). In this study the researcher purposively selected professional nurses in paediatric wards of the two hospitals as they were deemed capable of providing rich information on admitted children during the COVID-19 pandemic.

1.8.2.2.4. Sampling size

According to Polit and Beck (2017:702) there are no fixed rules for sample size in qualitative research. The authors further indicate that a guiding principle is data saturation – that is, sampling to the point at which no new information can further be obtained and redundancy is achieved. Anticipated number of participants was 21, which is the total number of professional nurses working in two paediatric wards of the selected hospitals. However, eleven (11) professional nurses participated in the study, five (05) from the district hospital and six (06) from the provincial hospital. Data generation stopped at the eleventh case when data saturation was reached.

1.8.2.2.5. Inclusion criteria

Inclusion criteria	Justification
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<p>- All professional nurses working in paediatric wards, irrespective of their gender.</p> <p>-Professional nurses who have been working in paediatric wards for more than a year.</p>	<p>-Professional nurses, males and females are responsible for the total care of patients in the ward, e.g. administration of parenteral and oral medication and other daily activities, whereas other nursing categories such as enrolled nurses and enrolled nursing assistants only perform certain activities due to their scope of practice.</p> <p>-Professional nurses who have been working in paediatric wards for more than a year had experience of taking care of children who were admitted in paediatric ward during the COVID-19 pandemic and they therefore provided the researcher with rich data.</p>
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1.8.2.2.6. Exclusion criteria

Exclusion criteria	Justification
<p>- Professional nurses working overtime in paediatric wards of the selected hospital but were working in other wards of the selected hospitals were excluded from the study.</p>	<p>-The researcher wanted to explore the experiences of professional nurses working in paediatric wards in order to explore their experiences as they were working in paediatric wards during the COVID-19 pandemic so that she could get rich data. Professional nurses who were working overtime in paediatric wards would not provide the researcher with rich data as they were only working for a certain time in the wards and they spent less time in the wards.</p>

1.9. Recruitment of participants

After ethical approval from the NuMIQ scientific review committee, North-West University Human Research Ethics Committee and permission from Department of Health, the researcher wrote a letter to the Chief Executive Officers (CEO) of the selected hospitals who acted as gatekeepers. The researcher requested permission to access participants and to gain entry to the research site. The CEOs shared the information with deputy directors in nursing and operational managers of paediatric wards. After obtaining permission from the CEOs, further consultation was then made with operational managers of paediatric wards who acted as mediators and they assisted the researcher with recruitment. The researcher explained all the details pertaining to the study to the mediators who then informed and explained the study to the potential participants. Furthermore, the researcher thoroughly explained the informed consent to participants that they can withdraw anytime from the study without any penalty should they wish to do so. The researcher emailed the recruitment material to the mediators to be shared with potential participants. The mediators posted them in notice boards at the selected hospitals and some were handed to potential participants. The recruitment material contained contact details of the researcher. The ward administrative clerks were independent persons in this study and were responsible for keeping a list of prospective participants and times they were available. The independent persons were contacted to check on potential participants who had interest in taking part in the study. Appointments were then made by the researcher with interested participants for further explanation of the nature of the study.

1.10. Process of obtaining informed consent

Informed consent necessitates the researcher divulging specific information to each prospective participant (Burns & Groves, 2017:176). The participant must also freely agree to participate in the study (Burns & Groves, 2017:176). The participants were informed and allowed to take part in the study voluntarily and the consent was written. The process of obtaining informed consent commenced after all approvals from the relevant authorities had been obtained and after the participants had agreed to participate in the study. The written, signed informed consent form (Annexure D) with a date and contact number of the researcher was mailed by the researcher to the mediators for distribution to study participants. The consent was written in English and there was no need for translation as the consent was written in the language that the participants understand.

The researcher met with professional nurses at the selected hospitals as per arrangements made by the mediator (operational managers), to give more information about informed consent with the mediator present. During the meeting, the study participants were given a

minimum period of 7 days to decide whether they still wanted to participate in the study or not. Thereafter, the independent persons assisted with obtaining informed consent and ensuring that the process was followed correctly. The potential participants then informed the independent persons if they are interested to take part. The independent persons then informed the researcher who made appointments to meet with the participants to explain information pertaining to the study. This information included the research aim and objectives and the right to withdraw from the study at any time without being penalised and coerced. This took place at the selected hospitals in well-ventilated rooms with no distractions. On the day of the interview the researcher once again explained the information on the informed consent document to the participants.

1.11. Data collection

Data collection is the process of choosing participants and generating data from them (Burns & Groves, 2017:493). In this study data was generated by using in-depth interviews that were conducted face-to-face. Polit and Beck (2018:315) indicated that in-depth interviews are appropriate to let people talk freely about their problems, allowing them to take initiative in directing the flow of conversation. Furthermore, according to Polit and Beck (2017:728) the most critical interviewing skill for in-depth interviews is being a good listener. Through active listening and allowing the participants to talk freely during interviews, the researcher obtained rich and in-depth data pertaining to experiences of professional nurses working in paediatric wards during the COVID-19 pandemic at two hospitals in the North West province, South Africa.

1.11.1. Data collection tool - Interview guide

An interview tool was developed to guide the researcher on what to ask participants with regard to their experiences. Conversations with participants were audio recorded with their permission. One question was asked during interviews: *Tell me more about your experience of working in a paediatric ward during the COVID-19 pandemic?*

One sub question was further asked:

- *What were the lessons you learned about this pandemic?*

1.11.2. Data collection process

According to Burns and Groves (2017: 260) when preparing for an interview, the researcher needs to establish an environment that encourages an open, relaxed conversation. After obtaining permission to conduct the study from relevant authorities such as NuMIQ scientific review committee, North-West University Human Research Ethics Committee, Department of

Health and management of the selected hospitals, in-depth interviews were conducted face-to-face in private and conducive rooms at the selected hospitals. A notice reading: **“Do not disturb”** was pasted on the outside of the door of the office. Interviews lasted for approximately 8-29 minutes so that the researcher could get rich data. The interview dates were rescheduled and communicated to professional nurses who were off duty during the data collection day. The researcher avoided disruption of ward routine by rather conducting interviews during lunch times and those agreed upon for the convenience of the participants.

1.12. Data analysis

The purpose of data analysis is to provide structure to, and elicit meanings from data (Polit & Beck, 2017:748). In qualitative studies, data collection and analysis often occur simultaneously rather than after all data are collected (Polit & Beck, 2017:748). Data must be converted to smaller, more manageable units that can be retrieved and reviewed by means of coding (Polit & Beck, 2017:749). Phenomenologists often prefer holistic, “contextualizing” strategies that involve interpreting the narrative data within the context of a “whole text” (Polit & Beck 2017:762

To explore and describe the experiences of professional nurses working in paediatric wards during COVID-19 pandemic, the researcher used the Colaizzi method which is described by Polit and Beck (2017:762) as the only method that calls for a validation of results by returning to study participants. During data analysis the researcher applied the principle of bracketing by identifying feelings that could lead to lack of neutrality. By so doing her own experiences and feelings did not influence the process of data analysis.

The following steps as outlined by Polit and Beck (2017:763) were followed:

Step 1: Read all protocols to acquire a feeling of them.

The researcher transcribed data by reading all the verbatim transcriptions carefully several times. This ensured that the transcriptions were a true reflection of the interviews. This assisted in getting a clear and comprehensive background of all transcripts.

Step 2: Review each protocol and extract significant statements.

In this second step, the researcher read each protocol in order to identify and extract only the information that pertains to the phenomenon under study.

Step 3: Spell out the meaning of each significant statement.

The researcher analysed the transcripts to understand the meaning of each significant statement. This assisted in generating and extrapolating new meanings from each significant statement.

Step 4: Organise the formulated meanings into clusters of themes.

Themes and sub-themes were formulated.

Step 5: Integrate results into an exhaustive description of the phenomenon under study.

When themes and sub-themes emerged, the researcher got a new understanding of the phenomena under study.

Step 6: Formulate an exhaustive description of the phenomenon under study in as unequivocal a statement of identification as possible.

The researcher converted themes into statements capturing the essence of the experiences of the professional nurses.

Step 7: Ask participants about the findings thus far as a final validating step. After two weeks of finalising the results, a follow up interview was conducted with five participants and findings were confirmed as reflecting their experiences.

1.13. Trustworthiness

In this study, the researcher adopted the four criteria for developing the trustworthiness of a qualitative inquiry: credibility, dependability, confirmability and transferability (Polit & Beck, 2017:787).

- **Credibility**

Credibility refers to confidence in the 'truth value' of the data and its interpretation (Polit & Beck, 2017:787). Credibility is used to establish that the findings are accurate, credible and believable (Renjith *et al.*,2021:6). To increase credibility in this study and to obtain true data and true experiences that were felt by study participants, the researcher selected professional nurses who were working in paediatric wards during the COVID-19 pandemic. This provided rich and truthful findings as data was collected from participants with experiences of managing paediatric patients during the COVID-19 pandemic. Furthermore, the researcher used prolonged engagement in the interviews. Prolonged engagement is essential for building trust and rapport with informants, which in turn makes it more likely that rich, detailed information will be obtained (Polit & Beck, 2017:791). The researcher ensured prolonged engagement by spending prolonged time with the participants, engaging with the them to build rapport and facilitate in-depth discussions with them. First contact with participants occurred when the researcher introduced the research topic.

Dependability

The second criterion is dependability, which refers to the reliability of data over time and conditions (Polit & Beck, 2017:787). The criterion of dependability refers to the assumption of repeatability of the study findings and is the same as that of reliability in quantitative research (Renjith *et al.*, 2021: 6). In this study, dependability was enhanced by appointing a

co-coder, who has doctoral degree in nursing and is experienced in analysing qualitative data.

Furthermore, the researcher ensured that throughout the data collection process the same data collection method was used, which in this case was semi structured individual interviews. Additionally, reliability was increased by careful documentation and thick descriptions of all findings so that other researchers using the same study population of this study could arrive at similar results. Furthermore, a dependability audit was carried out.

- **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 (Polit & Beck, 2017:788). Confirmability refers to the degree to which the study findings could be verified by others. To ensure confirmability, the data should directly echo the participants' experiences (Renjith *et al.*,2021:6). In this study the co-coder verified the findings and audiotape recordings were kept for supervisors for confirmability. This was accomplished by an incorporation of an audit procedure (Brink *et al.*, 2018:111).

- **Transferability**

Transferability refers to the potential for extrapolation, that is, the extent to which findings can be conveyed to or have applicability in other settings or groups (Renjith *et al.*, 2021: 6 and Polit & Beck, 2017:788). The researcher provided thick descriptions of findings regarding experiences of professional nurses who were working in paediatric wards during the COVID - 19 pandemic so that other researchers could use those findings in other settings.

1.14. Ethical considerations

Prior to data collection, ethical clearance was obtained from the North-West University Human Research Ethics Committee and permission to access the study participants was sought from Department of Health in North West province and from management of the selected hospitals. To ensure confidentiality, interview details were not disclosed to anyone who was not a part of the research process. Furthermore, the following ethical principles for protecting study participants as outlined by Polit and Beck (2017:210) were followed strictly:

- **Beneficence**

Beneficence enforces a duty on researchers to minimize harm and maximize benefits (Polit & Beck, 2017: 211). This study sought to explore experiences of professional nurses in paediatric wards during the COVID-19 pandemic, therefore emotional discomfort was anticipated. During data collection the researcher arranged counselling sessions for

professional nurses who could have emotional discomfort and the process of data collection would be temporarily suspended until the participant was counselled and willing to continue with the interview.

- **Respect for persons**

This principle comprises the right to self-determination and the right to full disclosure (Polit & Beck, 2017:212). Self-determination means that prospective participants can voluntarily decide whether they want to take part in the study or not, without risk of prejudicial treatment (Polit & Beck, 2017:212). Study participants were informed that they had the right to withdraw from the study. Full disclosure means that the researcher fully described the study, the person's right to refuse participation, the researcher's responsibilities, and likely risks and benefits (Polit & Beck, 2017:213).

- **Justice**

One aspect of justice concerns the fair distribution of benefits and risks of research (Polit & Beck, 2017:214). In this study, participants voluntarily participated in the study and they were not coerced. Fair selection of participants was ensured as follows: all professional nurses working in paediatric wards, irrespective of their gender were invited to participate in the study.

1.14.1. Probable experience of participants

The prospective participants were working in paediatric wards as professional nurses during the COVID-19 pandemic. Their duties in paediatric wards included administering catch-up vaccines to admitted children who could not be vaccinated during hard lockdown at the clinics, administration of both parenteral and oral medication and execution of doctors' orders. They also had an increased workload following the absence of caregivers and delayed treatment seeking behaviour which resulted in catch-up immunisations and complications due to hard lockdown. They shared their valuable experiences during the COVID-19 pandemic with the researcher. They were given information pertaining to the study, thereafter they signed informed consent and they were interviewed by the researcher face-to-face at the selected hospitals.

1.14.2. Risk and precautions

The aim of this study was to explore experiences of professional nurses in paediatric wards during the COVID-19 pandemic and therefore posed a medium risk because emotional and physical discomfort were anticipated. However, the researcher minimised those risks by taking into consideration the precautions mentioned below in 1.14.6.

1.14.3. Anticipated benefits

Results of this study assisted in the development of recommendations that address the challenges that professional nurses had when they were working in paediatric wards during the COVID-19 pandemic.

1.14.4. Direct benefits

There were no direct benefits in this study.

1.14.5. Indirect benefits

Children who were admitted in paediatric wards during the COVID-19 pandemic and who shall be admitted in future or during other pandemics that require social distancing indirectly benefited from this study as the results might assist policy developers to develop policies that allow caregivers to stay with their admitted children, thus reducing professional nurses' workload. Other interventions included employing more professional nurses to enhance paediatric nursing services during the COVID-19 pandemic, thus reducing child mortality rates.

1.14.6. Risk/ benefit ratio analysis

The risk/benefit ratio should take into consideration whether risks to participants are commensurate with benefits to society (Polit & Beck, 2017: 216). The aim of this study was to describe and explore the experiences of professional nurses in paediatric wards during the COVID-19 pandemic, therefore the likelihood of benefit outweighed the risk of harm to participants.

Risks (e.g. physical, psychological, social, legal, economic, dignitary and community)	Precautions (When describing these precautions be clear on how they will mitigate all the identified risks)
Physical risks. COVID-19 was likely to be spread during the process of obtaining informed consent and interviews. Emotional risks/discomfort: The study aimed to explore experiences of professional nurses	Study participants who would have signs of COVID-19 would be allowed to test for COVID-19 and data collection would be suspended temporarily depending on the results.

<p>in paediatric wards during the COVID-19 pandemic, therefore emotional discomfort was anticipated.</p> <p>Economical risks:</p>	<p>The researcher would arrange for counselling with social workers within the selected hospitals for participants who would be emotionally provoked during interviews. Interview session would be temporarily suspended for participants who may display some emotional discomfort. An interview rescheduling would be done.</p> <p>Interviews were conducted in the wards during lunch times and at times convenient to participants to avoid interruptions of ward routine. Furthermore, if participants were off, the researcher rescheduled appointments to the days when they were on duty. After interviews participants were provided with snacks and water.</p>
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1.14.7. Experience, skills and competency of researcher(s)

- Supervisors in this study are nurse educators with doctoral degrees in nursing, they have ethics training and experience in qualitative and quantitative research.
- The researcher did ethics training and has worked in a paediatric ward from July 2015 until July 2020.

1.14.8. Legal authorisation

Ethical approval was obtained from Scientific Review Committee of NUMIQ and North-West University Human Research Ethics Committee, ethical clearance number, NWU-00082-S1. Permission to conduct the study was sought from Provincial Department of Health and the management of the selected hospitals.

1.14.9. Goodwill permission / consent

A letter was written to seek permission for accessing study participants to the CEOs of the selected hospitals and they further informed the Directors of nursing and operational managers of paediatric wards. An informed consent was further obtained from the participants.

1.14.10. Vulnerable participants

According to Brink *et al.* (2012:35) vulnerable participants are individuals with reduced autonomy who are not allowed to make decisions for themselves and this includes children and people who are mentally unstable. Study population in this study was professional nurses above 18 years and these were capable of giving consent.

1.14.11. Respect for participants

In this study, as indicated by Brink *et al.* (2018:29) participants were given the right to withdraw from the study at any time or withdraw any information that was previously given. Furthermore, they were allowed to withdraw from the study without being penalised and they were not coerced to participate. Their confidentiality and privacy were respected.

1.14.12. Measures to ensure privacy / confidentiality

Privacy is an individual's right to determine the time, the extent, and general circumstances under which personal information is shared with or withheld from others (Groove & Burns, 2017:168). To ensure privacy, the researcher conducted interviews in a closed, private room. Collected data was only shared with supervisors.

Groove and Burns (2017:170) define confidentiality as the researcher's accountability to manage the participant's information that is not supposed to be shared with others without the participants' permission. In this study confidentiality was ensured by protecting personal information of study participants. Information was only shared with supervisors. Hard copies were stored in a lockable place and soft copies were password protected.

1.14.13. Anonymity

The process of ensuring anonymity refers to the researcher's act of keeping the participants' identities a secret with regard to their participation in the research study (Brink *et al.*, 2016:37). In this study anonymity of study participants was ensured throughout by assigning each participant a code rather than other identifiers such as real names to the actual data. Furthermore, consent forms with names of participants were kept in a lockable cupboard.

1.14.14. Data management

Immediately after interviews, recordings were transcribed verbatim into a MSWord document and saved to a computer which is password protected. Transcribed data was in a folder with password protection which is only known to the research team. Informed consent in hard copies were kept safe by storing them in a lockable cupboard in the supervisor's office separately to avoid linking the data to the participants. The gadget used for recordings was also kept in a lockable cupboard and recordings were deleted from the voice-recorder once the supervisors had an opportunity to listen to them. The data shall be destroyed after five years according to NWU policy. Only the researcher and supervisors can access this archive. On completion of the study soft copies shall be transferred to an external hard drive and stored in a lockable cupboard in the research director's office for a period of five years. After five years this shall be deleted from the computer files, external drive and from the recycle bin.

1.14.15. Dissemination of research results

The results of the study were disseminated as follows:

On completion of the study, the researcher ensured that results are published in peer reviewed accredited journals. The results were also presented in conferences and seminars. A meeting was organised for the Provincial Department of Health, hospital managers and participants where feedback on the study was provided and recommendations made. Seminars were also organised to share results with nurses from the clinics as well as from paediatric wards.

1.14.16. Monitoring of the research

The implementation of the research was monitored by the research supervisors to ensure adherence to ethical principles mentioned above. The supervisors in this study monitored the research process for adverse events, they also monitored data analysis by comparing the audio-recorded transcripts with the codes. Reports on the progress of the study and any essential changes were provided to the HREC as necessary.

1.14.17. Conflict of interest

There was no conflict of interest in this study.

1.15. Research report structure

Article format was followed in this study on the experiences of professional nurses working in paediatric ward during COVID-19 pandemic. The study is presented as follows:

Section 1: Overview of the study

Section 2: Manuscript

Section 3: Conclusions, limitations and recommendations

1.16. CONCLUSION

Section one introduced the study, statement of the problem, aim of the study and research question, significance of the study, research design, methodology and ethical considerations. The next section is the manuscript which has been submitted to *African Journal of Primary Health Care and Family Medicine*, an accredited Journal for academic research.

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SECTION 2: MANUSCRIPT

2.1 AUTHOR GUIDELINES

Submission guidelines for *African Journal of Primary Health Care & Family Medicine*

Original Research Articles

An original research article presents innovative research within the focus and scope of the journal, according to a clear and well-structured format. Detailed instructions are given below on the structure and contents required. The introduction should argue for the social and scientific value of the research and end with the aim and objectives of the study. Any conceptual or theoretical framework can also be included in the introduction. The methods section should be structured according to the following sub-headings: study design, setting, study population and sampling strategy, intervention (if appropriate), data collection, and data analysis. Occasionally a different structure may be required, for example, in quality improvement or participatory action research. The methods should be followed by a section on ethical considerations. After this, the results are presented. The article should end with a discussion section that summarises the key findings, and then discusses these findings, the strengths and limitations of the study, and any implications or recommendations. This should be followed by a conclusion, acknowledgements and references sections.

Submission status	Open
Manuscript language	English or French are considered
Word limit	3500-7000 words (<u>excluding</u> the abstract, tables, figures, graphs, and references)
Abstract	maximum: 250 words requires structural headings: Background, Aim, Setting, Methods, Results, Conclusion and Contribution
Main text	requires structural headings, refer to the full structure 'Ethical considerations' is a sub-section in the manuscript and must include: <ul style="list-style-type: none">• Name of the ethical review committee• Study approval number• Manner of consent (written, oral) for human participants

	<ul style="list-style-type: none"> • Description of measures taken to maintain the confidentiality of data • If the study was not human or animal research or the study was determined to be non-human subjects research or exempt, the authors must provide a statement with those details in this section.
References	60 or less, adhere to the Vancouver referencing style
Tables, figures and graphs	7 or less, adhere to the Illustrations requirements found in the AOSIS House style guide
Formatting requirements	apply the guidelines located on the Formatting requirements page and the AOSIS house style guide
Compulsory supplementary file(s)	the Authorship, disclosure statements, copyright, and license agreement form , Ethical Clearance/Waiver Documentation and any other relevant form applicable to your submission
Ethical clearance/waiver documentation	evidence of ethical clearance for the study, such as the study approval letter or certificate from the Institutional Review Board (IRB), a waiver from the IRB et cetera

Original Research Article full structure

Title: The article's full title should contain a maximum of 95 characters (including spaces).

Abstract: The abstract, written in English, should be no longer than 250 words and must be written in the past tense. The abstract should give a succinct account of the objectives, methods, results and significance of the matter. The structured abstract for an Original Research article should consist of seven paragraphs labelled Background, Aim, Setting, Methods, Results, Conclusion and Contribution.

- Background: Summarise the social value (importance, relevance) and scientific value (knowledge gap) that your study addresses.
- Aim: State the overall aim of the study.
- Setting: State the setting for the study.

- **Methods:** Clearly express the basic design of the study, and name or briefly describe the methods used without going into excessive detail.
- **Results:** State the main findings.
- **Conclusion:** State your conclusion and any key implications or recommendations.
- **Contribution:** What key insights into the research results and its future function are revealed? How do these insights link to the focus and scope of the journal? It should be a concise statement of the primary contribution of the manuscript; and how it fits within the scope of the journal.

Do not cite references and do not use abbreviations excessively in the abstract.

Introduction: The introduction must contain your argument for the social and scientific value of the study, as well as the aim and objectives:

- **Social value:** The first part of the introduction should make a clear and logical argument for the importance or relevance of the study. Your argument should be supported by the use of evidence from the literature.
- **Scientific value:** The second part of the introduction should make a clear and logical argument for the originality of the study. This should include a summary of what is already known about the research question or specific topic and should clarify the knowledge gap that this study will address. Your argument should be supported by the use of evidence from the literature.
- **Conceptual framework:** In some research articles it will also be important to describe the underlying theoretical basis for the research and how these theories are linked together in a conceptual framework. The theoretical evidence used to construct the conceptual framework should be referenced from the literature.
- **Aim and objectives:** The introduction should conclude with a clear summary of the aim and objectives of this study.

Research methods and design: The methods section should be structured according to the following sub-headings:

- **Study design:** An outline of the type of study design.
- **Setting:** A description of the setting for the study; for example, the type of community from which the participants came or the nature of the health system and services in which the study is conducted.

- Study population and sampling strategy: Describe the study population and any inclusion or exclusion criteria. Describe the intended sample size and your sample size calculation or justification. Describe the sampling strategy used. Describe in practical terms how this was implemented.
- Intervention (if appropriate): If there were intervention and comparison groups, describe the intervention in detail and what happened to the comparison groups.
- Data collection: Define the data collection tools that were used and their validity. Describe in practical terms how data were collected and any key issues involved, e.g. language barriers.
- Data analysis: Describe how data were captured, checked and cleaned. Describe the analysis process, for example, the statistical tests used or steps followed in qualitative data analysis.
- Ethical considerations: Approval must have been obtained for all studies from the author's institution or other relevant ethics committee and the institution's name and permit numbers should be stated here.

Results: Present the results of your study in a logical sequence that addresses the aim and objectives of your study. Use tables and figures as required to present your findings. Use quotations as required to establish your interpretation of qualitative data. All units should conform to the [SI convention](#) and be abbreviated accordingly. Metric units and their international symbols are used throughout, as is the decimal point (not the decimal comma).

Discussion: The discussion section should address the following four elements:

- Key findings: Summarise the key findings without reiterating details of the results.
- Discussion of key findings: Explain how the key findings relate to previous research or to existing knowledge, practice or policy.
- Strengths and limitations: Describe the strengths and limitations of your methods and what the reader should take into account when interpreting your results.
- Implications or recommendations: State the implications of your study or recommendations for future research (questions that remain unanswered), policy or practice. Make sure that the recommendations flow directly from your findings.

Conclusion: Provide a brief conclusion that summarises the results and their meaning or significance in relation to each objective of the study.

Acknowledgements: Those who contributed to the work but do not meet our authorship criteria should be listed in the Acknowledgments with a description of the contribution. Authors are responsible for ensuring that anyone named in the Acknowledgments agrees to be named. Refer to the acknowledgement structure guide on our *Formatting Requirements* page.

Also provide the following, each under their own heading:

- **Competing interests:** This section should list specific competing interests associated with any of the authors. If authors declare that no competing interests exist, the article will include a statement to this effect: *The authors declare that they have no financial or personal relationship(s) that may have inappropriately influenced them in writing this article.* Read our [policy on competing interests](#).
- **Author contributions:** All authors must meet the criteria for authorship as outlined in the [authorship](#) policy and [author contribution](#) statement policies.
- **Funding:** Provide information on funding if relevant
- **Data availability:** All research articles are encouraged to have a data availability statement.
- **Disclaimer:** A statement that the views expressed in the submitted article are his or her own and not an official position of the institution or funder.

References: Authors should provide direct references to original research sources whenever possible. References should not be used by authors, editors, or peer reviewers to promote self-interests. Refer to the journal referencing style downloadable on our *Formatting Requirements* page.

2.2 PROOF THAT MANUSCRIPT HAS BEEN SUBMITTED

Ref. No.: 3935
Manuscript title: Experiences of professional nurses in paediatric wards during COVID-19 pandemic, North West Province
Journal: African Journal of Primary Health Care & Family Medicine

Dear Miss Kgongwane

Your submission has been received by the journal and will now be processed in accordance with published timelines.

Processing time guidelines are available under the journal's 'About' section, however, please note that each submission is assessed on its individual merit and in certain circumstances processing times may differ.

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African Journal of Primary Health Care & Family Medicine

Experiences of professional nurses in paediatric wards during COVID-19 pandemic, North West Province

Tshepiso Y. Kgongwane¹, Jeanette M. Sebaeng² and Seeapaneng S. Moloko-Phiri³

1. School of Nursing, Faculty of Health Sciences, North-West University, South Africa
2. School of Nursing, Faculty of Health Sciences, University of Free State, South Africa
3. North-West University, South Africa School of Nursing, Faculty of Health Sciences, North-West University, South Africa

Corresponding author, Tshepiso Y Kgongwane

kgongwanet@gmail.com

Abstract

Background: Although COVID-19 itself is a mild disease in children, its indirect effects lead to disruptions in the provision of paediatric health care services. Measures to curb the spread of COVID-19 infection resulted in restrictions to routine healthcare access. The lockdown restrictions that were implemented led to a decline in childhood immunisations and admissions that later increased professional nurses' workload in paediatric wards.

Aim: The study aimed to develop a significant understanding of the experiences of professional nurses in paediatric wards of North West province during the COVID-19 pandemic.

Setting: The study was conducted at paediatric wards of two district hospitals in North West Province, South Africa.

Methods: A qualitative, descriptive phenomenological study was conducted. A total of 11 professional nurses working in the paediatric wards were purposively selected to participate in the study. In-depth interviews were conducted. Data was analysed using the Colaizzi method. Ethical considerations and trustworthiness were adhered to.

Results: Three themes emerged from the findings of the study namely: nurses' experiences of COVID-19 pandemic, resilience developed by nurses during Covid-19 pandemic and lack of human and material resources. Following the results, recommendations were made on nursing practice, research and education.

Conclusion and contribution: The findings show that professional nurses worked in difficult situations during the COVID-19 pandemic. Despite these challenges, nurses developed resilience and other coping strategies. This article recommends contingency plans for future pandemics and support for professional nurses working in paediatric wards to prevent burnout.

Keywords: Children, COVID-19, experience, paediatric ward, pandemic, professional nurses.

Introduction and background

Several pneumonia cases of unidentified causes were reported on December 31, 2019, in China and a virus called corona was identified as the causative agent¹. This virus was conditionally called 2019-nCoV and was later renamed as severe acute respiratory syndrome coronavirus 2 by the International Committee on Taxonomy of Viruses¹. Due to a rapid transmission of the virus, the World Health Organisation declared it a public health emergency in January 2020 and the name was changed to "coronavirus disease 2019" (COVID-19)¹. Paediatric hospitals globally were faced with challenges due to COVID-19². These challenges had a negative impact on professional nurses as their workload increased and this was worsened by the already existing shortage of professional nurses. For instance, ³ indicated that COVID-19 had intensely impacted on paediatric staffing and the results were physical and

psychological suffering. The authors further argued that professional nurses in paediatric wards experienced an increased workload due to multiple roles and responsibilities that were brought by quarantine and isolation⁴. It was reported that shortage of staff and fear of contracting the virus affected professional nurses during the COVID-19 pandemic⁵. The experiences of COVID-19 pandemic in paediatric wards were further expressed by a nurse from Zambia as follows: *“We work very hard because of shortage of staff”*⁵.

The COVID-19 pandemic led to disruptions in paediatric services including surgeries⁶. Non-emergent surgical procedures were halted globally in preparation for dealing with the COVID-19 pandemic⁷. For instance, in America guidelines were developed that stated that all elective surgeries should be cancelled except for emergent ones⁸. Similarly, in Italy non-emergent surgical procedures were suspended to create space in the hospitals⁷. Moreover, in the United Kingdom, all hospitals halted elective surgeries⁹.

The COVID-19 pandemic led to a pause in paediatric non-emergent surgeries in Nigeria¹⁰. Furthermore, in South Africa, theatre policies were developed that limited elective surgeries, leading to a decline¹¹. This delay in diagnosis and management of surgical disease could result in an increased significant mortality rate among paediatric patients¹² resulting in increased workload for professional nurses.

Caregivers feared the COVID-19 and they could not take their children to the clinical facilities timeously when they were sick. This resulted in delayed diagnosis and late presentation complications¹³. Children with special needs suffered more due to reduced access to health care facilities because they often need medical attention¹⁴. Some caregivers were bringing their sick children to hospital late, and this resulted in complications and death¹². According to⁷, paediatric admissions decreased enormously as caregivers sought medical treatment only when their children had severe symptoms of diseases. Furthermore, in the United Kingdom, according to¹⁵ statistics showed that most babies under the age of 6 weeks were not taken to hospitals.

Non-compliance to childhood immunisations leads to an outbreak of communicable diseases, and this puts a strain on the already overburdened health system¹⁶. Despite the importance of childhood vaccination, the COVID-19 pandemic led to a decline in the rate of childhood immunisation. In Ghana, there was a decline in childhood immunisations during the COVID-19 pandemic as compared to the pre-pandemic period⁴. Moreover, the immunization coverage fell in South Africa during hard lockdown¹². A decline in vaccination rate led to an increased workload for professional nurses in paediatric wards as they had to give catch-up doses to admitted children who could not be vaccinated during routine visits due to hard lock down.

Professional nurses are obliged to give catch-up doses because according to ⁴, catch-up vaccines should be administered to curb future outbreaks of communicable diseases.

A variety of measures have been instituted to prevent transmission of the virus within health-care facilities and these included banning of visitors including caregivers in paediatric wards because they are possible transmitters¹⁷. However, caregiver presence is vital as it ensures safe paediatric care because they provide comfort and minimize fear and trauma¹³. These restrictions had a negative impact on the mental health of healthcare professionals ¹⁸ because absence of caregivers increased workload in paediatric wards as professional nurses perform all the duties including the ones that are usually performed by caregivers.

Research design and methods

Research design

The study adopted the qualitative, phenomenological, descriptive, exploratory and contextual design. Qualitative approach allowed the researcher to gain an understanding of experiences of professional nurses in paediatric wards of the selected hospitals during the COVID-19 pandemic.

Descriptive phenomenology assisted the researcher to intensively describe the experiences of professional nurses during the COVID-19 pandemic. Descriptive phenomenologists carefully describe what people experience on daily basis¹⁹.

An exploratory, descriptive and contextual design was used to explore experiences of professional nurses in paediatric wards during the COVID-19 pandemic. ²⁰ Indicated that exploratory research is used when the subject is new, when little is known about the subject. Prior to this pandemic, nursing care in paediatric wards was normal but the pandemic brought changes that affected how nursing care is rendered in paediatric wards. The exploratory design assisted the researcher to obtain rich information directly from professional nurses as they have experience of rendering nursing care to admitted children during the COVID-19 pandemic. Descriptive research design was used to find problems with the current practice, justify current practice and make judgments of what other professionals in similar situations are doing⁶. This study is descriptive because experiences of professional nurses working in paediatric wards were intensively described in words, thus enabling the researcher to provide thick description of those experiences.

Contextual design was applicable for the study because the researcher interviewed the participants at a natural setting, a hospital where paediatric patients were admitted during COVID-19 pandemic. After experiences of professional nurses during the COVID-19 have been described, findings of the study were contextualised and were not generalised to other

hospitals because experiences of professional nurses in the selected hospitals may differ from those of other hospitals.

Study setting

This study was conducted at two settings of the North West Province, South Africa, namely a Provincial hospital with a bed capacity of 393 of which 65 are allocated for paediatric ward. The hospital consists of approximately 234 professional nurses and the paediatric ward has 11 professional nurses, 6 enrolled nurses and 10 enrolled nursing assistants for both day and night shifts. The second setting is a district hospital with a bed capacity of 120 beds, with nineteen (19) beds allocated for paediatric ward. The setting has an overall of 114 professional nurses and ten (10) of them are allocated for paediatric ward for both day and night shifts. The ward comprises surgical, medical, and high care areas. The two hospitals receive paediatric referrals from other hospitals and clinics within the Province.

Study population and sampling strategy

²⁰ Argued that qualitative researchers establish the kinds of people who are suitable to participate in their research. The population in this study was professional nurses working in paediatric wards of the selected hospitals in North West Province, South Africa. Both male and female professional nurses who worked more than a year in the paediatric wards were included in the study. Professional nurses in these wards were selected because of their experience in taking care of admitted children during the COVID-19 pandemic. The study excluded professional nurses who were on locum in paediatric wards as they spend less time in the ward. Purposive sampling technique was used in this study for identification and selection of information-rich cases. A total of 11 professional nurses took part in the study.

Data collection

In-depth interviews were conducted at the selected hospitals and permission was sought from the participants for voice recordings. All interviews were conducted in English as it was well understood by participants. One question was asked during interviews: *Tell me more about your experience of working in a paediatric ward during the COVID-19 pandemic?*

One sub question was further asked:

- *What were the lessons you learned about this pandemic?*

Probing was done for further clarity based on individual participants' responses.

Data analysis

Data was analysed using the Colaizzi method as suggested by²⁰. Verbatim transcription of data was done. Trustworthiness of the data was enhanced through the use of a qualified co-coder. Verbatim transcribed data was carefully read several times, significant statements were extracted, the meaning of each statement was spelled out, meanings were clustered into themes and results were integrated into a description of the phenomenon under study.

Ethical considerations

The study commenced after obtaining permission from the North-West University Health Research Ethics Committee (NWU-HREC) of the Faculty of Health Sciences, Ethics number: NWU-00082-22-S1. Thereafter, goodwill permission was sought from North West Department of Health and the selected hospitals in North West Province. After permission had been granted, participants were informed about the nature of the study and informed consent was obtained. Confidentiality was ensured by protecting personal information of study participants by referring to them as participant A, B and so on.

Results

The following results emerged from the analysed data.

Table 1: Summary of themes and sub-themes

Themes	Sub-themes
1. Nurses' experiences of COVID-19 pandemic	1.1 . Fear of contracting COVID-19 1.2 . Testing positive for COVID-19 1.3 . Isolation challenges 1.4 . Absence of caregivers
2. Nurses developed resilience during Covid-19 pandemic	2.1 . Teamwork assisted nurses to adapt with COVID-19 situation 2.2 . Professional nurses developed increased coping mechanism
3. Lack of human and material resources	3.1. Shortage of staff 3.2. Lack of personal protective equipment

Nurses' experiences of COVID-19 pandemic

Professional nurses revealed that they had vast experiences during the COVID-19 pandemic. The experiences were expressed in four sub-themes namely: fear of contracting COVID-19, testing positive for COVID-19, isolation challenges and absence of caregivers.

Fear of contracting COVID-19

The findings of this study show that, initially, nurses did not have knowledge about the COVID-19 virus, as a result they had significant fear. Participants indicated that some of their colleagues were not comfortable to nurse COVID-19 patients due to fear of contracting the virus. The experience was expressed as follows:

“I mean it was for the first time, everybody was scared for their life. We were never taught. We didn’t know anything about this corona virus. So we were even afraid for our lives and then the staff some of them ...they did not want to attend those patients, they were afraid of being infected” (PD)

Another participant said:

“I don’t know, but it was too much challenging, and then even us the nurses we were at risk, because we can also get infected, because you are working with the infected ones” (PC)

Another participant echoed:

“They were refusing to come and help us to moonlight because they know what’s happening that if they come they are going to nurse those patients. If the patient came with respiratory distress, tested, but waiting for the results, they were suspecting that maybe if she’s not improving, she’s having the COVID-19” (PI)

Testing positive for COVID-19

Participants indicated that they tested positive for COVID -19 including their family members and their colleagues. As a result, they had to isolate, some admitted and some quarantined. This participant expressed the experience as follows:

“Unfortunately, some of our health care workers contracted the virus. So the isolation was quite strict, 14 days. One of my colleagues, the husband tested positive. She also tested positive, so I had to go and test, even if the results came negative, but I was in close contact. The challenge was, health care workers who contracted the virus got it from their families, from outside. Especially in paed’s ward, they got it from outside. We don’t have any record of any health care worker who acquired the COVID-19 in the ward. They all get it from their homes.” (PK)

Another participant added:

“It was tough; it was difficult I’m telling you. It was really difficult, and mind you then you can imagine during that time also, nurses also were admitted, many nurses were sick also, so...during the day, you find may be we are six, but when one or two is admitted, we just have to be four and others have to go for quarantine then we [are] left with two nurses on shift. Remember that time also...there were also this thing of contact should be quarantined for certain period. So there was too much stress, very too much stress at that time” (PJ)

Isolation challenges

Participants confirmed that there were isolation challenges to admit COVID-19 positive children in the beginning of COVID-19 pandemic. This was expressed as follows:

‘We didn’t have the isolation where to put the children who tested positive, so even the mothers...the mothers are allowed to be with their babies on admission, so if a baby tests positive, then the mother ,what are we supposed to do with the mother because we don’t have separate bathrooms’ (PD)

Another participant said:

And also we have a challenge with short space, in ward 5, we have an isolation, but it’s for contagious diseases like TB, hepatitis, all these conditions, but now we didn’t have space for COVID patients, so we had to improvise and create a space on how we could accommodate our patients. Since well we cannot mix them with other infectious conditions (PK)

Absence of caregivers

Participants indicated that caregivers were not allowed in paediatric wards and they had to perform the duties that were usually performed by caregivers. This exacerbated shortage of staff and it impacted on nursing care.

This was expressed as follows:

“When it comes to caregivers, it was a bit hectic because a lot of children would be coming without parents that would be taking care of them. So as nurses it means that we have to take the role of being a nurse and then also being the caregiver. When you have to feed the child, take out the nappy and staff like that. So if the mother is tested

positive they go to the COVID-19 ward and the child remains in the ward, meaning its more responsibilities for the nurses of which we are short-staffed to begin with. So imagine other staff were quarantining, the mothers are also now on quarantine so..” (PF)

Another participant added:

“One of the challenges was, we would admit patients, that time now there were times whereby mothers were not allowed to be in the unit, so you’ll admit very serious patients whereby, we’ll be needing mothers to be closer to them. Like in our unit, we only allow mother lodgers to be with their babies, the very ill ones. So during that time, it was difficult for us to allow mothers to be with their children. And mind you that time there were no visiting times. It was difficult, very, very difficult. So even though we have to get contact numbers, still we’ll have experience problems whereby you can’t get hold of the person or that mother if something happens to the child. Secondly, there was also a problem because mother lodgers in the unit also helped in assessing their children. In Ward 5, we are few, we have a very serious shortage of staff. So it helped us when mothers are there to also assisting us and reviewing and checking their children, because is easier for them because when they see the child that is not okay, they just call us” (PJ).

The same participant further said:

“So mind you, we are only 4 during the day, we can’t be seeing all the babies in the ward. You know, you just find when you just pass by, you see, this child is not okay. So mostly, we were suffering, and we were having lots of death because of that you understand? Because the through nursing care, it was not that up to date. So that’s that. That’s what we experienced also. That one I would say there was serious shortage of staff and also whereby the mother lodgers were not close to their children. That was the challenge we went through during the pandemic” (PJ)

Professional nurses developed resilience during COVID-19 pandemic

The findings of the study showed that professional nurses experienced difficult situations that the COVID-19 pandemic brought but they ultimately became flexible and learnt how to live with it. They used teamwork to adapt to COVID-19 complicated situation and their coping mechanisms increased.

Teamwork assisted nurses to adapt with COVID-19 situation

Participants revealed that through teamwork with other members of the multidisciplinary team, they managed to adapt to the COVID-19 situation.

This was echoed as follows:

“What I can say? Our experiences, we worked as a team, we won at last because we were working as a team never mind it was difficult, but were striving forward to win” (PH)

Another participant said:

“The only thing that I can say if we club in together, everybody, everyone can help each other, so if we form a team, I mean we can fight every battle that comes our way” (PD)

Another participant added:

“Everyone, like we were working together as a whole, the nurses, the doctors, dieticians, everybody were working together as a whole. Pharmacists, the lab, it was just a team” (PC)

Professional nurses developed increased coping mechanism

The findings of this study showed that participants were able to cope during the difficult or challenging situations that the COVID-19 pandemic brought.

This was expressed as follows:

“At first like I was saying, we didn’t know anything about it, but with time we were taught, every moment we were taught about the virus, what happens to it. We ended up being okay, not being that afraid like the first time. Yes, we became strong” (PD)

Another participant said:

“You know the only thing that was keeping us going it’s just to see yourself knocking off and going home. And you’ll say thank you God, I managed, I survive[d]. It made us to be strong in this career, to overcome difficult situations. We managed. With God’s Grace, we managed. And we knew how to try to cope with that. We are strong now.” (PJ)

Another one added that:

‘We were trying, it was difficult, we were coping because work is work! We were trying to cope, never mind the difficulty because, even at home ,our families also, they were killed by this disease and then sometimes when you knock off, you are scared to go and meet your family because you ask yourself what if I have this disease and going

to give my family again. That thing, it was very difficult for us but we were trying our best' (PH)

Lack of human and material resources

Participants indicated that during the COVID-19 pandemic they experienced shortage of staff and personal protective equipment.

Shortage of staff

Participants revealed that during the COVID-19 they experienced shortage of staff due to COVID-19 infections in paediatric nurses. Some tested positive and went home for isolation or they were admitted. Their contacts were on quarantine. Shortage of staff was resulting in an increased workload and burnout because paediatric wards have areas such as malnutrition and high care and paediatric nurses had to divide themselves to ensure that routine duties such as vital signs monitoring and provision of therapeutic feeds are done.

This was expressed as follows:

"Shortage of staff during that time because our colleagues were getting infected, we were running short staff and then during that time we were having problems because to work with young children is challenging' (PH)

Another participant added that shortage of staff led to increased workload:

"The workload was caused by shortage of staff and then if there is shortage of staff, the other nurse is in high care, the other registered nurse is in general, isolation, malnutrition and juvenile, and then we are having one nurse, who will be doing the vital signs, giving of milk." (PC)

Another one affirmed that:

"The increased workload means that there is a shortage of staff, the ratio of the nurse-patient, it didn't balance because of you find there are three (3) nurses. thirty-three (33) patients, so it didn't balance. That's and increase, that's what I mean by increased workload. The three (3) of us, we have to make sure all the ward routine is well taken care of and proper nursing care is done." (PA)

Lack of personal protective equipment

Participants indicated that at the beginning of the pandemic there was no adequate supply of personal protective equipment.

This was expressed as follows:

“There were no protective clothes, we were going to other wards like medical to request, they were having their own because they said they are admitting those patient, so us we didn’t have.” PI

Another participant added that:

“The supply of resources, also was a challenge, err... It took us some time to receive the PPEs and a sanitiser because they were not budgeted for. COVID-19 was an outbreak” (PK)

Discussion

In this article, face-to-face individual interviews were conducted with eleven (11) professional nurses. The findings from the study are summarised in Table 1. Three (03) themes emerged from the findings of the study namely: nurses’ experiences of COVID-19 pandemic, resilience developed by during Covid-19 pandemic and lack of human and material resources.

This study aimed to generate a deeper understanding of the experiences of professional nurses in paediatric wards of North West province during the COVID-19 pandemic. The findings of the study established and captured the experiences of professional nurses during the COVID-19 pandemic period. The following three (03) themes emerged and are discussed below: Nurses’ experiences of COVID-19 pandemic, nurses developed resilience during Covid-19 pandemic and lack of human and material resources. The findings revealed that at the beginning of the pandemic professional nurses feared the COVID-19 virus due to knowledge deficiency regarding the new virus. One participant indicated that other professional nurses did not want to take care of COVID-19 patients due to fear of contracting the virus. In addition, it was evident from the findings that other professional nurses did not want to work overtime in the paediatric wards because they knew that they would be delegated to nurse COVID-19 positive patients. In support of the findings ²¹ affirmed that in Iran several factors such as the unknown nature of the disease of patients and fear of being infected by the virus distracted the nurses from providing efficient patient care. Another participant indicated they were afraid to care for patients with respiratory disease because they thought all those patients were COVID-19 positive there they would infect them. In South Africa, ⁹asserted that half of the respondents in their study were concerned about contracting COVID-19 from patients. The evidence from these findings suggests that the participants were afraid of providing care to patients fearing to contract the virus.

The findings of this study show that professional nurses tested positive for COVID-19 during the pandemic, and they had to isolate for a period of fourteen days. During this period patient care suffered due shortage of staff because some professional nurses were admitted adding to increased workload for those who were on duty. Furthermore, findings of this article revealed that some professional nurses were contacts and they also had to quarantine. One participant indicated that according to hospital records professional nurses who were working in paediatric wards who tested positive did not acquire the virus from the hospital but from outside. To support this finding the South African Minister of Health reported that earlier statistics indicated that more than half of the infected HCWs were nurses⁹. Moreover, in Iran³³ reported that among the patients in their study, the majority of infected people were nurses. Additionally, as of July 2020, the United Nations announced that worldwide more than 1.4 million infections of COVID-19 were accounted for in Health care workers which included professional nurses²². This implies that COVID-19 infections among professional nurses affected staffing levels because of isolation and quarantine and impacted negatively on patient care.

The findings further show that at the beginning of the COVID-19 pandemic, there were isolation challenges whereby COVID-19 paediatric patients could not be separated from their COVID-19 negative caregivers. Furthermore, there was no space to admit COVID-19 positive paediatric patients. In addition, the settings where the study was conducted had challenges with isolation rooms because they were reserved for contagious diseases such as hepatitis and COVID-19 patients could not be mixed with children diagnosed with those contagious diseases. Again, paediatric wards at the selected hospitals had to improvise and create space COVID-19 positive patients. These findings are consistent with a study by¹⁰ in Wuhan who found that there was a need to increase space by converting other buildings to accommodate COVID-19 positive patients. For example, the same author reported that the Hongshan stadium in Wuhan was converted into a temporary Centre for COVID-19 patients. According to¹⁶ hospitals in Wuhan constructed temporary wards to accommodate COVID-19 patients. It is therefore inferred that more space was needed to isolate and care for COVID-19 paediatric patients throughout the world including in South Africa for efficient care.

The participants in this study revealed that due to strict COVID-19 regulations and infections among the caregivers, they could not lodge with their admitted children. The findings further revealed that caregivers who tested positive were immediately transferred to COVID-19 wards leaving their children alone under the care of professional nurses only. As a result, professional nurses had to take the role of caregivers, which include nappy changing and bathing and their workload increased as they had their own direct nursing duties. The increased workload was worsened by the already existing shortage of staff. One participant

stated the importance of caregivers in the ward in that they always assist in assessing their own and other children in the ward and if there are problems they report to professional nurses for interventions.²² Supported this findings by concluding that parents and families are always needed to be at the bedside of their sick children to assist with caring and emotional support. Absence of caregivers impacted on nursing care and child mortality rate increased.²³ in their study that they conducted in Iran affirmed that caregivers take care of their admitted children and protect them from harm. The findings of this study clearly describe the importance of caregivers when children are admitted and that their absence often lead to increased workload for the professional nurses.

Participants in this study emphasised that although it was difficult during the COVID-19 pandemic, through teamwork with their colleagues and other members of the multidisciplinary team they won the COVID-19 war. It is further indicated by the participants that they were able to adapt during the difficult times as they showed resilience during COVID-19 pandemic. This is supported by¹⁷ who argued that nurses in the United States of America coped during the difficult times of COVID-19 through the use of teamwork within the healthcare facilities. In a cross-sectional multi country study, conducted by¹⁴, it is argued that during the pandemic in Africa, teamwork among healthcare workers became a more significant matter to overcome the challenges of the COVID-19 patients. The current findings highlight the importance of teamwork in difficult situations and how it encourages the nurses to be resilient and to adapt.

Participants in this study indicated that during the beginning of the COVID-19 pandemic, they did not know anything about the virus, but as time went by, they were taught about the it and they became strong. In addition the participants expressed that they survived the pandemic through God's grace and their coping mechanisms during the pandemic improved. To support these findings,¹¹ conducted a study in Iran and revealed that during the COVID-19 period nurses developed a positive attitude towards the future where there could be more infections such as the current one. Nurses relied on and believed in the Christian faith where they mentioned that they survived by God's grace. This supported by the²⁴, Ephesians 2:8 "For it is by God's grace that you have been saved through faith."²⁵ in their study that they conducted in South Africa affirmed that faith played an important role in the lives of the health workers including professional nurses to cope in the COVID-19 situation.

The implication of these findings is that professional nurses developed coping mechanism which they linked to their faith in God. Participants reported that they experienced shortage of staff which was due to COVID-19 infections among professional nurses working in the paediatric wards. One participant indicated that shortage of staff led to an increased workload

because they had to nurse COVID-19 and non-COVID-19 patients because majority of professional nurses were either booked off sick or under quarantine and managers could not have more nurses to replace those who were sick. In support of the findings,²⁶ affirmed that most of nurses had to increase their workload as a result of staff shortages. Similarly, ⁴⁰ indicated in their study that was conducted in America that respondents in their study remarked on the mental and physical exhaustion of working during the pandemic due to staffing shortages and increased workloads. Moreover, ³ asserted that one of the major issues facing professional nurses in the COVID-19 pandemic are the critical shortage of nurses. The findings clearly indicate that shortage of staff led to an increased workload in paediatric wards during the COVID-19 pandemic.

Lack of resources such as personal protective equipment during COVID was raised as the serious issue because nurses were being infected because of no protection. The findings of the current study further revealed that at the beginning of the COVID-19 pandemic, professional nurses revealed that they lacked personal protective equipment because they were not budget for at their wards therefore they had to go and borrow from others. This often led to lead to disruption in nursing services as professional nurses also needed to protect themselves. According to participants, there were COVID-19 positive paediatric patients that they had to nurse. In support of the findings, it is reported that earlier in the pandemic, it was not possible to access adequate PPE and that created a serious challenge²⁷. Furthermore,²¹ argued that in South Africa, PPE supply was a challenge due to abuse of funds hence most of professional nurses contracted the infection. The evidence from these findings suggests that there was an inadequate supply of PPE which hindered provision of care in paediatric wards.

Limitations and strengths

The following limitations were found in this study. Firstly, the target population of this study was professional nurses only, as a result, experiences of lower nursing categories were not explored yet they were also working during the COVID-19 pandemic. Secondly, a few professional nurses met the inclusion criteria because only nurses who have worked for more than a year in paediatric wards were supposed to be interviewed, hence interviews were held with only eleven professional nurses. However, despite these limitations, the study provides useful information on the experiences of professional nurses during the COVID-19 pandemic as well as recommendations on how to address the challenges identified and how to manage future pandemics.

Recommendations

There is a need to conduct more studies on the experiences of nurses during the COVID-19 pandemic. The population of those studies should include other categories of nurses. There is also a need to determine the effects of COVID-19 on the mental health of nurses. Paediatric wards have more programmes as compared to adult wards; therefore, the researcher recommends that in future pandemics, more professional nurses should be allocated in paediatric wards to prevent shortage of staff. This will ensure quality nursing services. Contingency plans should be in place for future pandemics, that include isolation policies and budget that will procure the resources that will be required during that period. Hospital management should support professional nurses to prevent mental health problems.

Conclusion

The aim of this study was to generate a nuanced understanding of the experiences of professional nurses in paediatric wards during the COVID-19 pandemic. Three themes emerged from the findings of this study, namely: professional nurses' experiences of COVID-19, professional nurses developed resilience during COVID-19 pandemic and lack of human and material resources.

These findings show that nurses were overwhelmed during the pandemic, and they developed resilience which assisted them in adapting and coping during the pandemic. Recommendations were made for future pandemics.

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Competing interests

The authors declare no conflict of interest either financially or otherwise.

Authors' contributions

T.K. was a Master's student J.M.S and S.S.M. were supervisors in this study. All the authors played an important role in writing this article.

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Data availability

Data sharing is not applicable.

Disclaimer

The views that are expressed in this article are those of the participants.

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SECTION 3: CONCLUSIONS, LIMITATIONS AND RECOMMENDATIONS

3.1 INTRODUCTION

The first two sections were an overview of the study and the manuscript prepared according to the *African Journal of Primary Health Care & Family Medicine* guidelines to prepare a manuscript. Three themes emerged from the findings of the study namely: professional nurses' experiences of COVID-19, professional nurses developed resilience during COVID-19 pandemic and lack of human and material resources. This final section discusses conclusions, limitations and recommendations.

3.2. CONCLUSION

The aim of this study was to have a nuanced understanding of the experiences of professional nurses in paediatric wards during the COVID-19 pandemic, in North West Province, based on the following two questions:

- What are the experiences of professional nurses in paediatric wards during COVID-19 pandemic in the North West Province?

The research questions of the study were answered through the three themes that emerged from the study namely: nurses' experiences of COVID-19 pandemic, nurses developed resilience during Covid-19 pandemic and lack of human and material resources.

Nurses' experiences of COVID-19 pandemic

The evidence from the findings of this study suggests that provision of nursing care was compromised because participants feared contracting the virus. Participants contracted the COVID-19 virus, those who tested positive isolated at home, some were admitted, some of them passed on and some quarantined because they were contacts. This led to shortage of staff and nursing care was negatively affected. Furthermore, at the beginning of the pandemic, more space was required to isolate and admit COVID-19 positive paediatric patients. Caregivers play an important role in paediatric wards because they perform non-nursing duties such as bathing and feeding admitted children. During the COVID-19 pandemic they were not allowed in the ward because they are regarded as the super spreaders of the virus. Their absence resulted in an increased workload for professional nurses because they had to perform the duties that are usually performed by caregivers.

Nurses developed resilience during COVID-19 pandemic

During the COVID-19 pandemic participants were faced with challenges such as shortage of staff and increased workload. However, despite these challenges, teamwork with other members of the multidisciplinary team such as doctors and dieticians, and other staff members such as cleaners fragmentation of services were prevented and paediatric services were enhanced. In paediatric wards cleaners sometimes help with feeding. Teamwork assisted professional nurses to be resilient and adapt during the difficult situation of COVID-19. Furthermore, participants' coping mechanisms increased because they had faith in God and they were dependent on Him.

Lack of human and material resources

Shortage of staff was critical during the COVID-19 pandemic because some professional nurses tested positive and they isolated and some of them were on quarantine. The results of shortage of staff were manifest in increased workload which impacted negatively on the provision of nursing care in paediatric wards more especially in the absence of caregivers. COVID-19 was a sudden pandemic and the spread was fast. At the beginning of the pandemic, there was an inadequate supply of PPE because they were not budgeted for. As a result, the transmission rate was high leading to more COVID-19 infections among professional nurses.

3.3. LIMITATIONS

The inclusion criteria were only professional nurses in paediatric wards and other nursing categories such as enrolled nurses and enrolled nursing assistants were excluded from the study. These nurses were also working during the pandemic and they were taking care of admitted children. They could also have shared their experiences with the researcher. The other inclusion criteria was only professional nurses who have worked for more than a year in paediatric wards. Many professional nurses did not meet the inclusion criteria because most of them who were working in paediatric wards during the pandemic were community servers and they had only worked for few months and then they moved to other wards. Hence interviews were conducted with only eleven (11) professional nurses after data saturation was reached on the eleventh participant.

3.4. RECOMMENDATIONS

From the findings of the study, recommendations were made for nursing practice, research and nursing education.

Nursing practice

During interviews professional nurses indicated that they experienced shortage of staff which led to increased workload. The researcher recommends that in future pandemics more nurses are allocated in paediatric wards because of more activities that are done in these wards. For instance, malnourished children should be fed three hourly, and some of them via nasogastric tubes. This duty needs a professional nurse especially if the caregiver is not present. Children who are severely dehydrated need to be given oral rehydration solution for four hours, every 15 minutes, while monitoring their vital signs.

Nursing research

More research should be conducted on the experiences of all categories of nurses during the COVID-19 pandemic. From the results of this study, it is evident that professional nurses working in paediatric wards were overwhelmed during the COVID-19 pandemic. Therefore, there is also a need to conduct studies that could determine the effects of COVID-19 on the mental health of professional nurses working in paediatric wards. The results of this study could assist policy makers to develop policies that enhance provision of paediatric nursing services during future pandemics.

Nursing education

The spread of COVID-19 in nursing education institutions affects the academic progress of students. Seeing that COVID-19 still exists, it is important to include measures to manage pandemics in the curriculum to prepare students to cope in clinical practice. Including pandemics such as COVID-19 in the curriculum should assist students to acquire information that will include modes of transmission so that they will know how to protect themselves and patients at the clinical facilities. The researcher suggests the following strategies that will assist in preventing the spread of infections in future: teaching in the nursing colleges should be done through online methods and computer skills should be offered to all students and nurse educators who are computer illiterate so that they can cope during online teaching. Students should be provided with gadgets such as laptops and data so that teaching and learning can take place without the spread of COVID-19.

3.5 SUMMARY

The objectives of this study were reached and the research questions were answered through exploring and describing the experiences of professional nurses of two hospitals in NWP. Through interviews with professional nurses working in paediatric wards during the COVID-

19 pandemic, knowledge and insight were gained on what they experienced. Recommendations for nursing practice, nursing research and nursing education were made that are likely to improve the nursing services in future pandemics.

ANNEXURES

ANNEXURE A: NWU-HREC APPROVAL LETTER



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: 018 299-1206
Email: Ethics-HRECApply@nwu.ac.za

2 August 2022

To whom it may concern

APPROVAL OF THE RESEARCH STUDY FROM THE NORTH-WEST UNIVERSITY HEALTH RESEARCH ETHICS COMMITTEE (NWU-HREC) OF THE FACULTY OF HEALTH SCIENCES

Ethics number: NWU-00082-22-S1

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: Experiences of professional nurses in paediatric wards during the COVID-19 pandemic, North West Province

Study leader: Dr JM Sebaeng

Student: TY Kgongwane - 22520465

Application type: Single study

Risk level: Minimal

You are kindly informed that this application was reviewed at the meeting of the North-West University Health Research Ethics Committee (NWU-HREC), Faculty of Health Sciences, North-West University, held on 19/05/2022. Following the review of the application, it has been decided that the study is approved. Approval in this letter means that **final ethics approval** was indeed granted for the **research methodology and the ethical aspects** of this study and that the NWU-HREC has **no further ethical concerns** relating to the research ethics process, except for the outstanding documentation indicated below, which must be provided to the NWU-HREC by the researcher. It is important to mention that this letter indicates that no further ethical concerns exist regarding the execution of the research. A final ethics letter will be issued upon the receipt of the following documentation:

- a. A copy of the permission letter from you as a representative of the provincial Department of Health indicating that the study can proceed.
- b. A copy of the goodwill permission letter from you as the CEO of the selected hospital, granting access to the facilities.

The mentioned document, as indicated above, should be submitted to Ethics-HRECProcess@nwu.ac.za by the researcher, for review before the ethics approval certificate can be provided. This approval is provided for a year, after which continuation of the study is dependent on receipt of an annual (or as otherwise stipulated) monitoring report and the concomitant issuing of a letter of continuation for another year.

Please note: Due to the nature of the study i.e. (face-to-face collection of qualitative data via focus group discussions with professional nurses from a paediatric ward of a public hospital), this study will be able to proceed during the current alert level, following receipt of the approval letter. This approval letter will only be provided if the researchers have implemented appropriate COVID-19 risk mitigation strategies into their research study. The researchers should also take note of the restrictions placed on the number of people allowed within a specific venue, as outlined in the document entitled, "Implications of alert levels for researchers and postgraduate students during the COVID-19 pandemic", which is available at <http://health-sciences.nwu.ac.za/covid-19-management>.

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 Prof Petra
Bester
Date: 2022.08.04
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Chairperson: NWU-HREC

Current details: (2323952) G:\My Drive\ Research and Postgraduate Education\ 1.5.3 Letters Templates\ 1.5.3.6_Gatekeepers_Letter_HREC.docm
30 April 2018

ANNEXURE B: NORTH WEST DEPARTMENT OF HEALTH APPROVAL LETTER



1st Floor, Health Office Park
Private Bag X 2068
MMABATHO
2735

RESEARCH, MONITORING & EVALUATION

Tel: +27 (18) 391 4501
Email: MbuleloT@nwpg.gov.za
www.nwhealth.gov.za

Name of Researcher: Ms T.Y. Kgongwane
North West University

Physical Address: Dr. Albert Luthuli Drive
(Work/ Institution) Private Bag X2178
Mafikeng 2745

HEAD OF DEPARTMENT
2022 -09- 07
NORTH WEST DEPARTMENT OF HEALTH <small>PRIVATE BAG X 2068, MMABATHO, 2735</small>

Subject: Research Approval Letter – Experiences of professional nurses in paediatric wards during COVID-19 pandemic, 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 courtesy meeting with the District Chief Director and the Chairperson of the District Health Research Committee (DHRC) (as per their details below), to introduce their research team/members on the proposed research to be undertaken. The researcher can thereafter proceed to the identified institution/s and/or facility and produce this letter to the Management 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 an 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.



Office of the Chief Director: Dr Ruth Segomotsi Mompati	Chairperson of the DHRC
Mr A. Mvula	Dr S. Abizu
Contact person: Ms Kesaobaka Monchwe	Contact person: Tlotlo
053 928 0506/7 (072 679 6440)	053 927 0458
KMonchwe@nwpg.gov.za	OSefako@nwpg.gov.za

Office of the Chief Director: Ngaka Modiri Molema District	Chairperson of the DHRC
Ms. M. Mokhutswane-Kaudi	Dr M. Nong
Contact person: Ms Boitumelo Sethaiso	Contact person: Ms Wame Makara
018 384 0240	018 384 0240
BSethaiso@nwpg.gov.za	WNthaike@nwpg.gov.za

Kindest regards,



Dr. FRM Reichel
Director: RM&E

Date: 7/9/2022



Researcher

Date: 7/9/2022



ANNEXURE C: PERMISSION LETTERS FROM JOE MOROLONG MEMORIAL AND MAFIKENG PROVINCIAL HOSPITALS



health
Department:
Health
North West Provincial Government
REPUBLIC OF SOUTH AFRICA



506 South Street
Private Bag X 4
VRYBURG
8601

OFFICE OF THE CEO

Tel: +27 (53) 928 9000
Email: APTlou@nwpg.gov.za
Email: Jkhwele@nwpg.gov.za
www.health.nwpg.gov.za

**TO : MS T. KGONGWANE
LECTURER: NORTH WEST COLLEGE (MAFIKENG CAMPUS)**

**FROM : MRS A.P TLOU
CHIEF EXECUTIVE OFFICER**

SUBJECT : APPROVAL TO CONDUCT RESEARCH


DATE : 14 SEPTEMBER 2022

This communique is to acknowledge your letter dated: 7 September 2022.

Please be informed that permission is hereby granted to conduct your research in Joe Morolong Memorial Hospital.

Furthermore provide the institution with a schedule to conduct the research for the necessary arrangement with the Paeds department.

.Yours in Service Delivery


Mrs A.P. Tlou
Chief Executive Officer
Date: 14/09/2022

DEPARTMENT OF HEALTH NORTH WEST PROVINCE
14 -09- 2022
Chief executive officer: Ms A.P Tlou Joe Morolong Memorial Hospital
PRIVATE BAG X 4. VRYBURG 8600



health
 Department:
 Health
 North West Provincial Government
 REPUBLIC OF SOUTH AFRICA



Lichtenburg Road corner
 Danville,
 Private Bag X 2031
 Mafikeng, 2735

MAFIKENG PROVINCIAL HOSPITAL

Tel: +27 (18) 383 6700
 Cell: 008305672750
 Email: mmoromanenwpg.gov.za
 www.health.nwaa.gov.za

To: Ms Tshepiso Kgongwane
 From: Deputy Director Nursing
 Date: 08 .09.2022
 Subject: Request for approval to conduct research.

Your request to conduct research in paediatric ward is hereby granted.

Regards

 MJ Moromane

MAFIKENG PROVINCIAL HOSPITAL
 NURSING SECTION
 12 SEP 2022
 PRIVATE BAG X2031, MAFIKENG, 2745
 SIGNATURE:.....



ANNEXURE D: NWU-HREC STAMPED CONSENT FORM



INFORMED CONSENT DOCUMENTATION FOR PROFESSIONAL NURSES WHO WILL PARTICIPATE IN THE STUDY

TITLE OF THE RESEARCH STUDY: Experiences of professional nurses in paediatric wards during COVID-19 pandemic, North West Province.

ETHICS REFERENCE NUMBER: NWU-00082-22-A1

PRINCIPAL INVESTIGATOR: Dr J.M. Sebaeng & Professor S.S. Moloko Phiri

POST GRADUATE STUDENT: Tshepiso Yvonne Kgongwane

ADDRESS: 5983 Mokhasi Close Unit 14 Mmabatho 2735

CONTACT NUMBER: 078 24 25591

You are being invited to take part in a research study that forms part of my master's degree. The title of the study is: **Experiences of professional nurses in paediatric wards during COVID-19 pandemic, North West Province.**

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 this study that you do not fully understand. It is very important that you are fully satisfied and 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** 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.

What is this research study all about?

The aim of this study is to have a deeper understanding of the experiences of professional nurses in paediatric wards of North West province during the COVID-19 pandemic.

Why have you been invited to participate?

You have been invited to be part of this research because:

- ✓ *You are a professional nurse who have been working in paediatric ward for more than a year, irrespective of your gender. You will therefore provide the researcher with valuable information regarding your experiences during the COVID-19 pandemic.*
- ✓ *You will provide information regarding your experiences as you have been nursing children who are admitted in paediatric ward during the COVID-19 pandemic.*
- ✓ *You would not be able to take part in this research if you were working overtime in paediatric ward of the selected hospital because you spend less time in paediatric ward, therefore you will not provide the researcher with adequate information.*

What will be expected of you?

- ✓ *You will be provided with information about the study.*
- ✓ *You will sign an informed consent that is written in English.*
- ✓ *You will be given an opportunity to ask questions for clarity and enough time to make decision about your participation.*
- ✓ *You will be interviewed for approximately 60 minutes at the selected hospital.*

- ✓ *If you are off during the scheduled interview day, the interview will be rescheduled, and you will be interviewed when you are on duty.*

Will you gain anything from taking part in this research?

- ✓ *You will not gain anything from taking part in this research.*

Are there risks involved in you taking part in this research and what will be done to prevent them?

- ✓ *There is a risk of contracting COVID-19 during the interview process, but COVID-19 protocols will be adhered to.*

How will we protect your confidentiality and who will see your findings?

- ✓ *Anonymity of your findings will be protected by anonymising all your data and you will be assigned a code rather than using your real name.*
- ✓ *Your privacy will be respected by conducting interviews in a private room.*
- ✓ *As soon as data has been transcribed it will be deleted from the recorders and will be stored in a password protected computer.*
- ✓ *Your results will be kept confidential by keeping hard copies in a lockable cupboard of research director and soft copies will be stored in a password protected computer.*
- ✓ *Only the researcher and supervisors will be able to look at your findings.*
- ✓ *Data will be stored for five (05) years and thereafter it will be destroyed.*

What will happen with the findings or samples?

- ✓ *The findings of this study will only be used for this study.*

How will you know about the results of this research?

- ✓ *We will give you the results of this research when the project is complete.*
- ✓ *You will be informed of any new relevant findings by the researcher.*
- ✓ *Furthermore, the results will be shared with you through a meeting, or scheduled feedback session observing COVID-19 protocols.*
- ✓ *A seminar will be conducted to disseminate the results so as to also share with other nurses in the hospital and clinics.*

Will you be paid to take part in this study and are there any costs for you?

- ✓ *The study is not funded*

- ✓ *You will not be paid to take part in the study*
- ✓ *You will be provided with snacks and water after the interview because you will be interviewed during your lunch time.*
- ✓ *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 Miss Tshepiso Kgongwane at 0782425592 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 the research study titled: **Experiences of professional nurses in paediatric wards during COVID-19 pandemic, North West Province**

I declare that:

- I have read this information.
- 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 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 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

Signature of witness

Declaration by researcher

I (*name*) declare that:

- I explained the information in this document to
- I did not use an interpreter
- I was available should he/she 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

Signature of witness

ANNEXURE E: EXAMPLE OF AN INTERVIEW

DURATION: 09:25 minutes

DATE: 14 October 2022

Topic: Experiences of professional nurses in paediatric wards during the COVID-19 pandemic, North West

Researcher: Good morning, Mam. My name is Tshepiso Kgongwane, a master's student from North-West University. The title of the study is "*Experiences of professional nurses in paediatric wards during COVID-19 pandemic, North West Province.*" Thank you for agreeing to participate in this study. The duration of the session will last for approximately 60 (sixty) minutes. Please note that you can withdraw from the study at any time, and you will not be penalised for that. The conversation will be audio recorded; do you give me the permission to record? Everything that will be discussed will be kept confidential, your identity will not be disclosed and for the purpose of this interview you will not be addressed by your name, but will be referred to as Participant G.

To answer the research question of this study two questions will be asked during interview:

Please feel free to participate and if you are ready, may we start?

Researcher: Tell me more about your experience of working in paediatric ward during the COVID-19 pandemic.

Participant: My personal experience? Or experience as a nurse?

Researcher: Yes, your experience as a professional nurse during the COVID-19 pandemic.

Participant: It was like, heart-breaking and very painful to me because I was working with small children and then seeing them dying due to this pandemic, brought a very sad feeling on me. We used to have patients who come with differential diagnosis like DKA as a nurse, you would not know that child is having COVID, you'd be nursing that child, only to find out after some days' gone it was COVID. I was also one of the nurses who was affected by this COVID during this pandemic, nursing a patient not knowing that he was having that COVID, I thought initially it was for adults. So, I was one of those nurses, I stayed at home for 14 days due to this pandemic, while working in paediatric ward.

Researcher: Okay, you said you were heartbroken, can you please elaborate more on that.

Participant: Because if you look at the statistic of children who died due to this pandemic, compared to those that died due to ordinary conditions like severe acute malnutrition and whatever. It was a bit high. Yes, that is why I was heartbroken, I was not used to seeing so many deaths due to COVID virus. That is why I'm saying I was heartbroken.

Researcher: Okay, so how were you coping?

Participant: Iyooo, we were not coping, because if we had a patient of COVID, we would isolate and no nurse would wish to go and work in that cubicle. You understand? I'm a manager but during that time, we were hands on. I'm a manager working in the office now, but I was working in the ward due to shortage of nurses that was created by nurses who were supposed to stay at home for 14 days, we were short staffed, so nobody would like to go and work in those err. Cubicles with COVID virus children, who were isolated. As such it affected the shortage of staff, it affected our morale, like it affected us in all spheres.

Researcher: Okay, so you mentioned the shortage of staff, can you please elaborate more on that?

Participant: Yes, of course everybody knows gore initially, when you were infected with this virus you were expected to go and stay at home for 14 days. In our ward for instance, plus minus when this err... pandemic was starting, plus minus six or seven nurses were isolating, you can imagine, and we are plus minus 26 in this ward. You can imagine err. Remember that some of them are supposed to go on leave, some of them are ...are... supposed to be off. We are not even getting our off duties, we were like the whole week without getting off duties, that is how much this virus affected us.

Researcher: Okay, so when you were short-staffed, do you think quality nursing care was rendered?

Participant: It's obvious, it was not rendered, because akere you know gore there is a certain err. Ratio that is expected, the ratio of a nurse to patient should be proportional, according to the ratio of err. Nurses to patient, one nurse is supposed to nurse how many patients? plus minus 4, but during this pandemic, you'd find yourself being 1 nurse nursing 15 or twenty patients in a cubicle, whilst the others are recuperating and isolating at home.

Researcher: Okay, so it means quality nursing care could not be rendered.

Participant: It was not rendered at all. It was not.

Researcher: And what were the consequences?

Participant: Consequences of what?

Researcher: The consequences of not providing quality nursing care to paediatric patients?

Participant: It's obvious, the average length of stay of patients was elevated, the bed occupancy rate was high. For instance, in our hospital bed occupancy rate is supposed to be 85%, so during the pandemic, it was ranging between 95 and one-hundred-and-something per day.

Researcher: Okay, thank you Mam, any more experience?

Participant: It left some scars, for myself as a person, even now I cannot even smell anything. My smelling senses are gone, I cannot taste anything, I'm just happy because I'm alive. It left some scars in most of the nurses.

Researcher: Okay, thank you, do you want to share any more of your experiences?

Participant: No, I think I'm enough, I'm okay.

Researcher: Okay, thank you, we are now moving to the second question. What were the lessons you learned about this pandemic?

Participant: I learned that this pandemic is not meant for a particular race, colour, age or sex. It was affecting like everybody. Because of the reason that most of the... Even the doctors, some of them died because of this pandemic. Not only the nurses or the ordinary people, it was killing everybody, and it lasted for a long time. It made me ask myself gore what is the government? What is the government doing to prevent such occurrence of this nature because it caught us off-guard ...[we] did not have a vaccine, and it took us a very short time to get this vaccine. Are they ready for something like this? Because anything can happen, any pandemic can come on now, is the government ready for any pandemic of this nature, are they ready? Are they prepared?

Researcher: Okay, thank you, any more lessons?

Participant: Ahh...none whatsoever.

Researcher: Okay, was that all?

Participant: This is all Mam.

Researcher: Okay, thank you so much for your time, and thank you for participating.

Participant: Thank you Mam.

Researcher: Thank you

APPENDIX F : LANGUAGE EDITING CERTIFICATE



Office: 0183892451

FACULTY OF EDUCATION

Cell: 0729116600

Date: 26th November, 2022

TO WHOM IT MAY

CONCERN

CERTIFICATE OF EDITING

I, **Muchativugwa Liberty Hove**, confirm and certify that I have read and edited the entire dissertation,

Experiences of professional nurses in paediatric wards during COVID-19 pandemic, North West Province

Submitted by TSHEPISOKGONGWANE, student number **22520465**, orcid.org/0000-0003-1097-1655, in partial fulfilment of the requirements for the degree *Magister of Nursing Science*, Faculty of Health Sciences, NuMIQ Research Focus Area, North-West University.

TSHEPISOKGONGWANE was supervised by Dr J.M. Sebaeng and co-supervised by Professor S.S. Moloko-Phiri

I hold a PhD in English Language and Literature in English and am qualified to edit such a thesis for cohesion and coherence. The views expressed herein, however, remain those of the researcher/s.

Yours sincerely

Professor M.L. Hove (PhD, MA, PGDE, PGCE, BA Honours – English)