Experiences of nurse educators regarding teaching and learning during the COVID-19 pandemic at a nursing education institution in the North West Province

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Dissertation accepted in fulfilment of the requirements for the degree *Master of Nursing Science with Community Nursing* at the North-West University

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PREFACE

This dissertation followed the guidelines for submitting a dissertation in article format as stipulated by the North-West University General Academic Rules (A4.4.2 and A4.10.5). The dissertation is presented in three sections to comply with the requirements for a Master of Nursing Science degree.

Section One: This section outlines the experiences of nurse educators regarding teaching and learning during the COVID-19 pandemic at a nursing education institution in the North West Province. Moreover, the study's context, problem statement, research question, purpose, and methodology in carrying out the research study are discussed in this section.

Section Two: Comprises the manuscript titled: The Experiences of nurse educators regarding teaching and learning during the COVID-19 pandemic at a nursing education institution in the North West Province. The study followed a qualitative descriptive phenomenological approach to explore and describe nurse educators' experiences regarding teaching and learning during the COVID-19 pandemic. The article has been submitted for publication in BMC Nursing Journal, an accredited peer reviewed journal. The format in this section followed the author's guidelines as specified by the journal. The student wrote the proposal, collected the data, analysed, interpreted, and presented the information. The supervisor and the two co-supervisors offered guidance and academic contributions to the dissertation and the manuscript.

Section Three: This section highlights the conclusions, limitations, and recommendations.

The co-authors of the manuscript submitted for publication titled: "The experiences of nurse educators regarding teaching and learning during the COVID-19 pandemic at a nursing education institution in the North West Province", which is presented in Section two of this dissertation are: Dr GP Kovane (supervisor), Mr IO Mokgaola (Co-supervisor) and Prof SS Moloko-Phiri (Co-supervisor). The study supervisors granted permission to submit the manuscript to BMC Nursing.

The formatting of this dissertation, including page numbering, is sequential. However, section two has a variance regarding the headings and referencing style. Headings and referencing style follow journal's author submission guidelines. The continuing sections of the dissertation followed the North West University guidelines.

PERMISSION LETTER FOR MANUSCRIPT PUBLICATION

I, Dr G P Kovane, the study's supervisor, affirm that this dissertation titled "The experiences of nurse educators regarding teaching and learning during the COVID-19 pandemic at a nursing education institution in the North West Province", written by Gontse KS contains a manuscript submitted to BMC Nursing for review and possible publication. I grant permission that she may submit the manuscript for examination purposes. The dissertation fulfils the obligations required for the Master of Nursing Science degree at North-West University.

DEDICATION

I dedicate this dissertation in loving memory of the following people. May their precious souls continue to rest in perfect eternal peace:

- My late father, Mocwedi Ernest Gontse, had it not been for the foundation that you laid, "education is the key to success", I would not have made it this far.
- My late sister and brother, Onalenna Laticia Gontse and Odirile Richard Gontse, I do not doubt you would to be proud of me.
- My late niece, Tshepang Gontse, all the memories and support will forever be cherished in my heart.

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I want to express my sincere gratitude to the "most high" God, the giver of my life, the Lord, my provider, for seeing me through all the challenges that I encountered in this journey; all the glory belongs to him, for He is worthy to be praised.

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I am also expressing my sincere gratitude to all my North-West College of Nursing colleagues, who happened to be my study companions and mentors. I am blessed to have gone through the study challenges with you, and I can never thank you enough for being the support system during this journey; you were always just a phone call away; thank you for your unconditional assistance and be blessed.

I also express my sincere gratitude to the North West Department of Health (NWDoH) and the selected Nursing Education Institution (NEI) managers for permitting me to conduct and collect data for the study.

I cannot underrate the importance of the selected NEI nurse educator participants in the North West Province (NWP), who sacrificed their time and convenience to share their experiences with me.

To my only beloved daughter, Qhama Tshepiso Gontse, I was sometimes an absent mother, but I hope that someday you will understand you are the motivation behind achieving my goals.

To my mother, Balebetse Elizabeth Gontse and my sister, Tshiamo Ellen Gontse, thank you for playing the mother role to my daughter in my absence.

To my niece, Gomotsang Gladness Gontse, your assistance with knowledge of Information Technology is highly appreciated.

To my nephew, Oageng Nelson Gontse, thank you for always availing yourself to transport my daughter to school while I was busy with study commitments.

I am grateful to everyone I might not have mentioned who contributed directly or indirectly to accomplishing my dream. May God bless you abundantly.

DECLARATION

I declare that the dissertation titled "Experiences of nurse educators regarding teaching and learning during the COVID-19 pandemic at a Nursing Education Institution in the North West Province" is my original work and has not been previously submitted for any degree or any other purpose at the North-West University or any other institution. All the sources utilised or quoted are acknowledged through thorough referencing.

Kebuseditswe Sylvia Gontse Date 17 August 2023

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LIST OF ACRONYMS

COVID-19	Coronavirus disease discovered in 2019
DoH	Department of Health
FGD	Focus Group Discussion
HEI	Higher Education Institution
HOD	Head of Department
HREC	Health Research Ethics Committee
IT	Information Technology
NEI	Nursing Education Institution
NMC	Nursing and Midwifery Council
NuMIQ	Quality in Nursing and Midwifery Scientific Committee
NWDoH	North West Department of Health
NWP	North West Province
NWU	North-West University
NWU-HREC	North-West University Health Research Ethics Committee
POPI	Protection of Personal Information
SANC	South African Nursing Council
WHO	World Health Organization

ABSTRACT

Background: The abrupt pandemic outbreak of the Coronavirus in 2019, together with the movement restrictions associated with the pandemic, affected education systems globally, which include nursing education institutions in South Africa. This study aimed to explore and describe the experiences of nurse educators regarding teaching and learning during the COVID-19 pandemic at a Nursing Education Institution in the North West Province.

Methods: A qualitative, descriptive, and phenomenological approach was used to explore and describe the experiences of nurse educators regarding teaching and learning, during the COVID-19 pandemic, at a Nursing Education Institution in the North West Province. The study was conducted at a Nursing Education institution with two campuses 178,1 kilometres apart. A total of 25 nurse educators from the two campuses were purposefully selected and agreed to participate in the study. Four focus group discussions were used to collect information through face-to-face semi-structured interviews and field notes. The data analysis followed Colaizzi's seven-stage process. Ethical considerations and trustworthiness were maintained throughout the study.

Results: Three themes emerged, namely positive experiences regarding teaching and learning during the COVID-19 pandemic, negative experiences regarding teaching and learning during the COVID-19 pandemic, and suggestions for overcoming the challenges experienced by nurse educators during the COVID-19 pandemic.

Conclusions: The study findings revealed that nurse educators had positive and negative experiences regarding teaching and learning during the COVID-19 pandemic.

Keywords: Coronavirus, COVID-19, experiences, nurse educator, nursing education institution.

Section One

SECTION 1: OVERVIEW OF THE STUDY

1.1 INTRODUCTION

The strict legislation that was implemented to curb the spread of the Coronavirus (COVID19) pandemic during 2019 and 2020 impacted educational activities globally. COVID-19 disturbed teaching and learning at academic institutions, including the Nursing Education Institutions (NEIs), which led to suspension of teaching activities (Ilankoon *et al.*, 2020:1). Furthermore, Brummet (2014:108) argues that the closing of schools such as NEI was controversial and affected the quality of teaching and academic attainment. According to Jena (2020:12584), technology was used to modify some of the negative effects on teaching and learning but didn't replace the crucial effect of direct interactions between students and educators. Therefore, the closure of NEI due to the COVID-19 pandemic increased pressure on students and educators, especially those with restricted digital skills. Similarly, many students did not have the necessary access to technology, which made teaching and learning difficult (Onyema *et al.*, 2020:108).

1.2 BACKGROUND AND RATIONALE FOR THE STUDY

The outbreak of COVID-19 was discovered at the end of 2019 in Wuhan, China (Cesco *et al.*, 2021:285). The World Health Organization (WHO) declared COVID-19 a global pandemic in March 2020. According to WHO (2021) statistics, there were 533,816,957 million COVID-19 confirmed cases worldwide from December 30, 2019, to June 14, 2022, with a mortality rate of 6,309,633 million. Within these large numbers, the nurse educators and students were also globally affected, which had an impact on teaching and learning. Many countries developed action plans to stop the effects of the COVID-19 pandemic, which were based on social distancing rules and lockdowns (Cesco *et al.*, 2020:285). These action plans had serious and disturbing consequences such as closure of schools and having to work remotely from home. Many sectors, including the NEI were affected.

Furthermore, Drenkard *et al.* (2021:948), in a study conducted in the United States of America, reported that billions of people were bound to "stay at home", and work and learn from home due to the COVID-19 pandemic. This created a challenge for both educators and students, particularly those from developing countries. Suliman *et al.* (2021:828), in a study conducted in Asia, argued that nurse educators had to produce and organize teaching materials such as podcasts, videos, and discussion boards over a limited period of time.

In the United Kingdom, Swift *et al.* (2020:1) reported that lockdowns and social distancing resulted in the termination of campus-based teaching, whereby nurse educators and students were compelled to home-based working. Physical attendance at simulation laboratories had to be discontinued, and nurse educators only provided theory through online teaching methods to ensure continuation of studies from home, according to the Nursing and Midwifery Council (NMC, 2020:1). This implied that the demonstration of clinical skills was not achieved. Similarly, Haslam (2021:1) argued that in the United Kingdom, COVID-19 interruptions compelled nurse educators to adopt contemporary and evolving technologies to sustain teaching and learning during the pandemic. However, Carolan *et al.* (2020:1), in a study conducted in the United Kingdom, asserted that online education was hindered by poor infrastructure, including networks, and poor digital skills for both students and educators.

The global suspension of academic activities had impacts on nurse educators. In Europe, COVID-19 compelled nurse educators to switch to online teaching and learning (Aristovnik *et al.*, 2020:2; Haslam, 2021:1; Swift *et al.*, 2020:1). In several countries, nurse educators had increased pressure with regards to teaching and learning as some of them had restricted digital skills (Onyema *et al.*, 2020:108; Subedi *et al.*, 2020:69; Swaminathan *et al.*, 2020:269); nurse educators also had fears of contracting the disease (Carolan *et al.*, 2020:1). Clinical placement was also halted to reduce the rate of COVID19 infections, which resulted in an increased workload for nurse educators. With the country's move to alert level 3 of the COVID-19 lockdowns, nurse educators had a lot of outstanding clinical skills inductions and assessments to be conducted.

Bqczek *et al.* (2020:1) reported that in Poland, online learning became the principal practice of teaching the curriculum during the pandemic. However, successful execution of this type of teaching required a well-thought-out strategy and more effective measures. In addition, the authors highlighted that technical problems with information technology (IT) resources were some of the primary challenges observed. Similarly, Tomietto *et al.* (2020:131), in a study conducted in Italy, also argued that excellent internet connectivity to permit access to online resources and financial constraints were some of the challenges. Additionally, the practical skills-based and simulation sessions were challenging to simulate online since these skills require interaction. Furthermore, these authors suggested that online learning was less productive than face-to-face contact, which increased the skills and social capabilities of students. Students were compelled to adapt to a total shift to online educational delivery, whereas others experienced the absence of physical human involvement (Du Preez & Le Grange, 2020:90; Watson *et al.,* 2020:4). Dewart *et al.* (2020:2) assert that Canadians reached a challenging conclusion to eliminate nursing students from clinical practicals. In addition, Canada had to consider the importance of education against the risk and strain to the students individually and professionally. This led to uncertainty in several countries about the continuation of nursing programs due to COVID-19 infections (Savitsky *et al.*, 2020:6). In nursing, clinical practice was essential yet a challenging element of students' professional development, particularly during the COVID-19 pandemic (Susmarini *et al.*, 2022:176). Teaching and learning were affected during different lockdown levels; however, clinical teaching was the most affected at the selected NEI as clinical supervisors and students could not access the clinical settings. Similarly, in a study conducted in Italy, Shanafelt *et al.* (2020:2134) asserted that NEI's clinical supervisors were often denied access to clinical sites, which made direct supervision and guidance difficult. This resulted in a lack of support for students, which affected the achievement of learning outcomes. Nurse educators also feared the risk of becoming infected with COVID-19 during clinical accompaniments.

Jena (2020:84) highlighted in the study conducted in India that the country was facing an extensive crisis in many areas, and the education sector was also affected, with examinations being cancelled during the final assessments. Additionally, students and educators were striving for continuous teaching and learning using online methods of

education. In a study conducted in Asia by Suliman *et al.* (2021:828), it was argued that the deficiencies in teaching and learning were encouraged by existing poor IT infrastructure, a lack of e-learning support, and staff digital knowledge. Langegård *et al.* (2021:5) conducted a study in Sweden and asserted that other students experienced discomfort because of their limited digital knowledge.

In a study conducted in Nigeria, Onyema *et al.* (2020:108) affirmed that the outbreak of COVID-19 expanded the global demand for online teaching and learning. Furthermore, these authors affirmed that to alleviate the impact that accompanied the closures of institutions, many educators and students depended on technology to ensure continued teaching and learning during the COVID-19 pandemic. Similarly, in Senegal, the higher education institutions (HEIs) took the decision to suspend most academic activities and resorted to remote teaching and learning (Kossingou *et al.*, 2021:1). According to Henaku (2020:54), in a study conducted in Ghana, both social media and online learning were utilised for teaching and learning by the HEIs in the country. Moreover, the students encountered difficulties with internet connectivity, financial restraints, and challenges with electronic devices.

Du Preez and Le Grange (2020:92) highlighted that to save lives, South Africa also incorporated lockdown measures that were relevant to the HEIs, whereby nurse educators and nursing students worked and learned from home. In the same study, faceto-face contact was halted, and some institutions adopted online teaching and learning. Issues such as inequities in accessibility and connectivity were experienced among rural and urban areas (Agu *et al.*, 2021:153; Subedi *et al.*, 2020:69).

The selected NEI in the NWP also had the challenge of running two programmes of R425, which, on completion, the student will register with SANC as a diploma nurse with (general, psychiatric, and community) and midwifery, and R.171 (Diploma in General Nursing) concurrently, which added more to the challenges. There was no literature available on the experiences of nurse educators during the COVID-19 pandemic in South Africa, particularly in the NWP, as it is a new disease. Therefore, the researcher intended

to explore and describe the experiences of nurse educators regarding teaching and learning during the COVID-19 pandemic at a selected NEI in the NWP.

1.3 PROBLEM STATEMENT

Teaching and learning were negatively impacted during lockdown at the selected NEI, whereby academic programs were disrupted (Patrick *et al.*, 2021:1). For instance, direct teaching was abruptly suspended due to the COVID-19 pandemic, and all academic institutions moved to online teaching and learning. Before the COVID-19 pandemic, the delivery of teaching and learning at the selected NEI in the NWP was face-to-face, whereby there was direct interaction between students and nurse educators. NEI suspended teaching and learning to curb the spread of COVID-19 disease as per the South African government directive.

The COVID-19 pandemic increased the demand for online teaching and learning (Onyema *et al.*, 2020:113). However, this was not realised at the selected NEI in the NWP. Online teaching and learning were impeded by a lack of IT resources in some NEIs, such as Wi-Fi, computers, and an online supportive student portal. The researcher, as a nurse educator in one of the NEIs in the NWP, observed that some NEIs, such as universities, continued with online teaching and learning because they had necessary resources such as an online student portal and efficient internet connections. Teaching and learning, including clinical skills, were suspended for 3 (three) months at the selected NEI during the country's level 5 lockdown. As a result there were unavoidable course extensions. Contact teaching and learning only resumed on the 1st of June 2020, with the country's move to alert level 3 of the COVID-19 lockdowns. Therefore, nurse educators and nursing students were faced with a lot of teaching and learning to catch up.

In response to the above concerns, this study proposes to explore and describe the experiences of nurse educators regarding teaching and learning during the COVID-19 pandemic at the two campuses of the selected NEI in the NWP. This study also proposes to make recommendations regarding teaching and learning during COVID-19 pandemic.

1.4 RESEARCH QUESTION

What are the experiences of nurse educators regarding teaching and learning during the COVID-19 pandemic at a selected NEI in the NWP?

1.5 RESEARCH AIM AND OBJECTIVE

The aim and objective of this study are as follows:

1.5.1 Research aim

The aim of the study was to explore and describe the experiences of nurse educators regarding teaching and learning during the COVID-19 pandemic at a NEI in the NWP where academic activities were suspended.

1.5.2 Research objectives

- To explore and describe the experiences of nurse educators regarding teaching and learning during the COVID-19 pandemic at a NEI in the NWP.
- To make recommendations regarding teaching and learning during COVID 19 pandemic.

1.6 SIGNIFICANCE OF THE STUDY

1.6.1 Nursing Education

Nursing education may benefit from the study findings with regards to future teaching & learning in terms of resource planning and new curriculum innovations. Furthermore, HEIs' policymakers may use the findings to formulate policies for teaching and learning as future guidelines for any future pandemics.

1.6.2 Research

The findings of this study may add to the body of nursing knowledge and may assist with planning for future research with regards to teaching and learning during the COVID-19 pandemic and other infections.

1.7 CONCEPTUAL DEFINITIONS

Experience refers to any event through which an individual has lived or gained knowledge (Myburgh & Poggenpoel, 2009:448). In this study, experience refers to the lived events or effects of nurse educators regarding teaching and learning during the COVID-19 pandemic.

Nurse educator refers to a person registered under Section 31 of the Nursing Act, 2005 (Act 33 of 2005) with an additional qualification in nursing education (Nursing Act, 2005:25). For the purpose of this study, a nurse educator was referred to as a professional nurse with an additional qualification in nursing education teaching at the NEI during the COVID-19 pandemic in the North West Province.

Teaching refers to an interactive process primarily involving classroom talk, which takes place between educator and student and occurs during certain definable activities (Rajagopalan, 2019:1). In this study, teaching referred to the interactive process between a nurse educator and nursing students during the COVID-19 pandemic.

Learning refers to the acquisition of knowledge, understanding, values, skills, competence, or experience as stipulated by the National Education Policy Act 27 of 1996. For the purpose of this study, learning referred to the achievement of information, standards, expertise, and proficiency during the COVID-19 pandemic.

COVID-19 refers to a new disease (severe acute respiratory syndrome coronavirus 2, which is equivalent to SARS-CoV-2) (Cesco *et al.*, 2020:285). COVID disease is caused by a coronavirus, and COVID-19 stands for the coronavirus disease that was discovered in 2019. In this study, COVID-19 referred to the outbreak of SARS-Cov-2 named COVID19, which had a negative impact with regards to the delivery of teaching and learning at the selected NEI.

Nursing Education Institution refers to any educational facility that offers professional nursing education at the basic and post-basic level where such nursing education has been accredited in terms of Section 15(2) of the South African Nursing Council Nursing Act, 2005 (Act No. 33 of 2005). In this study, NEI referred to the institutions in the NWP that were training and producing nurses during the COVID-19 pandemic.

1.8 RESEARCH DESIGN AND METHODS

1.8.1 Study design

Research design refers to the plan for addressing a research question, including strategies to enhance the study's integrity (Creswell, 2014:31; Polit & Beck, 2014:414). The study followed a qualitative descriptive-phenomenological approach with the intention of exploring and describing the experiences of nurse educators with regards to teaching and learning during the COVID-19 pandemic. Qualitative research focuses on understanding the people's experiences as it is lived (Polit & Beck, 2014:37).

1.8.2 Research Methods

Research methods refer to the plans and the procedures for research that span the steps of detailed methods of data collection, analysis, and interpretation (Creswell, 2014:3; Polit & Beck, 2014:410). This study utilised a phenomenological approach. Phenomenology is a qualitative research tradition with roots in philosophy and psychology that focuses on the lived experience of humans (Creswell *et al.,* 2019:85; Polit & Beck, 2014:410). The phenomenological approach allowed the researcher to explore the lived experiences of nurse educators with regards to teaching and learning during the COVID-19 pandemic.

Phenomenology is divided into two subsections: descriptive and hermeneutics. This study explored and described the experiences of nurse educators regarding teaching and learning during the COVID-19 pandemic using descriptive phenomenology, which focuses on examining the lived experiences through explanations received from the individuals involved (Brink *et al.*, 2018:105; Polit & Beck, 2017:659). Through focus group discussions (FGDs), the researcher was able to explore and describe the experiences of nurse educators regarding teaching and learning during the COVID-19 pandemic in the

NWP and obtain the richness and depth of the data. Descriptive phenomenology was first established by Husserl; his idea emphasised the descriptions of human experience with regards to their everyday lives (Polit & Beck, 2017:667). Descriptive phenomenology pursues to define lived experiences (Polit & Beck, 2017:667). Descriptive phenomenology involves the following four steps: bracketing, intuiting, analysing, and describing (Polit & Beck, 2014:292).

Bracketing

Bracketing refers to the process of identifying and suspending predetermined views about the phenomenon under study, (Polit & Beck, 2014:292). In this study, the researcher used bracketing to remain neutral with respect to certainty or doubt in the reality of the phenomenon under study. For the purpose of this study, the researcher suspended any information she might have about the experiences of nurse educators with regards to teaching and learning during the COVID-19 pandemic. The researcher's predetermined concepts might hinder real description of the experiences of the nurse educators with regards to teaching and learning during the COVID-19 pandemic.

Intuiting

Intuiting occurs when researchers regard the meanings of the phenomenon by those who have experienced it (Polit & Beck, 2014:292). In this study, the researcher engaged in the phenomenon under study, as it was described by the nurse educators. The researcher didn't consider any predetermined concepts that might hinder real description of the lived experiences of nurse educators with regards to teaching and learning during the COVID19 pandemic.

Analysing

Analysing refers to extracting significant statements, categorizing, and making sense of the essential meanings of the phenomenon, (Polit & Beck, 2014:292). In this study, the researcher grouped together the important themes in order to understand their meaning.

Describing

Describing occurs when the researcher realises and explain the phenomenon, (Polit & Beck, 2014:293). In this study, the researcher categorised all important elements of

essences common to the lived experiences of nurse educators with regards to teaching and learning during the COVID-19 pandemic. These essences are also thoroughly described.

1.8.3 Study context

The study was conducted at the selected NEI in the NWP which comprise of two campuses which are 178,1 km apart. The selected NEI was chosen since it was the only public NEI in the NWP. Furthermore, some NEIs such as universities managed to continue with online teaching and learning, because they had necessary resources such as online student portal and efficient internet connections. However, this was not realised at the selected NEI as teaching and learning was impeded by lack of IT resources such as, Wi-Fi, computer laboratory and online supportive student portal. The selected NEI used to have an estimated student intake ranging from 100 to 150 per campus for the phased-out curriculum of R.425. However, the selected NEI was still offering the R.425 program since the last intake was in 2019. Due to the COVID-19 disruptions the last intake group of 2019 was still in the program. The NEI was accredited for the new curriculum of R.171 with effect from February 2021. The current student intake for the new curriculum of R.171 was 40 per campus. One campus had an estimated number of 50 nurse educators. Nine of the nurse educators were in managerial/administration posts, that is, 8 (eight) head of departments (HODs) and one campus-head. Some had office spaces, while others were sharing in groups of five and seven and each nurse educator had either a desktop or a laptop. The other campus had an estimated number of 40 nurse educators. Ten of the nurse educators were in managerial/administration posts and had their own offices. Thirty of the nurse educators shared an office space in a boardroom and each one had either a desktop or a laptop. However, the nurse educators who were in the managerial/administration posts were not involved in direct teaching and learning.

1.8.4 Population and sampling

The population for this study were the nurse educators teaching at the campuses of the selected NEI in the NWP and were purposively selected.

Population

According to Polit & Beck (2017:98), population is all individuals or objects with common, defining characteristics. The population for this study comprised of nurse educators who were teaching at the campuses of a selected NEI in the NWP. A selected NEI had an estimated number of 40 nurse educators per campus. For the purpose of this study, nurse educators who were registered under section 31 of the Nursing Act, 2005 (Act 33 of 2005) with an additional qualification in nursing education (Nursing Act, 2005:25) working in NWP were selected.

Sampling

Sampling is a method that will be used to select a subset that will represent the study population (Brink *et al.*, 2018:115; Polit & Beck, 2017: 367). In this study a sample is referred to the nurse educators who were selected from the population the researcher was interested in.

1.8.5 Sampling size

Sample size refers to the number of participants to be included in a study, (Brink *et al.*, 2018:126). The sample size was determined by data saturation. According to Brink *et al.* (2018:126) data saturation is the point at which new data no longer lead to new information. According to Carlsen and Glenton (2011:2) there is no direct guidance regarding how to attain the optimum number of FGDs. Polit & Beck (2017:720) recommends five or more participants in a focus group discussion. Creswell *et al.* (2019:111) recommends between five to 12 participants per group. However, in this study 4 (four) FGD sessions were conducted comprising of eight participants until data saturation. Two FGD sessions were conducted at each campus since the selected NEI has two campuses. Therefore, the minimum sample size of this study was 25 participants. Conducting four FGDs assisted to curb bias that might be seen in a single group or site.

1.8.6 Sampling technique

Sampling technique refers to identification of the specific process by which the entities of the sample have been selected, (Christensen *et al.*, 2014:247). Purposive sampling was utilized in this study. According to Brink *et al.* (2018:126) purposive sampling refers to a

technique based on the researcher's own judgement when selecting members of the population to participate in the study. The nurse educators were purposively selected as they possessed knowledge concerning experiences regarding teaching and learning during the COVID-19 pandemic.

1.8.7 Selection criteria

Inclusion and exclusion criteria in this study outlined the requirements that the researcher was looking for, from the probable participants that provided the researcher with information that was relevant to address the research question (Grove *et al.*, 2015:331). In this study the following inclusion and exclusion criteria are discussed:

Inclusion criteria	Justification
• Nurse educators who were employed at the selected NEI before COVID-19 was declared a pandemic by WHO, including the ones in managerial and/ or administration positions.	• They possessed knowledge with regards to experiences regarding teaching and learning during the COVID-19 pandemic.
• All nurse educators who possessed either a diploma or degree in nursing and had an additional qualification in nursing education.	• They were responsible for facilitating teaching and learning.
• Nurse educators who were registered under section 31 of the Nursing Act, 2005 (Act 33 of 2005).	• The nursing profession is regulated by SANC by establishing and maintainig standards for nursing education and training as well as for clinical practice.
• All nurse educators who agreed to participate in the study.	• Indicated that participation was precisely autonomous and the participants were not coerced.

Exclusion criteria	Justification
• Nurse educators who were on leave during the time of data collection.	• They might have challenges of time and availability during data collection.
• Nurse educators who had positive signs and symptoms of COVID-19 during the time of data collection.	• They might infect the researcher or fellow research participants.

1.8.8 Data collection

Data collection is the systematic gathering of information relevant to the research problem using methods such as individual interviews and group discussions (Polit & Beck, 2017:725). In this study, data was collected by means of face-to-face semi-structured FGDs and field notes were taken. Christensen *et al.* (2014:234) refers to focus group as a type of group interview in which a moderator leads a discussion with a small group of individuals to explore and describe in detail, how the group members feel and think about the topic. Data was collected during the time when participants were on-duty as per negotiation with them for the convenient time for them. Semi-structured focus groups were utilised as they enabled the researcher to gain overall information about the experiences of nurse educators regarding teaching and learning during the COVID-19 pandemic. Two FGD were conducted at each of the two campuses of the selected NEI. In this study, 23 participants were interviewed, size was large enough to provide a variety of perspectives and small enough not to become disorderly or fragmented. The FGDs entailed semi-structured questions to explore and describe the experiences of nurse educators regarding teaching and learning during the COVID-19 pandemic. According to Creswell *et al.* (2019:108) semi-structured interviews are grounded on a line of inquiry established by the researcher prior the interview. In this study open-ended questions were asked, followed by further probing and clarification. The researcher had a research assistant/facilitator who assisted with the collection of field notes and the management of recording equipment. COVID-19 protocols were maintained. The room was sanitized as per the institution's rules prior to utilisation. The room had a sanitizer available and was well-ventilated. Participants were only allowed to enter the room and participate in the FGD if they were symptom-free. COVID-19 screening was done as per the institution's policy. All participants were required to wear masks covering their nose and mouth. Social

distancing was maintained, participants were seated at least 1,5 m apart. Participants were allowed to remove their masks while talking to enable the audio to be clear so that other participants can respond, audio recording was clear and enabled the facilitator to visualise facial expressions. However, the mask was put back on immediately after talking.

Advantages of FGDs.

FGDs are advantageous, (Creswell *et al.*, 2019:111; Polit & Beck, 2017:721). The advantages of FGD are as follows:

- Can afford a piece of in-depth information, it allows moderators to probe deeper into the topic under study to uncover hidden issues.
- Are usually thought-provoking to participants, for instance, people feel more comfortable expressing their opinions if their backgrounds are the same.
- Participants react to what is being said by others, thus leading to deeper expressions of views in FGD.
- Allows the researcher to acquire the viewpoints of many people within a short period of time.

Field Notes

According to Polit and Beck (2014:402) field notes refer to the notes taken by researchers to record the unstructured observations made in the field, and the interpretation of those observations. Field notes are both descriptive, observational, and reflective (Polit & Beck, 2017:736). However, in this study, detailed field notes about each session were taken. According to Polit and Beck (2017:737), descriptive notes refer to objective descriptions of observed events and conversations, information about actions, dialogue, and context are recorded as completely and objectively as possible. In this study, the researcher took field notes by looking, listening, and noting the participants verbatim. Field notes enabled the researcher to capture non-verbal observations, such as actions, vocalisations, language, facial expressions, and gestures. Moreover, factual, and objective terms were utilised, that is, the researcher only noted what they saw, rather than what they were thinking they saw.

1.8.9 Interview schedule

An interview schedule (Annexure A) is a guideline that comprises of a set of questions that a researcher compiles to use to interview the participants (Holloway & Wheeler, 2010:88). The interview schedule is comprised of a list of questions that was used for probing. The first question that was asked was to enable the participants to relax. An icebreaker allowed the participants to feel free to participate during the discussions.

1.8.10 Data collection process

Data collection refers to a process of gathering information from all relevant sources to find a solution to the research problem, (Grove et al, 2017:493). The research study took place at each one of the two campuses of the selected NEI in the NWP and all the FGDs took place at a time that was convenient for both the researcher and the participants. A boardroom was utilised, and participant's privacy was maintained by conducting interviews behind closed and locked doors, mobile cell phones were switched off, and "do not disturb" door sign was pasted or hung outside the door. The face-to-face semistructured FGDs lasted for at least 60 minutes, to fully explore the topic under discussion. All data collection equipment were arranged timeously to diminish disturbances during the process. The sessions were audio recorded with permission from the participants to assure that the interview data is the participant's actual verbatim responses. Audio recordings were subsequently transcribed. The researcher created some ground rules with the participants, for instance, one person to speak at a time, to be respectful of each other, and to maintain the confidentiality of the FGD. Ground rules aided to explain expectations for conduct during the discussions, therefore assisting the group to start and sustain a useful discussion. Another importance of ground rules was to make clear the group's norms about how participants should interact, thus preventing or decreasing misinterpretations and disagreements. All participants were encouraged to give inputs, domination was not permitted during discussions. Participants sanitised their hands at the end of the interview. Each of the participants picked a NWU-branded pen from the box, as a token of appreciation for their time and inconvenience.

1.8.11 Data analysis

Data analysis refers to a process used by researchers to organize, provide structure to, and elicit meaning from data, (Polit & Beck, 2017:748). In this study data was analysed through Colaizzi's seven-stage process, which occurred as follows:

- In stage one the researcher transcribed the data from audio recorders verbatim and read written data from the transcripts several times to get their meaning.
- In the second stage, significant statements were extracted, that is, only relevant information about the experiences of nurse educators regarding teaching and learning during COVID-19 pandemic at a Nursing Education Institution in the North West Province was extracted from each description. The researcher organised data in a meaningful and systematic way.
- In the third stage, Data was organised and broken into small chunks text and segments (coding).
- In the fourth stage, small chunks text and segments were divided into sentences (or paragraphs) and clustered into themes.
- In the fifth stage, themes that were relevant to the study were defined and supported by quotations and literature.
- In the sixth stage, the researcher reviewed and modified the themes identified in stage five.
- Whilst in the seventh stage, refinement and validation of the themes was done to know what each theme is about. The researcher validated the findings by revisiting the participants. Validation of the findings took place at the end of data collection. The researcher clustered the collected data into themes and revisited the participants for them to ratify them.

1.9 RIGOUR

1.9.1 Trustworthiness

The research procedures were made transparent, allowing others to scrutinize it, in order to ensure the accuracy of findings, and to convince others that the findings are worth paying attention to (Yin, 2011:18). In order to make certain that the study is trustworthy,

all the five criteria's of trustworthiness, which are: credibility, transferability, dependability, conformability and authenticity were applied as follows:

1.9.2 Credibility

Credibility refers to the truth and accuracy of the findings and interpretations of data, (Polit & Beck, 2017:787). For the purpose of this study, to ensure the credibility of the results the researcher employed the following strategies: prolonged engagement and member checking as discussed below:

1.9.2.1 Prolonged Engagement

Prolonged Engagement refers to the investment of sufficient time collecting data to have an in-depth understanding of the people under study, (Polit & Beck, 2017:791). Moreover, spending sufficient time collecting data is vital to test for misrepresentation and falsifications, and to ensure saturation of crucial categories, (Polit & Beck, 2017:791). In this study, the researcher had extended engagement with the participants during the semi-structured FGD, to gain in-depth understanding and rule out if there was no repeating information.

1.9.2.2 Member Checking

Member checking is defined as a quality control process by which a researcher seeks to improve the accuracy, credibility, and validity of what has been recorded during a research interview, (Harper & Cole, 2012:3). For the purpose of this study, participants had a chance to evaluate and authenticate whether the researcher's analyses were good descriptions of their experiences or not, (Creswell *et al.*, 2019:208). Member checking was carried out during data collection by probing to make certain that interviewers appropriately understood the participant's meanings. Therefore, the researcher first analysed the raw data from the interviews by developing distinct descriptions or themes. These distinct descriptions or themes were shared with the participants, to determine their accuracy. A few months following the semi-structured FGDs, an opportunity was offered to the participants to be involved and add to the interview and interpreted data.

1.9.3 Transferability

Transferability refers to the extent to which findings can be transferred to or have applicability in other settings or groups, (Polit & Beck, 2017:788). For the purpose of this study, the researcher furnished a general description to allow readers or other researchers to make an assessment should they choose to apply it in other contexts. The researcher offered all the information regarding the study to the readers, including the study context, participants and methods that were used in data collection.

1.9.4 Dependability

Dependability refers to the stability (reliability) of data over time and conditions, (Polit & Beck, 2017:787). That is, will the inquiry yield same findings, should it be applied in the same context, using the same participants? In this study all the research processes including a detailed description of the research methods and transcripts were given to an independent subject for analysis and coding to ensure that findings are consistent and could be repeated.

1.9.5 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). To attain this, audio records were used to capture the participant's voices. The researcher ensured that the collected data were submitted to an independent coder for confirmation of findings in the form of transcripts.

1.9.6 Authenticity

Authenticity refers to the extent to which researchers fairly and faithfully demonstrate a sort of reality, (Polit & Beck, 2017:788). To assure authenticity in this study, the researcher had extended engagement with the participants during the semi-structured FGDs to gain in-depth understanding. The audio records and verbatim transcripts were scrutinized by the researcher and the external co-coder. Furthermore, a chance was given to the participants to evaluate and authenticate whether the researcher's analyses were good descriptions of their experiences or not.

1.10 Ethical considerations

Ethical considerations emphasise that care must be safeguarded to protect the rights of human beings if they are involved in any research study, (Polit & Beck, 2017:208). Therefore, ethical considerations were abided by submitting a research proposal to the Quality in Nursing and Midwifery (NuMIQ) Scientific Committee, and Health Research Ethics Committee (HREC) of School of Health at the North-West University (NWU) (Annexure B) for approval before the commencement of the study. Authorization to conduct the study was requested from the North West Provincial Department of Health (NWDoH) (Annexure C) and the management of the two campuses of the selected NEI in the NWP (Annexure D). In this study, ethical principles of beneficence and nonmaleficence, equality and respect for human dignity and autonomy was observed.

1.10.1 Beneficence and non-maleficence

The principle of beneficence and non-maleficence enforces researchers to minimize harm and maximize benefits, (Polit & Beck, 2017:211). This principle covers the following aspects: the right to freedom from harm and discomfort and the right to protection from exploitation, and are discussed as follows:

1.10.2 The right to freedom from harm and discomfort

The risks of harm constituted by the research were acceptable considering the predicted benefits. In this study, the risks to participants were evaluated opposed to the probable benefits and knowledge to be gained. The researcher took the responsibility for the physical, mental, and social well-being of the participants, and warranted the ideal benefits while avoiding the risks or decreasing them to the lowest. The researcher was willing to terminate the study should it cause any unwarranted affliction to participants.

1.10.3 The right to protection from exploitation

Participation in a research study should not cause any disadvantage or harm to the participants, (Polit & Beck, 2017:211). In this study, to avoid exploitation, the researcher adhered to the agreed duration of the interview which lasted for at least 60 minutes.

1.10.4 Respect for human dignity and autonomy

This principle includes the right to self-determination and the right to full disclosure, (Polit & Beck, 2017:212). In this study the participants were given all the necessary information to make virtuous decisions. The principle was discussed as follows:

1.10.5 The right to self-determination

According to Polit and Beck (2017:212), self-determination means that prospective participants can voluntarily decide whether to take part in a study, without risk of prejudicial treatment. In this study, the participants were allowed the right to extract from the study and retain information, to ask questions, liberty from any pressure and were empowered to make free decisions.

1.10.6 The right to full disclosure

According to Polit and Beck (2017:213), full disclosure means that the researcher has fully described the study, the person's right to refuse participation, the researcher's responsibilities, and likely risks and benefits. In this study, the aim and objectives of the study were conveyed to the participants by the researcher, to fully disclose the essence of the study.

1.10.7 Distributive justice (equality)

This ethical principle concerns justice, which includes participant's right to fair treatment and their right to privacy, and the other aspect concerns the equitable distribution of benefits and burdens of research, (Polit & Beck, 2017:214). The right to fair treatment and the right to privacy were discussed as follows:

1.10.8 The Right to Fair Treatment

The right to fair treatment means that researchers must not prejudge people who decline to part take (or who withdraw from the study after initial agreement), (Polit & Beck, 2017:214). In this study, the researcher safeguarded that there was no discrimination of whatsoever against participants.

1.10.9 The Right to Privacy

According to Polit & Beck (2017:215), researchers should ensure that their research is not more intrusive than it needs to be, and that participant's privacy is maintained. In this study, the researcher applied privacy and confidentiality regarding all the data attained from the participants. Data collection took place behind closed and locked doors in a boardroom and mobile cell phones were switched off. A "do not disturb" door sign was pasted outside the door. All information shared with the participants was kept confidential. Every participant was encouraged to take the responsibility of keeping the FGDs confidential. Privacy was further ensured by regulating access to the participant's personal information, all information recorded was password protected. The Protection of Personal Information (POPI) Act 4 of 2013 was implemented which included the protection of personal information by making certain there is computer safety and locked record storage facilities and cautious gate keeping on access to raw data.

1.10.10 Legal authorization

The researcher obtained ethical approval from the North-West University Health Research Ethics Committee (NWU-HREC), the Scientific Review Committee of NuMIQ, the provincial DoH, and the management of the two campuses of the selected NEI in the NWP. The study commenced after receipt of letter of approval from the NWU-HREC.

1.10.11 Goodwill permission/consent

After legal authorisation was obtained from the NWU-HREC and the NWDoH (the researcher requested for permission to conduct the study from the campus-heads and HODs of the two campuses of the selected NEI.

1.11 Recruitment of participants

Recruitment refers to identification, assessment, and communication with potential study participants (Gray *et al.*, 2017:374). In this study, recruitment of participants was done after legal authorization was sought. Recruitment adhered to the ethical principles of autonomy, beneficence, and distributive justice. Only the participants that met the inclusion criteria were recruited. The researcher also made use of the gatekeepers and mediators. In this study, the researcher requested permission to conduct the study from

the DoH of the NWP where the multi-campus head acted as a gatekeeper. Approval was also obtained from the management, that is, the campus heads of the two campuses of the selected NEI, to access participants. The HODs were used as mediators to introduce the study to prospective participants. Furthermore, a mediator played a significant role in securing appointments with relevant participants. The researcher appointed an independent person who assisted with the recruitment of participants and the process of obtaining informed consent. (Annexure E). The independent person is working at one of the public NEI in the NWP and is in possession of a master's degree, currently studying towards a PhD and is also experienced in research. The independent person has also completed the TRREE ethics training. The participants were recruited by means of information pamphlets. The information pamphlets outlining the aims and objectives of the study were provided to the participants, which also included the researcher's and independent person's contact details. The participants contacted the independent person directly to indicate their interest in participating. All the processes to be followed were communicated to the prospective participants to assist them to make an informed decision regarding participation. The researcher scheduled another session with the prospective participants to give further explanation regarding the nature of the study.

1.12 Process of obtaining informed consent

Informed consent means that participants have adequate information about the research, can comprehend that information, and have the ability to make an informed decision to participate or decline participation voluntarily, (Polit & Beck, 2017:217). In this study, the assistance with obtaining and signing of informed consent forms was carried by an independent person. The appointment of an independent person was crucial in avoiding bias and coercion. The researcher had a session at the convenience of the participants, whereby information regarding the aim of the study was explained to establish a rapport. The researcher handed out information pamphlets to the prospective participants. The researcher scheduled another session, whereby a detailed nature of study was discussed, and any queries clarified, so that the prospective participants can make an informed decision regarding participation. Adequate information regarding the study was communicated to the participants, including explanation of data collection proceedings, for example, anticipated time of engagement, possible risks as well as attempts to reduce

them and the type of data that will be collected. A guarantee that privacy will always be secured was also given. Furthermore, information regarding participation was also clarified that participation was voluntary without any risk of prejudicial treatment and that they have the right to withdraw from the study at any given time. Contact details of the researcher was also made available in case of additional questions, or dissatisfaction. Informed consent documents were issued to all prospective participants at the second session. The prospective participants were therefore given a week prior to the commencement of the study to decide whether they wanted to participate or not. The participants who were interested in participating in the study directly informed the independent person of their willingness to participate. The independent person informed the researcher of the interested participants. Thereafter, the researcher contacted the participants to arrange when and where data collection will take place. The participants were expected to sign a consent form as proof that they were willing to participate prior to the commencement of the study and were allowed to have someone they trusted to co-sign as a witness. The signing of the informed consent was obtained face-to-face, conducted by the independent person, and took place in an office at the selected campuses. The office was free from interruptions to ensure privacy. COVID-19 protocols were maintained. The room was sanitized as per the institution's rules prior to utilisation and had a sanitiser available and was well-ventilated. COVID-19 screening was done as per the institution's policy and participants were expected to be symptom free to enter the office. The participants and the independent person were wearing masks covering their nose and mouth. Social distancing was maintained, by ensuring a distance of at least 1.5 m apart.

1.13 Probable experience of participants

The participants were involved in direct teaching and learning during the COVID-19 pandemic. Therefore, shared their experiences with the researcher.

1.13.1 Risks and benefits

The benefits are the positive values the research offers, while risks denote the probability that participants may be harmed during the research course (Brink *et al.*, 2018:35). The researcher conducted a risk/benefit assessment to determine whether the risk/benefit ratio was tolerable.

1.13.2 Risks and precautions

A summary of risks and benefits were disseminated to the recruited individuals so that they can determine if whether it was sensible to participate.

Table 1.2 Risks and precautions

Possible risk(s) of harm	Justification for the exposure to the identified risk(s) of harm	Precautionary measures to minimise or mitigate each possible identified risk of harm
Loss of time.	The participants were the most knowledgeable on the research study.	Interview sessions were kept as short as possible at least 60 minutes long. Participants were given a NWU branded pen at the end of the interview as a token of appreciation for their time and inconvenience.
COVID-19 infection	The participants were the most knowledgeable on the research study.	All COVID-19 protocols were maintained, for example, wearing of masks, sanitising of hands, and social distancing.

1.13.3 Anticipated benefits

Benefits are direct if are to the interest of the participant and indirect if are to the advantage of the researcher, scientific field of knowledge, or society.

Table 1.3 Direct or indirect benefits

Direct benefits for participants	**Indirect benefits** for society at large or the researchers/institution
There were no direct benefits from this study.	The institution and the students might benefit from the study with regard to future teaching & learning, in terms of planning resources during COVID-19 or future infections.
Study findings might improve the planning of the curriculum, including new innovations in the teaching and learning of nursing students.	Health services might benefit by getting students who will assist in enhancing the conduct of the overall health system.

1.13.4 Risks/benefit analysis

Risks/benefit analysis evaluates whether the benefits of participating in a study are in line with the costs, it could be either financial, physical, emotional, or social, (Polit & Beck, 2017:215). This study involved minimal risks, there was no psychological harm reported neither. The participants were only inconvenienced with time spent during the interviews. The participants were only at risk of contracting COVID-19, which none was reported post the interviews. The study benefits outweighed risks as evident in the table above. The benefits were more than the risks and risk level according to the DoH document.

1.14 Respect for participants

Prospective participants were allowed to voluntarily decide to take part in a study without any coercion or risk of prejudicial treatment, (Polit & Beck, 2017:212). In this study, participants were given information pertaining to the study, risks and benefits were communicated to assist them to make informed decision regarding participation. The participants were allowed the opportunity to withdraw from the study at any time if they wished to do so.

1.15 Measures to ensure privacy, confidentiality and anonymity

According to Polit and Beck (2017:222), it is within the rights of study participants to expect that data they furnish to be treated confidentially. In this study, the researcher ensured that participant's privacy and confidentiality were maintained and protected during the research. The interviews were held face-to-face and only the recruited participants were admitted. All information shared with the participants was kept confidential. During the report writing no names of the participants or the NEI were shared. Privacy was further ensured by regulating access to the participant's personal information as all information recorded was password protected. The Protection Of Personal Information (POPI) Act 4 of 2013 was implemented which included the protection of personal information by making certain there was computer safety and locked record storage facilities and cautious gatekeeping on access to raw data.

Anonymity is a way of protecting confidentiality, in which researchers cannot associate participants to their data, (Polit & Beck, 2017:223). The authors further assert that any information furnished by the participants should not be published in such a way that makes them recognizable and accessible to others. For the purpose of this study, anonymity was limited due to FGDs, however, names were not published, computerbased files were encrypted, and any identifying information was destroyed adhering to the POPI Act 4 of 2013.

1.16 DATA MANAGEMENT

The data that was collected from the participants was relevant to the study's purpose and was used only in a manner approved by the participants. Documents such as signed consent forms were stored in a locked file cabinet of the supervisor. Access was limited to the research personnel only, that is, the researcher and the supervisors and any personal identifiers were removed from study documents. The collected audio recorded data was removed from the recording device immediately after the meeting and stored on a password-protected computer. The audio recorder was deleted thereafter. The data was removed from the researcher's computer on completion of the study. Soft copies were stored in a password protected computer. On completion, soft copies will be copied into an external hard drive and stored in a lockable cupboard in the research director's

office for a period of 5 years. After this period has elapsed, it will be shredded by an administrative officer who was tasked with this job in order to avoid any fraud or misuse.

1.17 DISSEMINATION OF RESEARCH FINDINGS

The findings of the study will be disseminated in the form of workshops, seminars and conferences. Furthermore, the researcher has prepared a manuscript which will be submitted to the BMC Nursing Journal for review.

1.18 EXPERIENCE, SKILLS, AND COMPETENCY OF THE RESEARCHERS

The researcher is a master's student conducting qualitative research and has completed online TRREE ethics training and have interviewing skills as a nurse. The supervisor has a PhD in Nursing, the co-supervisor has PhD in Nursing, and the third co-supervisor has two master's degree and busy with PhD. All supervisors did TRREE ethics training and Good Clinical Practice course (GCP) and are experienced in qualitative research.

1.19 CONFLICT OF INTEREST

The researcher did not bear any conflict of interest.

1.20 STRUCTURE OF THIS DISSERTATION

Article format was followed in this study on exploring and describing the experiences of nurse educators regarding teaching and learning during the COVID-19 pandemic at a NEI in the NWP. The three sections followed in this study are as follows:

Section 1: Overview of the study
Section 2: Manuscript (Submitted to BMC Nursing)
Section 3: Conclusion, limitations, and recommendations

1.21 CONCLUSION

Section one is the overview of the study which familiarise the reader about the experiences of nurse educators regarding teaching and learning during the COVID-19 pandemic at a nursing education institution in the North West Province. The succeeding section entails the article and the author guidelines for the relevant journal, BMC Nursing.

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Section Two

SECTION 2: MANUSCRIPT

2.1 SUBMISSION GUIDELINES

The manuscript was submitted to BMC Nursing Journal. The evidence that manuscript was submitted is found in Annexure D.

The following are the journal guidelines:

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Research articles should report on original primary research, but may report on systematic reviews of published research provided they adhere to the appropriate reporting guidelines which are detailed in our editorial policies. Please note that noncommissioned pooled analyses of selected published research will not be considered. Studies reporting descriptive results from a single institution or region will only be considered if analogous data have not been previously published in a peer reviewed journal and the conclusions provide distinct insights that are of relevance to a regional or international audience.

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Title page

The title page should:

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Large Language Models (LLMs), such as ChatGPT, do not currently satisfy our authorship criteria. Notably an attribution of authorship carries with it accountability for the work, which cannot be effectively applied to LLMs. Use of an LLM should be properly

documented in the Methods section (and if a Methods section is not available, in a suitable alternative part) of the manuscript.

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Abstract

The Abstract should not exceed 350 words. Please minimize the use of abbreviations and do not cite references in the abstract. Reports of randomized controlled trials should follow the CONSORT extension for abstracts. The abstract must include the following separate sections:

Background: the context and purpose of the study

Methods: how the study was performed and statistical tests used

Results: the main findings

Conclusions: brief summary and potential implications

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Keywords

Three to ten keywords representing the main content of the article.

Background

The Background section should explain the background to the study, its aims, a summary of the existing literature and why this study was necessary or its contribution to the field.

Methods

The methods section should include:

The aim, design and setting of the study,

The characteristics of participants or description of materials,
A clear description of all processes, interventions and comparisons. Generic drug names should generally be used. When proprietary brands are used in research, include the brand names in parentheses,

The type of statistical analysis used, including a power calculation if appropriate.

Results

This should include the findings of the study including, if appropriate, results of statistical analysis which must be included either in the text or as tables and figures.

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Conclusions

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All manuscripts must contain the following sections under the heading 'Declarations':

Ethics approval and consent to participate Consent for publication

Availability of data and materials

Competing interests

Funding

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All manuscripts must include an 'Availability of data and materials' statement. Data availability statements should include information on where data supporting the results

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Data availability statements can take one of the following forms (or a combination of more than one if required for multiple datasets):

The datasets generated and/or analysed during the current study are available in the [NAME] repository, [PERSISTENT WEB LINK TO DATASETS]

The datasets used and/or analysed during the current study are available from the corresponding author on reasonable request.

All data generated or analysed during this study are included in this published article [and its supplementary information files].

The datasets generated and/or analysed during the current study are not publicly available due [REASON WHY DATA ARE NOT PUBLIC] but are available from the corresponding author on reasonable request.

Data sharing is not applicable to this article as no datasets were generated or analysed during the current study.

The data that support the findings of this study are available from [third party name] but restrictions apply to the availability of these data, which were used under license for the current study, and so are not publicly available. Data are however available from the authors upon reasonable request and with permission of [third party name].

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Please acknowledge anyone who contributed towards the article who does not meet the criteria for authorship including anyone who provided professional writing services or materials.

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Article within a journal by DOI

Slifka MK, Whitton JL. Clinical implications of dysregulated cytokine production. Dig J Mol Med. 2000; doi:10.1007/s801090000086.

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Wyllie AH, Kerr JFR, Currie AR. Cell death: the significance of apoptosis. In: Bourne GH, Danielli JF, Jeon KW, editors. International review of cytology. London: Academic; 1980. p. 251-306.

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Complete book, authored

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Doe J. Title of subordinate document. In: The dictionary of substances and their effects. Royal Society of Chemistry. 1999. http://www.rsc.org/dose/title of subordinate document. Accessed 15 Jan 1999.

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Supplementary material/private homepage

Doe J. Title of supplementary material. 2000. http://www.privatehomepage.com. Accessed 22 Feb 2000.

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FTP site

Doe, J: Trivial HTTP, RFC2169. ftp://ftp.isi.edu/in-notes/rfc2169.txt (1999). Accessed 12 Nov 1999.

Organization site

ISSN International Centre: The ISSN register. http://www.issn.org (2006). Accessed 20 Feb 2007.

Dataset with persistent identifier

Zheng L-Y, Guo X-S, He B, Sun L-J, Peng Y, Dong S-S, *et al*. Genome data from sweet and grain sorghum (Sorghum bicolor). GigaScience Database. 2011. http://dx.doi.org/10.5524/100012

2.2. MANUSCRIPT

Experiences of nurse educators regarding teaching and learning during the COVID-19 pandemic at a Nursing Education Institution in the North-West Province

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North-West University – School of Nursing Science[1]

Abstract

Background: The abrupt pandemic of the Coronavirus (COVID-19) impacted educational systems globally, including Nursing Education Institutions. Therefore, this study aimed to explore and describe the experiences of nurse educators regarding teaching and learning during the COVID-19 pandemic at a Nursing Education Institution in the North West Province, South Africa.

Methods: A qualitative descriptive phenomenology approach was used to explore and describe the experiences of nurse educators regarding teaching and learning during the COVID-19 pandemic at a Nursing Education Institution in the North West Province, South Africa. The study was conducted at selected Nursing Education Institutions, which comprises of two campuses which are 178,1 kilometres apart. A total of 25 nurse educators from the two campuses participated in the study. The participants were purposively selected. Four focus group discussions were held to collect data through face-to-face semi-structured interviews and field notes. The data analysis followed Colaizzi's seven-stage process.

Results: Three themes emerged from data analysis namely: Positive experiences and negative experiences regarding teaching and learning during the COVID-19 pandemic, as well as suggestions for overcoming the challenges experienced by nurse educators during the COVID-19 pandemic.

Conclusions: The study findings revealed that nurse educators experienced positive and negative challenges regarding teaching and learning during the COVID-19 pandemic. The study findings revealed that there is a need for NEIs to plan for resources and new curriculum with regards to future teaching and learning innovations.

Keywords: Coronavirus, Covid-19, experiences, nurse educator, nursing education institution.

Background

The Coronavirus pandemic during 2019-2021 was one of the deadliest diseases the world has ever experienced. The COVID-19 pandemic brought the world to a standstill, disrupting normal working conditions [1]. The abrupt outbreak of COVID-19 had an impact on educational systems globally, and Nursing Education Institutions (NEIs) were not excluded [2, 3]. According to a study conducted in Namibia [4], COVID-19 distracted teaching and learning in Higher Education Institutions (HEIs). The spread of COVID-19 infections was reportedly high in social gatherings, including HEIs, [5]. Therefore, NEIs suspended face-to-face delivery of teaching and learning [6, 7].

Similarly, in Hong Kong, clinical placement was also halted to reduce the rate of COVID-19 infections [8]. However, some institutions continued with clinical teaching by allocating nursing students to clinical facilities [9]. NEIs had to devise measures to curb the spread of COVID-19 infections, such as using technology to continue rendering

teaching and learning [4, 6]. Furthermore, [10] asserts that the COVID-19 pandemic increased the demand for online teaching and learning.

Nursing students and nurse educators experienced challenges regarding teaching and learning due to the COVID-19 pandemic [8]. Challenges such as the rapid transition to online teaching and learning technology without time for preparation and orientation were reported [4]. Furthermore, [6] states that nurse educators were challenged to restructure the course content's delivery and evaluation. In Iran, nurse educators also experienced difficulties regarding home-based working, whereby there used to be noise in the background, which affected teaching [11]. These authors further stated that the nurse educators experienced challenges in creating teaching slides, which were, sometimes, too large to send via email.

Additionally, due to the sudden and abrupt implementations of strict no-movement regulations due to the COVID-19 outbreak, specific formats such as Microsoft Points slide presentations were not provided. Online education could only meet some of the needs due to internet access and connectivity challenges, as some students had no access to the internet or poor connectivity, and some of the slides could not open [11]. Similarly, [12] reported that nurse educators had negative attitudes toward online teaching and learning due to a lack of internet access and poor digital skills.

According to a study conducted in South Africa [1], clinical teaching and learning were challenging to achieve due to restrictions brought by COVID-19, such as no more than 50 people at a gathering and social distancing rule. The authors further assert that practical skills and simulation sessions were challenging to simulate online since these skills require interaction and psychomotor skills.[1] In addition, [13] indicated that most students in Pakistan claimed that e-learning was ineffective in attaining their clinical skills.

Apart from teaching and learning disruptions that were brought about by the COVID-19 pandemic were psychological challenges experienced worldwide. In Iran, [14] assert that some nurse educators had increased worries, fears, and anxiety about being infected with COVID-19 and probably transmitting the disease to their children and family. The authors further stated that nurse educators experienced psychological stressors from numerous governmental directives. [14] Similarly, [11] assert that little information about the disease and the escalating number of infections and deaths added more to the confusion and anxiety levels of the nurse educators.

At selected NEIs in the North West Province (NWP), the accredited teaching mode by the South African Nursing Council (SANC) is contact teaching and learning. However, the teaching mode was rapidly changed to online teaching, resulting in numerous challenges for nurse educators and students. South African government also incorporated lockdown measures which were implemented in five levels according to the needs of the country, to save lives and curb the spread of COVID-19 disease, [15]. As the alert levels of lockdown changed, NEIs had to re-introduce contact teaching and learning gradually. Therefore, this paper aimed to explore and describe the experiences of nurse educators regarding teaching and learning during the COVID-19 pandemic at selected NEIs in the North West Province.

Methods

Design and setting

A qualitative descriptive phenomenology approach was used to explore and describe the experiences of nurse educators regarding teaching and learning during the COVID-19 pandemic. The descriptive phenomenology approach allowed the researcher to understand the actual experiences of nurse educators regarding teaching and learning

during the COVID-19 pandemic. The study was conducted from October 2022 to January 2023 at the NEIs in North West Province, South Africa.

Participants and sampling

Twenty-five nurse educators employed at the selected NEIs were purposively selected to participate in the study. These also included campus heads, deputy campus heads and heads of departments. The participants met inclusion criteria if they possessed either a diploma or degree in nursing with an additional qualification in nursing education and were registered under section 31 of the Nursing Act, 2005 (Act 33 of 2005).

Data collection and analysis

Data was collected using face-to-face semi-structured focus group discussions (FGD). Two FGD sessions were conducted at each campus of a selected NEI. Therefore, a total of four FGD sessions were held. The FGDs lasted approximately 45 to 60 minutes and were audio recorded with the participants' permission. The study followed an inductive approach. Colaizzi's seven-stage process was used to analyse data.

In stage one, the researcher transcribed the data from audio recorders verbatim and read written data from the transcripts several times to get their meaning. In the second stage, significant statements were extracted. That is, only relevant information about the experiences of nurse educators regarding teaching and learning during the COVID-19 pandemic at the NEIs in the NWP was extracted from each description. The researcher organised data in a meaningful and systematic way. In the third stage, data was organised and broken into small chunks of text and segments (coding). In the fourth stage, the segments were divided into sentences (or paragraphs) and clustered into themes. In the fifth stage, themes relevant to the study were defined and supported by quotations and literature. In the sixth stage, the researcher reviewed and modified the themes identified in stage five, whilst in the seventh stage, refinement and validation of the themes were done to know what each theme is about. The researcher and co-coder independently created codes, themes, and subthemes.

Trustworthiness

To ensure that the study is trustworthy, the researcher considered Guba and Lincoln's criteria. The credibility, transferability, dependability, and confirmability were considered to increase the believability of the data. Prolonged engagement with the participants was exercised. The researcher had extended engagement with the participants during the semi-structured FGDs, to gain an in-depth understanding and rule out if there was no repeating information. The researcher carried out member checking by first analysing the raw data from the interviews and developing distinct descriptions or themes, which were shared with the participants to determine their accuracy. To increase dependability and confirmability, the research processes, including a detailed description of the research methods and transcripts, were given to an independent person for analysis and coding to ensure consistent findings.

Ethical considerations

Ethical approval to conduct the study was granted by North-West University Health Research Ethics Committee (ethics number: NWU-00081-22-A1). Authorization to conduct the study was requested from the North West Provincial Department of Health and the management of the two campuses of the selected NEI in the NWP. The researcher ensured that ethical principles were maintained in this study by ensuring that participants' privacy and confidentiality were maintained and protected during the research. All participants were included in the study after adequate information regarding the study processes and their responsibility were shared. This ensured the participants made an informed decision before signing a consent form.

Results

Twenty-five nurse educators participated in the study, consisting of 23 females and two males. Extracts from participants' FGDs were used to support the descriptions of the themes. Findings for the study emerged with three themes and ten sub-themes.

Table 1: Summary of themes and subthemes

THEMES	SUB-THEMES
Positive experiences regarding teaching and learning during the COVID-19 pandemic.	• Integration of technology in teaching and learning. • Increased teamwork among staff members.
Negative experiences regarding teaching and learning during the COVID-19 pandemic.	• Fear of contracting COVID-19 and dying. • Shortage of classrooms. • Abrupt changes in theoretical and clinical teaching and learning. • Difficulties in using technology for teaching and learning.
Suggestions for overcoming the challenges experienced by nurse educators.	• Compliance with all COVID-19 rules and regulations. • Vaccination of employees and students. • Special arrangement for extra classes and remedial assessments.

Theme 1: Positive experiences regarding teaching and learning during the COVID-19 pandemic

The first theme included the positive outcomes of the COVID-19 pandemic regarding teaching and learning. The subthemes that emerged were 1) *integration of technology in teaching and learning, 2) introduction of hybrid teaching and learning, and 3) increased teamwork among staff members.*

Sub-theme 1.1: Integration of technology in teaching and learning

The participants reported that even though they experienced different challenges during the COVID-19 pandemic, it also brought some positive experiences, such as improved digital skills.

One participant said:

"We had to learn very fast to new technology, all of us now we really know how to operate Zoom meetings, we can effectively use other methods of uh, uh, technology which we were not well conversed with previously so those are some of the good things that COVID brought to the nursing education and our college (PA, FGD 1)

Another participant added:

"It also taught us to be technology-wise. Because really, when it came, the Zooms were not…they were there, but we were not really into technology." (PC, FGD 3)

The outbreak of COVID-19 improved the digital skills of nurse educators and nursing students; they could communicate using different platforms such as Zoom, teams and others.

Participants reported that the COVID-19 pandemic also exposed them to other modes of delivering teaching and learning. One participant said:

"The other issue, COVID-19 has brought this new thing, our curriculum as approved by the South African Nursing Council, it was contact sessions, but automatically, we had to deviate from what we had previously agreed to. And later on, the good thing is that SANC allowed all institutions in South Africa to do both the contact and remote teaching, although initially the curriculum was not agreed to as such." (PA, FGD 1)

Another participant added:

"But the WhatsApp group, I must be honest, they helped a lot and, there were a few of them that we formed…that we could have like a…not like a teleconference, almost something like teams or something yeah…where we could interact verbally. The students and the lecturers could use technology and face-to-face at times." (PA, FGD 4).

Irrespective of the challenges brought by COVID-19, it improved the knowledge skills of nurse educators and nursing students regarding the use of technology.

Sub-theme 1.2 Increased teamwork among staff members

The participants reported that the COVID-19 pandemic improved teamwork and solidarity amongst the staff of the selected NEIs.

One participant said:

"What I wanted to say was that COVID-19 united us. Why am I saying it united us? Different stakeholders were responsible for setting duties. Let us take, for example, the security guy; his role, we know, was more of taking care of or protecting the college's assets. During covid-19, they even had to take the temperature of doctors and nurses at

the hospital and the staff at the college, and if the temperature was not normal, there was no way they would allow us to go in. Meaning when you look at the role." (PA, FGD 3)

Another participant added:

"We were working as a team during COVID-19, like a family. There was no security, no cleaner, no nurse, we all wanted to work together to fight this disease, and here we are today. We have conquered it." (PC, FGD 2).

COVID-19 improved the interpersonal skills of the employees of the institution. The statements confirm no discrimination in terms of categories and responsibilities.

Theme 2: Negative experiences regarding teaching and learning during the COVID-19 pandemic

The second central theme was the challenges experienced when providing theoretical and clinical teaching. This theme was further divided into the following sub-themes:

- Fear of contracting COVID-19 and dying.
- Shortage of classrooms, abrupt changes in theoretical and clinical teaching.
- Difficulties in using technology for teaching and learning.

Sub-theme 2.1: Fear of contracting COVID-19 and dying

The study participants reported that they feared contracting COVID-19 while providing teaching and learning, as there was a high number of infections and an increased mortality rate related to COVID-19 infections. There was also increased absenteeism of educators and learners due to infections.

One participant said:

"Because of the uproar of COVID, there was fear, there was intense fear because of the number of infections, the number of deaths that were reported...really with that only, everybody was fearful." (PB, FGD 2).

Other participants added:

"…I would say I was afraid, fear of the infection because most people were dying, so we were at home and feared contracting COVID. Even when we had to work or go to the clinical facilities, we feared that we would be infected and die because of the Coronavirus." (PH, FGD 1).

Another participant echoed:

"some of the learners were put off, especially when we came to the quarantine when we were in class. They would be booked off because of this COVID. If one is booked off, the whole class is not coming to work, they will be absent for ten days, and then on quarantine, we were having a real problem." (PB, FGD 4).

Another participant commented:

"We had a problem with placing the students in the clinical facilities because of the numbers, the number of students we could not place a large number of students at the same time because we were allocated numbers, the facility will tell us how many students we should place and also accompanying those students it was a problem because we feared infection from COVID-19." (PB, FGD 1).

This indeed confirms that the outbreak of COVID-19 brought uncertainties. Some nurse educators and nursing students had increased worries, fears, and anxiety about being infected with COVID-19 and probably transmitting the disease to their children and families.

Sub-theme 2.2: Shortage of classrooms

As the COVID-19 restrictions were progressively eased, contact sessions were allowed for teaching and learning; however, there were still restrictions to the capacity of classrooms. Participants reported that they needed more classrooms to accommodate social distancing. Therefore, students had to be divided into groups, and the institution had to hire venues to continue teaching and learning. They further reported that the hired venues could have been more convenient for teaching and learning. Repeating the same

content leads to the exhaustion of educators, affecting the quality of teaching and learning.

One participant said:

"When the students came back, we did not have enough classrooms because the ones we had were not big enough to can accommodate the social distancing that *we were talking about 1.5 to 2 metres. One class that should accommodate 50 by then, it could only accommodate 25 or 30 students but still not stick to the social distancing principle of 1.5 meters."(PA, FGD 3).*

Another participant added:

"For the college, it was very costly to hire venues and some of those venues which were not user-friendly like the other venue where we were like they already said there were some problems, no effective ablution facilities, no water, no electricity and all that was affecting the teachers and the students, especially when there was no electricity." (PB, FGD 1).

Another participant commented:

"I remember we had around 54 students then, and we had to divide them into two groups. The first class was from 8 to 12, and the other was from 12:30 to around 16:30. So it was also very challenging because the same lecturer had to teach two groups the same content. The first group maybe will benefit because you are still flexible, teaching in whatever way you can and when the second group come, you are a human being. You will be exhausted." (PC, FGD 3).

The outbreak of COVID-19 also had financial implications because the venues were hired even though they did not have basic amenities such as electricity and an

ablution block, among others. As a result, the selected NEI also had physical impacts on the nurse educators as the same content had to be repeated in different groups.

Sub-theme 2.3: Abrupt Changes in theoretical and clinical teaching and learning

Participants reported that all the plenary actions, including the assessment programs, had to be rescheduled. They further reported that some clinical skills induction tools had to be changed to abide by the COVID-19 rules. These changes also lead to the suspension of classes resulting in the extension of programs.

One participant said:

"Patients were no longer given mouth resuscitation, but now the tool was talking about mouth resuscitation, which was prepared before COVID, so some of the educators still insisted that students should do that, which was a hazard, and we had to include our Director of Nursing Education, and also we had to include all the South African Research Councils to have consensus as our examiners are centralised."(PA, FGD 1).

Another participant added:

"Indeed it was a very critical period, and plans had to be rescheduled no matter what. We did our best to ensure that the clinical contact hours, as made by the South African Nursing Council, had to be covered. So, some students had to be allocated at night to push the clinical contact hours. However, occasionally they were contacted with the WhatsApp platform…you know they had to be reached somehow. (PF, FGD 2).

Other participants added:

"Since I had said that COVID-19 disrupted teaching and learning, it meant our students' period of training was extended because of this disease or conditions." (PE, FGD 2).

"Due to the COVID-19 then and us working from home, the exam was then postponed for a whole six months…instead of them writing in May 2020, they wrote in November 2020." (PA, FGD 4).

The statements indicate that the abrupt outbreak of the COVID-19 pandemic disrupted both theoretical and clinical teaching and learning. This resulted in rescheduling and finding alternative measures to meet the requirements as stipulated by South African Nursing Council. However, the measures to continue teaching and learning needed to be revised, resulting in unavoidable course extensions.

Sub-theme 2.4: Difficulties in using technology for teaching and learning.

During the level five lockdown, where contact sessions were not allowed, the NEI had to resort to online teaching and learning, which brought challenges. The challenges were either due to needing access to resources such as a computer, internet connectivity or data availability. Moreover, some needed better digital skills to access online platforms such as Zoom, Teams and others.

One participant said:

"As far as educational issues are concerned, contact between students and lecturers was kept to a minimum so far that the only contact method was through WhatsApp. We could not zoom with students because most did not have cell phones that were compliant to access that service." (PD, FGD 2).

Another participant added:

"We experienced the same challenges. The thing was that most of the students were staying in rural areas, whereby there was no internet access. We struggled to reach a few using WhatsApp, but with others, we lost. We lost some of our students during the

pandemic. We could not communicate with them, even just trying to call them. It was so difficult." (PG, FGD 2).

Another participant commented:

"Yeah, it was really difficult because we did not have resources. I did not have resources because I only had my laptop at home, and there was no data for me to communicate with the students." (PB, FGD 3).

Another participant said:

"We had frustration because of the use of technology, we did not know how to use Zoom, and it was the first time that we heard of it as an online teaching." (PH, FGD 1).

One of the participants said:

"As you know…uh what I can call it…facilities…students were given some cell phones…but some could not access the internet because of how far we are taking our students from…from the ruralness of the rural." (PB, FGD 2).

One participant reported:

"We had challenges because our students are older people who are not technologically savvy, so they had a problem with the online facilitation because some could not reach the necessary information from us lecturers due to financial constraints or technological illiteracy." (PD, FGD 1.)

Another said:

"The other experience we had was the online teaching and learning regarding WhatsApp teaching and learning because most of the learners could not internalize the content, it was too difficult for them, and they became overwhelmed as also there were no group discussions for others to come and try to explain the content to each other." (PF, FGD 1).

The statements indicate that the COVID-19 pandemic compelled HEIs to resort to technology to continue teaching and learning. However, technical challenges, such as poor digital skills and internet connectivity, needed improvement. Thus, this indicates that the NEI should be well-established regarding IT resources.

Theme 3: Suggestions for overcoming the challenges experienced by nurse educators during COVID-19 pandemic

The third central theme was related to the measures taken to curb the spread of the COVID-19 pandemic and the remedial actions taken to cover up for the time lost during the institution's closure during the level five lockdown. The following sub-themes emerged:

- Compliance with all COVID-19 rules and regulations, vaccination of employees and students,
- Vaccination of all employees and students,
- And unique arrangement for extra classes and remedial assessments.

Sub-theme 3.1: Compliance with all COVID-19 rules and regulations

Participants reported that in order to curb the spread of COVID-19 they had to abide to the rules and regulations. One participant said:

"I think as we have alluded we complied with the rules and regulations of Covid19 like a decontamination at a frequent intervals and by screening ensuring that whoever that comes into the institutions does not have a high temperature and does not cough and stuff like that." (PC, FGD 1)

Another participant added:

"Adding to it by complying uh, also by wearing of masks. Sometimes it will be a problem with some of our students where they were not be able to access a masks, the, the school was able to give some masks to the students when they are at the facilities thank you." (PE, FGD 1)

This indicates that the NEI played a role in flattening the curve of COVID-19 infections by complying with the set rules and regulations.

Sub-theme 3.2: Vaccination of all employees and students

Participants reported that to curb the spread of COVID-19, they had to abide by the rules and regulations. One participant said:

"I think, as we have alluded, we complied with the rules and regulations of Covid19 like decontamination at frequent intervals and by screening ensuring that whoever comes into the institutions does not have a high temperature and does not cough and stuff like that." (PC, FGD 1).

Another participant added:

"Adding to it by complying, uh, and wearing masks. Sometimes it will be a problem with some of our students where they could not access masks; the school was able to give some masks to the students when they were at the facilities. Thank you." (PE, FGD 1).

Participant's quotes indicate that the NEI complied with the governmental rules and regulations of COVID-19 to curb the spread of the disease. Participants reported that to curb the spread of COVID-19, the importance of vaccinations was emphasised among the institution's employees. One participant said:

"So all staff members, educators, support staff and even the students were encouraged to be vaccinated and not forced. We were not coerced into doing that, but

there were presentations where they were encouraged. We were allowed to go to different clinical institutions where vaccination was done." (PA, FGD 1).

Another participant added:

"I think the best way that can assist us is when all of us are vaccinated when I mean all I mean all staff members and the students and everyone who is coming to the college must be vaccinated." (PE, FGD 1).

The statements indicate that the NEI also supported the rule of herd immunity by encouraging employees and students to vaccinate. Participant's quotes indicate that, indeed, the NEI complied with the governmental rules and regulations of COVID-19 to curb the spread of the disease.

Participants reported that in order to curb the spread of COVID-19, the importance of vaccinations was emphasised amongst the employees of the institution as a whole. One participant said:

"So all staff members, educators, support staff and even the students we encouraged to be vaccinated and not forced. We were not coerced into doing that but there were presentations where they were encouraged. We were allowed to go to different clinical institutions where vaccination was done." (PA, FGD 1).

Another participant added:

"I think the best way that can assist us is when all of us are vaccinated, when I mean all I mean all staff members and the students and everyone who is coming to the college must be vaccinated." (PE, FGD 1).

The statements indicate that the NEI also supported the rule of herd immunity, by encouraging the employees and students to vaccinate.

Sub-theme 3.3: Special arrangement for remedial classes

Participants reported that they had to devise measures to catch up with the students by conducting remedial classes. One participant said:

"Uhh, with the catch-up, you must also follow the regulations. You will have a contact session, but it must be in an open space which is in a classroom, and the student must maintain social distancing and so forth." (PB, FGD 3). Another participant added:

"Some of them will be put off when we do a catch-up until the exam. We will catch up when they are writing, maybe tomorrow or after tomorrow. You still have to catch up with some groups because of this COVID… And the remedial also, we got the catch-up, and we got the Remedial. The remedial for those who are supposed to write the optional test is the same as the catch-up." (PB, FGD 4).

The statements indicate that irrespective of measures taken to continue teaching and learning during the COVID-19 pandemic, the problem of needing more contact sessions was experienced. Therefore, other measures had to be incorporated to catch up.

Discussion

The first theme that emerged from this study was "positive experiences regarding teaching and learning during the COVID-19 pandemic" and included the sub-themes of integration of technology in teaching and learning," "introduction of hybrid teaching and learning," and "increased teamwork among staff members".

The study findings revealed gloom and doom, as there were some positive experiences regarding teaching and learning during the COVID-19 pandemic. These findings revealed that the participants learned new technologies, can now operate Zoom meetings, and can effectively use other technology methods that they were not familiar

with before. This is supported by [16], who reported that participants explained that they were excited about the new mode of teaching and learning. Moreover, they learn new things every day.

Irrespective of the challenges experienced by nurse educators of the selected NEI, COVID-19 brought innovations. For example, nurse educators' and students' digital skills improved, and the NEI was now introduced to online communication platforms such as Zoom meetings and teleconferencing. The nurse educators reported that the COVID-19 pandemic generated new chances for utilising virtual education in nursing education [17]. Prior to the COVID-19 pandemic, communication was only through face to face. Moreover, the COVID-19 pandemic introduced blended teaching and learning. SANC later approved the NEI for both contact and remote learning. According to a study conducted by [18] more nursing students suggested combined online and contact teaching and learning methods.

This study findings revealed that the COVID-19 pandemic promoted teamwork among employees, aiming to combat the deadly disease. In addition, the findings revealed that during the COVID-19 pandemic, people played roles that they would not do under normal circumstances. For example, security officers played roles in screening by measuring body temperatures. The COVID-19 pandemic united people of different professions and categories [19]. Moreover, the study revealed that nurse educators feared contracting COVID-19 and dying. The outbreak of the COVID-19 pandemic claimed many people's lives worldwide, which led nurse educators to fear for their lives as well, moreover, passing the disease to their families. The student's clinical accompaniment aggravated the fear of contracting COVID-19 and dying. This study revealed that students had to be placed in small numbers, which forced the nurse educators to visit clinical

facilities more often than usual and put them at risk of contracting the disease. The current study's findings are supported by other studies that nurse educators and nursing students experienced worries and uncertainties about contracting the COVID-19 disease or transmitting it to their families [11, 14]. Therefore, nurse educators feared contracting COVID-19 and feared that students might contract the infection themselves by being placed in clinical facilities. Hence, they were placed in small numbers.

The results also revealed that there needed to be more classrooms. One of the COVID-19 rules and regulations was that indoor venues should be filled only to 50% of their capacity, meaning a classroom capable of hosting 40 students was now permitted to host only 20 students. The infrastructure could not afford the suggested social distancing of 1.5 to 2 meters [20]. The current study's findings further revealed that the rules and regulations of COVID-19 led the institution to outsource venues, in order to continue teaching and learning. In addition, the venues could have been more conducive to teaching and learning. For example, there was no backup for electricity and internet connectivity.

Moreover, students had to be divided into groups, resulting in exhaustion from repeating the same content to different groups. These findings are supported by [1], who argue that repeating classes consumes much time and is exhausting to the presenter as the same information must be repeated. It also increases the chance of missing some information from other groups.

The abrupt change in theoretical and clinical teaching was revealed as harming teaching and learning. Furthermore, the study findings revealed that the outbreak of the COVID-19 compelled the selected NEIs to restructure the assessment tools prepared prior to the pandemic to accommodate the rules and regulations of COVID-19. In other

studies, NEIs were forced to amend the teaching and learning of clinical skills, including restructuring clinical set-ups assessment approaches due to the COVID-19 pandemic [17, 21]. Extension of all nursing programmes was found to be a challenge to the NEI, where students' training was extended even though they did not fail. This is supported by [22], who posit that restricting students' access to clinical sites delays their nursing program completion in record time.

Furthermore, due to the challenges with IT infrastructure, the selected NEI experienced problems with the continuation of both theoretical and clinical teaching and learning, irrespective of the measures implemented [18]. Moreover, there were delays in a clinical context, as during the different COVID-19 lockdowns, students were not permitted at clinical facilities. The study findings ruled out that, during the critical COVID-19 pandemic, it took much work for nurse educators and nursing students to ensure that the clinical contact hours were covered as required by SANC due to COVID-19 restrictions. The clinical component is vital in training nursing students whose teaching and learning include the correlation of theory and practice [16]. Therefore, nurse educators must ensure that nursing students cover their clinical learning outcomes and hours.

Difficulties in using technology for teaching and learning for nurse educators and learners were among the sub-themes. Due to limited digital skills, teaching and learning could not continue during the COVID-19 pandemic. This study revealed that nurse educators and nursing students were unfamiliar with online platforms like Zoom since the approved teaching mode was contact. Zoom is reported to be a solution for a large group since it allows an interactive session where students can ask and answer questions [23]. Literature support that the lack of online learning experience disadvantaged students [6]. Moreover, some of the technical difficulties were the resources such as advanced mobile

cell phones that could afford students to access information on WhatsApp group chats which were created. Poor internet connectivity was one of the technical difficulties in the current study, as some students were staying in rural areas where network coverage was poor. This is supported by [1], who assert that most nursing students come from rural areas without internet connectivity. Additionally, [3] assert that nursing students of low socio-economic status could not afford to purchase sufficient data to connect; therefore, they experienced connectivity and class attendance difficulties.

This study also discovered that technology should be integrated into teaching and learning in NEIs. [23] affirm that programs should continue using remote conferencing technology and other advanced resources [21]. Similarly, [18] highlighted in their study that the possibility of nursing students carrying on with online teaching and learning shortly was very high, considering the high rate of COVID-19 infections and new strains being detected.

To curb the spread of COVID-19, South Africa instituted lockdown measures which were relevant to the HEIs and the selected NEI abided by the rules and regulations of COVID-19, for example, sanitising of hands, wearing of masks, screening, decontamination of surfaces, among others. Many countries worldwide emphasise health practices such as wearing masks, social distancing, and restrictions on travelling and mass gatherings [17, 24]. Complying with health practices was proven to reduce the spread of COVID-19 disease. One of the ways to curb the spread of COVID-19 disease was vaccination. The findings revealed that the nurse educators, nursing students and other staff members of the selected NEI were encouraged to vaccinate against COVID-19. Nonetheless, it was not compulsory. COVID-19 vaccination is vital for the population's health and safety [25]. Vaccination in communities reduced the rate of COVID-19 infections

and deaths. Moreover, there was a reduction in healthcare costs due to fewer hospitalisations [26]. Over and above, there were selected sites where vaccines could be accessed. Encouraging vaccinations was to accomplish herd immunity which offers unvaccinated individuals, thus curbing the spread of COVID-19 infections [27].

Additionally, the herd community supports the country's aim of a minimum of 67% population vaccinations. This study revealed that to catch up for the work lost during COVID-19 lockdowns, measures such as arrangements of special classes had to be initiated. Moreover, remedial classes were also conducted before writing theoretical assessments and even for the students writing second-opportunity assessments. Extension of programs was unavoidable since the measures incorporated to continue teaching and learning were unsuccessful due to technical challenges [3].

Limitations

This study was conducted at a selected NEI with two campuses, and it could yield different results when conducted at well-established institutions such as universities or at any of the other public and private NEIs. Another area for improvement was that it was challenging to access the participants in a group form since nurse educators will have different commitments because the institution was running two nursing programmes concurrently, resulting in prolonged data collection.

Conclusion

The COVID-19 pandemic halted global educational activities and compelled nurse educators to adopt contemporary and evolving technologies to sustain teaching and learning during the pandemic or when contact sessions are not permitted. Poor IT infrastructure and digital skills hindered the continuity of teaching and learning at a

selected NEI. Therefore, there is a need for nurse educators and nursing students to have digital skills. Therefore, adding a basic computer literacy module to the curriculum should be considered to continue teaching and learning during prospective pandemics. The study findings revealed a need for NEIs to plan for resources and new curricula regarding future teaching and learning innovations. Furthermore, policymakers may use the findings to formulate HEIs policies for teaching and learning as future guidelines for any prospective pandemics.

Abbreviations

COVID: Coronavirus disease; IT: Information Technology; NEI: Nursing Education Institution; NWDoH: North West Department of Health; NWU-HREC: North West University Health Research Ethics Committee; SANC: South African Nursing Council; WHO: World Health Organisation

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Authors' contributions

The first author KSG was a student, GPK was a supervisor, IOM and SSM-P were co-supervisors. All four authors were involved in conceptualising, writing and finalising the manuscript.

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Availability of data and materials

The datasets used and/or analysed during the current study are available from the corresponding author on reasonable request.

Declarations

Ethics approval and consent to participate

North-West University Health Research Ethics Committee (NWU-HREC) (Ethics Number: NWU-00081-22-A1) granted ethics approval to conduct the study. The researcher ensured that ethical principles were maintained in this study. Written consent was also obtained. The participants were guaranteed that their privacy would always be secured, indicating that participating is precisely autonomous and that insufficiency to volunteer will not affect any punishment or deprivation of advantages and that they have the right to extract from the study at any given time.

Consent for publication

The authors consent to publication of this manuscript.

Competing interests

The authors declare that they have no competing interests in this section.

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Section Three

SECTION 3: CONCLUSION, LIMITATIONS, AND RECOMMENDATIONS

3.1 INTRODUCTION

This study focused on the experiences of nurse educators regarding teaching and learning during the COVID-19 pandemic at a NEI in the NWP. This last section looks to describe the conclusion, limitations, and recommendations of the study.

3.2 CONCLUSION

The COVID-19 pandemic halted global educational activities and compelled nurse educators to adopt contemporary and evolving technologies to sustain teaching and learning during the pandemic. It is evident that the continuity of teaching and learning at a selected NEI was hindered by poor infrastructure in terms of IT resources and buildings. The study also revealed that the poor digital skills of both nurse educators and nursing students contributed to challenges regarding teaching and learning. Irrespective of the challenges faced by the nurse educators of the selected NEI, teaching and learning continued during the COVID-19 pandemic. Nurse educators of the selected NEI continued to provide teaching and learning during the COVID-19 pandemic through WhatsApp group chats. Even though some students experienced challenges such as poor internet connectivity and a lack of data, this necessitated course extensions. The findings of the study revealed that nurse educators at the selected NEI mostly had negative experiences regarding teaching and learning during the COVID-19 pandemic. This suggests that both nurse educators and nursing students in the selected NEI be technology savvy and that nursing students be provided with technological learning devices

3.3 LIMITATIONS

This study was conducted at one public NEI; as it is the only one in the NWP, it could yield different results when conducted at well-established institutions such as universities or at any of the other public NEIs. The study was conducted at a selected public NEI in NWP, and it could yield different findings if conducted in different provinces and at private nursing colleges.

3.4 RECOMMENDATIONS

The following are recommendations derived from the results, limitations, and conclusion of the study. They are divided into nursing education and research.

3.4.1 Recommendations for nursing education

The study findings revealed that there is a need for NEIs to plan for resources and new curriculum with regards to future teaching & learning innovations. IT resources such as Wi-Fi, a computer laboratory, and an online supportive student portal are recommended, as well as the building capacity. There is a need for nurse educators and nursing students to have training in using technology in teaching and learning. This will not only assist with prospective pandemics but will also equip future nurses with technological skills in clinical practice. It's a fact that nowadays, almost everything revolves around technology, and the healthcare sector is no exception. Therefore, the addition of a basic computer literacy module for students and in-service training for nurse educators, as well as providing students with technological devices for learning, will enable the infrastructure of the NEI to meet the standards of HEIs in terms of IT resources. Furthermore, policymakers should utilise the findings to formulate HEI's policies for teaching and learning as future guidelines for any future pandemics.

3.4.2 Recommendations for nursing research

Further research at other NEIs is recommended by the researcher. The researcher recommends a follow-up study utilizing a different approach of mixed methods. Furthermore, all the employees of the NEI should be included, that is, both the academic

and support staff. It is recommended that the study be conducted on the nurse educators and students who were affected by COVID-19 to check their coping mechanisms post infection.

3.5 SUMMARY

The literature shows that the outbreak of COVID-19 had an impact on educational activities globally, including NEIs. The impact of COVID-19 on teaching and learning made it crucial for the researcher to undertake a research study. The research study explored and described the experiences of nurse educators regarding teaching and learning during the COVID-19 pandemic at an NEI in the NWP to evaluate if the experiences discovered in other settings are appropriate at the NEI under study. Face-to-face semi-structured FGDs and observational field notes were conducted to produce data, which were analysed through Colaizzi's seven-stage process.

ANNEXURE A INTERVIEW SCHEDULE

Semi-structured focus group discussions will be conducted face-to-face, and all COVID19 protocols such as wearing of masks, sanitising, and social distancing will be maintained in order to avoid potential infections.

To answer the research question of this study four questions will be asked during interviews:

"What are your experiences with regards to teaching and learning during the COVID-19 pandemic?"

"How did you conduct teaching and learning during COVID-19 pandemic?"

"What challenges did you experience during teaching and learning in that period of COVID-19?"

"How did you overcome the challenges you experienced during COVID-19 pandemic?"

ANNEXURE B ETHICS COMMITTEE (HREC) OF SCHOOL OF HEALTH AT THE NORTH-WEST UNIVERSITY

Private Bag X1290, Potchefstroom
South Africa 2520

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

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

Tel: 018 299-1206
Email: [redacted] (for human studies)

27 September 2022

ETHICS APPROVAL LETTER OF STUDY

Based on approval by the North-West University Health Research Ethics Committee (NWU-HREC) on 27/09/2022, the NWU-HREC hereby approves your study as indicated below. This implies that the NWU-HREC grants its permission that, provided the general and specific conditions specified below are met and pending any other authorisation that may be necessary, the study may be initiated, using the ethics number below.

Study title: Experiences of nurse educators regarding teaching and learning during COVID-19 pandemic at the selected Nursing Education Institution in the North West Province
Principal Investigator/Study Supervisor/Researcher: Dr GP Kovane
Student: KS Gontse - 16517806

Ethics number: | N | W | U | - | 0 | 0 | 0 | 8 | 1 | - | 2 | 2 | - | A | 1 |
Institution Study Number Year Status

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

Application Type: Single study
Commencement date: 27/09/2022
Expiry date: 30/09/2023

Risk: Minimal

Approval of the study is provided for a year, after which continuation of the study is dependent on receipt and review of an annual monitoring report and the concomitant issuing of a letter of continuation. A monitoring report is due at the end of September annually until completion of the study.

General conditions:

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

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

ANNEXURE C NORTH WEST PROVINCIAL DEPARTMENT OF HEALTH (NWDOH)

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

2030 NDP

RESEARCH, MONITORING & EVALUATION

HEAD OF DEPARTMENT
2022 -03- 26
NORTH WEST DEPARTMENT OF HEALTH

Name of Researcher: **Ms K.S. Gontso**
North West University

Physical Address:
(Work/ Institution)

Subject: **Research Approval Letter – Experiences of nurse educators regarding teaching and learning during COVID-19 pandemic at a Nursing Education Institution in the North West Province.**

This letter serves to inform the Researcher that permission to undertake the above mentioned study has been granted by the North West Department of Health. The Researcher must arrange in advance a 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.

ANNEXURE D **THE MANAGEMENT OF THE TWO CAMPUSES OF THE SELECTED NEI IN THE NWP**

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

North West College of Nursing

2030 NDP

Archbishop Desmond Tutu St
Private Bag X19
KLERKSDORP
2570

NWCON-KLERKSDORP CAMPUS

Tel: +27 (18) 468 8000
Email: nwcon.kroni@nwpg.gov.za
www.health.nwpg.gov.za

To: Ms. K Gontse
PO Box 337
Magogoe
2769

From: Mrs. N Sedumedi
Campus Heac

Date: 26 September 2022

PERSMISSION GRANTED TO CONDUCT A STUDY AT NORTH WEST COLLEGE OF NURSING: KLERKSDORP CAMPUS

This serves to grant permission to access North West College of Nursing (Klerksdorp Campus) for conducting a research study as requested by North West Department of Health Research, Monitoring and Evaluation

Kindly communicate your needs in advance so that appointments are secured with participants.

Approved by:

Mrs. N. Sedumedi
Campus Head

DEPARTMENT OF HEALTH
NORTH WEST COLLEGE OF NURSING
26 -09- 2022
PRIVATE BAG X19
KLERKSDORP 2570
NORTH WEST PROVINCE

Let's Grow North West Together

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

North West College of Nursing

2030 NDP

Dr. Albert Luthuli Drive
Private Bag X 2178
MAFIKENG
2745

NWCON MAFIKENG CAMPUS

Tel: +27 (18) 392 0600
Email: Batyi@nwpg.gov.za

Name of Researcher : Ms. K.Gontse
North West University
Mafikeng Campus

Physical Address : Dr. Albert Luthuli Drive
Private Bag X2178
Mafikeng, 2745

SUBJECT : Research Approval letter at North West College of Nursing: Mafikeng Campus

As an institution of Higher Education we embrace and support rearch initiatives fully.We thus have pleasure to inform you that your request to do research at North West College of Nursing: Mafikeng Campus has been granted.

Your study topic : Experiences of nurse educators regarding teaching and learning during Covid 19 pandemic at the selected nursing education institution in the North West Province. As a college we believe that the specific topic will play a vital role for the campus and the college as it will form baseline evaluation for future research.

We wish you all the best in your research endeavour.

Acting Campus Head: _____ Date: 06/09/2022
Mrs.T.V.Batyi

HEAD OF CAMPUS
06 SEP 2022
MAFIKENG
SIGNATURE.....

ANNEXURE E RECRUITMENT MATERIAL

NWU® | NuMiQ

Invitation
TO PARTICIPATE IN RESEARCH

INVITATION

TOPIC: experiences of nurse educators regarding teaching and learning during the COVID19 pandemic at a nursing education institution the North West province.

You are hereby cordially invited to participate in the above-mentioned research by Ms Kebuseditswe Sylvia Gontse from the North-West University, Mafikeng campus

WHY IS THIS RESEARCH STUDY NEEDED?

The outbreak of covid-19 propelled the education sector, including the nursing education institutions to suspend face-to-face contact and move to online teaching and learning. The aim of this study is to describe the experiences of nurse educators regarding teaching and learning during the COVID-19 pandemic at a NEI in the North West Province where academic activities were suspended in order to understand their experiences.

WOULD THIS STUDY BE A GOOD FIT FOR ME?

This study might be a good fit for you if:

- You are a nurse educator registered with the South African Nursing Council (SANC) and is teaching, and have been taught principles of education;
- You are a nurse educator who was teaching at any of the two campuses of the selected nursing education institution before COVID-19 was declared a pandemic by WHO.
- Are prepared to take part in the research.

WHAT WOULD HAPPEN IF I TOOK PART IN THE STUDY?

If you decide to participate in the research study, you will be required to do the following:

- Be willing to participate in-depth semi-structured focus group discussions which will be conducted face-to-face;
- Be willing to sign a written informed consent form as evidence that your participation is voluntary;
- Be willing to spend at least 60 minutes in a focus group discussion session;
- You may be required to participate in the research in your own time, however, negotiating it with the management to regard it as on-duty time will be done;
- Be willing to work accordantly in a group;
- Be willing to keep the focus group discussions confidential;
- Be willing to observe all the COVID-19 protocols such as wearing of masks, sanitising, and social distancing with the goal of protecting other participants and the researcher from the potential contact with COVID-19.

PROJECT DATE: 2021 – 2022

BENEFITS OF THE STUDY

Direct benefits for you if you partake in the research study include that you will:

- There will be no direct benefits from this study.
- The study finding may improve the planning of the curriculum, including new innovations in teaching and learning of nursing students.

DECLINE TO PARTICIPATE/ PRIVACY

- Participation is precisely autonomous;
- Participation will be voluntary without risk of prejudicial treatment;

- You have the right to extract from the study;
- Privacy and confidentiality will be maintained and access to personal information and records will be limited to the research personnel only, that is, the researcher, investigator and the co-coder.

THE RESEARCHER

Ms Kebuseditswe Sylvia Gontse is the primary investigator of this research project. She is a lecturer at the North West College of Nursing, Mafikeng Campus and a Master's degree student at the School of Nursing of the North West University, Mafikeng Campus.

This research will advance in recruiting the competency of other researchers with specific skills as required.

CONTACT DETAILS

Ms Kebuseditswe Sylvia Gontse

E-mail: kebuseditswegontse@yahoo.com

Tel: 063 434 7204 / 076 963 3301

COST

- No payments will be made for participation.

FUNDING

The research study will be self-funded by the researcher.

ANNEXURE F STAMPED CONSENT FORM

NWU®

NWU Health Research Ethics Committee (NWU-HREC) Faculty of Health Sciences 2022 -09- 27 NWU

HREC Stamp

INFORMED CONSENT DOCUMENTATION FOR NURSE EDUCATORS AT THE TWO CAMPUSES OF THE SELECTED NURSING EDUCATION INSTITUTION IN THE NORTH WEST PROVINCE

TITLE OF THE RESEARCH STUDY: EXPERIENCES OF NURSE EDUCATORS REGARDING TEACHING AND LEARNING DURING COVID-19 PANDEMIC AT THE SELECTED NURSING EDUCATION INSTITUTION IN THE NORTH WEST PROVINCE

ETHICS REFERENCE NUMBERS: NWU-00081-22-A1

PRINCIPAL INVESTIGATOR: DR P KOVANE

POSTGRADUATE STUDENT: KEBUSEDITSWE SYLVIA GONTSE

ADDRESS: 10035 MAGOGOE KOIKOI VILLAGE, MAFIKENG

CONTACT NUMBER: 0634347204/0769633301

You are being invited to take part in a **research study** that forms part of a MASTER OF NURSING SCIENCE WITH COMMUNITY NURSING SCIENCE.

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 that you clearly understand what this research is about and how you might be involved. Also, your participation is **entirely voluntary** and you are free to say no to participate. If you say no, this will not affect you negatively in any way whatsoever. You are also free to withdraw from the study at any point, even if you do agree to take part now.

This study has been approved by the **Health Research Ethics Committee of the Faculty of Health Sciences of the North-West University (NWU-00081-22-A1)** and will be conducted according to the ethical guidelines and principles of Ethics in Health Research: Principles, Processes and Structures (DoH, 2015) and other international ethical guidelines applicable to this study. It might be necessary for the research ethics committee members or other relevant people to inspect the research records.

What is this research study all about?

- This study will be conducted face-to-face in the form of focus group discussions at the two campuses of the selected nursing education institution in the North West province and will involve investigators and moderators with experienced health researchers trained in healthcare research, six of nurse educators participants will be included in this study.
- You have been invited to be part of this research because you are a nurse educator registered with the South African Nursing Council and you are teaching and have been taught the principles of education.
- You also fit the research because you were teaching at the nursing education institution during the COVID-19 lockdowns, therefore you possess knowledge with regards to the experiences thereof.
- We plan to conduct the research in order to capture the experiences of nurse educators regarding teaching and learning during the covid-19 era in the North West province.

Why have you been invited to participate?

- You will not be able to take part in this research if you were not involved in direct teaching and learning during the COVID-19 lockdowns.

What will be expected of you?

- You will be expected to grant an informed consent and to fully participate in the study once the research commences.
- You may be required to participate in the research in your own time, however it will be negotiated with the management to regard it as on-duty time.
- You will also be expected to participate in a face-to-face focus group discussion, which may last for at least 60 minutes in order to share information concerning your experiences with regard to teaching and learning during COVID-19 pandemic.

Will you gain anything from taking part in this research?

- The gains for you if you take part in this study will be sharing of information which may be helpful to others in similar situations and may also improve the planning of the curriculum, including new innovations in teaching and learning of nursing students.
- The other gains of the study is for the higher education institutions policy makers may benefit by using the findings to formulate policies for teaching and learning as future guidelines for any prospect pandemics.

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

- The risks to you in this study are loss of time and COVID-19 infection, but will be limited by observing all the COVID-19 protocols, such as wearing of masks, sanitising and social distancing, and focus group discussions will be kept as short as possible (at least 60 minutes).
- There are more gains for you in joining this study than there are risks.

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

- Anonymity of your findings will be protected by treating any furnished information confidential by means of not making it recognisable and accessible to others.
- Your privacy will be respected by preventing disclosure of any information that could identify you.
- Your results will be kept confidential by not entering any identifying information onto computers, but keeping them in a locked file.
- Computer-based files will be coded.
- You will be permitted to see the research findings.
- Findings will be kept safe by locking hard copies in locked cupboards in the researcher's office and for electronic data it will be password protected.
- As soon as data has been transcribed it will be deleted from the recorders. Data will be stored for 5 years.

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 it has been approved for publishing by means of workshops and conferences.
- You will be informed of any new relevant findings by seminars.

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

- This study is self-funded by the researcher
- 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 Kebuseditswe Sylvia Gontse at 0634347204 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 titled: .....

I declare that:

- I have read this information/it was explained to me by a trusted person in a language with which I am fluent and comfortable.
- The research was clearly explained to me.
- I have had a chance to ask questions to both the person getting the consent from me, as well as the researcher and all my questions have been answered.
- I understand that taking part in this research is **voluntary** and I have not been pressured to take part.
- I may choose to leave the research at any time and will not be handled in a negative way if I do so.
- I may be asked to leave the research before it has finished, if the researcher feels it is in the best interest, or if I do not follow the research plan, as agreed to.

Signed at (*place*) ..... on (*date*) ..... 20....

....

Signature of participant **Signature of witness**

Declaration by person obtaining consent

I *(name)* ..... declare that:

- I clearly and in detail explained the information in this document to

  .....
- I did/did not use an interpreter.
- I encouraged him/her to ask questions and took adequate time to answer them.
- I am satisfied that he/she adequately understands all aspects of the research, as discussed above
- I gave him/her time to discuss it with others if he/she wished to do so.

Signed at (*place*) ..... on (*date*) .....20....

....

Signature of person obtaining consent **Signature of witness**

Declaration by researcher

I Kebuseditswe Sylvia Gontse..... declare that:

- I explained the information in this document to ..... **or** I had it explained by ..... who I trained for this purpose.
- I did/did not use an interpreter
- I encouraged him/her to ask questions and took adequate time to answer them

  or 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 G EVIDENCE THAT MANUSCRIPT WAS SUBMITTED

From: In Review at BMC Nursing <noreply@springernature.com>
Sent: Friday, August 18, 2023 2:29 PM
To: Patience Kovane <Patience.Kovane@nwu.ac.za>
Subject: Your submission to BMC Nursing: Preprint Confirmation

Dear Dr. Gaotswake P Kovane,
Thank you for opting in to In Review from Springer Nature when you submitted your manuscript "Experiences of nurse educators regarding teaching and learning during the COVID-19 pandemic at a Nursing Education Institution" to BMC Nursing. You can begin tracking your submission and view a draft of your preprint by logging in to Research Square. Log in
In Review is a free service that posts your manuscript publicly and permanently to the preprint server Research Square and lets you track the status of your manuscript during the peer review process with a peer review timeline.
All preprints posted as part of the In Review service are screened for preprint suitability, formatted, assigned a DOI, and publicly posted under a CC-BY 4.0 license as a preprint on Research Square.
Your preprint may be posted within the next few days, prior to the beginning of the peer review process, or have a later posting date due to editorial processes at the journal. However, if you would like to preprint right away, please log in to Research Square and select "Post my preprint".
If you did not intend to opt in to In Review and would like to cancel your preprint, please log in to Research Square to opt out as soon as possible. Once your preprint is posted, you will no longer be able to have it removed.
For questions about your preprint or the In Review service, you can visit our Help Center or contact Research Square.
Sincerely,
Springer Nature
Journal submission ID for reference: ced64eba-f98a-4eb8-b66f-651855bf982e
Submission title for reference: Experiences of nurse educators regarding teaching and learning during the COVID-19 pandemic at a Nursing Education Institution
This email has been sent to Patience.Kovane@nwu.ac.za by Research Square on behalf of Springer Nature.
Privacy policy

Contact Research Square
© Springer Nature

ANNEXURE H TRANSCRIPT

Topic: Experiences of nurse educators regarding teaching and learning during the COVID19 the pandemic at a Nursing Education Institution in the North West Province.

Focus Group Discussion One

Eight participants: Nurse educators, all females

Researcher = R

Participants A, B...= P-A or P-B...

Researcher the researcher introduced himself and explained the details of the study and reiterated the consent form and sought consent to record the discussions. He also informed the participants that their identities will be concealed and therefore assigned an alphabet letter to each participant (i.e. A, B, C).

R: The first question I am going to ask is, what are your experiences with regards to teaching and learning during the COVID-19 pandemic? Experiences could be anything that comes to mind, that you went through during COVID-19.

P-D: Okay thank you, what I have experienced as a lecturer in the mentioned institution, there was a challenge for our students because their programs were delayed or prolonged thereby, they did not finish on the expected time as there was a break during the pandemic (lockdown). And what I have experienced is that when we came back after the lockdown restrictions were relaxed and the schooling commenced, we had a challenge because we were not allowed to take a large number of students at once in one place. Even during lockdown when we were teaching from home we had a challenges because our students are older people who are not technologically savvy, so they had a problem with the online facilitation because some could not reach the necessary information from us lecturers due to financial constrains or technological illiteracy.

R: Before I can give another person the opportunity to speak, can I ask you this. You mentioned that large numbers of students were not allowed in the institution, what do you mean, can you please elaborate on that?

P-D: For example, one class takes more than a hundred students, so we could not take such groups, so the institution had to go and look for bigger venues which also posed a challenge on our finances because it was not part of our annual budget. Some classes were delayed because of the same problem of infrastructure, because {*akere* Setswana affirmation word} we had to ensure that we do not accommodate large numbers of students in one place for a longer time, as per COVID-19 Regulations.

R: You also spoke about financial constraints and technological illiteracy, can you please elaborate on that.

P-D: As I have mentioned that most of our students here in the institution are old people, some of them or most of them cannot operate the online apps, like when we say we are going to facilitating via zoom or via WhatsApp, others could not do those things. And it also put financial strain on them because they had to buy data or cell phones that they will be able to use for class.

R: Thank you. Just to refresh your mind, the question was, what are your experiences regarding teaching and learning during the COVID-19 pandemic, is there any other person who has a view?

P-A: As participant D has alluded, our college does not have an existing student information management system, and that really posed a big challenge because all of us, students and lecturers, we were not ready because throughout we have been facilitating the lessons through contact sessions with the students. Now that was none existing, however because we are living in a technologically savvy world right now, some of the educators started conducting the lectures via Zoom and others using other technological devices (apps) like WhatsApp but there was no preparation for both students and lecturers regarding to that. And some of our students are from, the province itself is very vast and most parts of it is rural, so some students were released to go home. Some would be in the rural parts of the province were connectivity is very poor, so they did not benefit from whatever measures which were started by the educators and as a result, whatever that was done during that period was null and void because it was not recorded, and we had to restart again, hence the extension of the program. And the other issue, COVID-19 has actually brought this new thing, our curriculum as approved by the South African Nursing Council, it was contact sessions but automatically we had to deviate from what we had previously agreed to. And later

on, the good thing is that SANC allowed all institutions in the republic can do both the contact and remote teaching, although initially the curriculum was not agreed to as such. Another big challenge we experienced when students started coming back to class was that the infection rate became very high, I remember in one class of first years who had just came from class and were starting with their practical. On day one, three were found to be positive at the facility and from there on we were getting reports of students testing positive on a daily basis. Almost 50 percent of the students became positive and they had to be recalled from the clinical because it was a large portion of the class so they had to go back home and some had to be taken to places... mmm what do they call them {participant tries to recall the word quarantine}... were people who were positive or who have been in contact with positive people were placed, so that was a challenge.

R: Uh, listening to you right now, you have spoken about a number of things. I want to go back to the part where you spoke about preparation where you said there was no preparation for students. What do mean by that, can you please elaborate?

P-A: As we have explained, our accredited curriculum was for contact sessions, but because of this new monster COVID-19 coming it was impossible for contact sessions to continue, especially in April (2020) were the country was the entire country was shut down and everybody had to be at home. And coming back the COVID regulations actually said there is a specified number of people to occupy an area which normally takes a hundred people now it was supposed to take only fifty, it accommodated fifty percent. So, it was a real problem during that time because it meant that some of the students will not be in the class and at the time when all the students were not at the college, the whole announcement was abrupt. So nobody was prepared both educators and students, financially so because they had to have data and if did not know that this kind of situation will occur, you would not have enough money for data. And over and above that, students did not know how Zoom operates, even the educators themselves. It was a learning curve in a sense that if you start a Zoom session, people did not know that you have to mute everybody in attendance so that everybody could benefit from the class. And some would be going out not knowing how to login so it was a really big problem. Other times we would have started with the class without no fore thought of how to capture the attendance register, there was no thought about it. So finally you would not know who were attending, how many went

out during the session and even the noises or the disruptions because people did not know about this things.

R: Okay, lastly I would like to go back to what you said regarding the extension of the academic program, can you please elaborate on that.

P-A: For example with our first intake of R171, they started in February, meaning that in 2022 they were supposed to be in second year. But because of those disruptions of COVID, having to stay at home. They ended up writing their first year final exams in March – April 2022, starting second year in May. That was three months extension period.

R: Thank you Participant A for your input. To remind the participants that the question is still: What are your experiences with regards to teaching and learning the COVID-19 pandemic? Is there any other input participant H?

P-H: Thank you sir, uh my experience I would say I was afraid, fear of the infection because most people were dying, so we were at home and we had fear of contacting COVID. Even when we had to work or go to the clinical facilities, we had that fear that we will be infected and die because of the Coronavirus. And also, we lost a lot of students and that has put a lot of fear in us as educators. Even the lecturers contacted COVID. We had frustrations because of the use of technology, we did not know how to use Zoom, it was the first time that we heard of it as an online teaching. So, the other thing is we had to divide our classes, most of our students they were between 120 to 150 in numbers and coming back we were only allowed to take only 50 students in a class that can take 150.

So that meant that we had to divide our classes into two or three and whatever you taught in class A, you had to also teach in class B or C that made uh, a lot of work for us and a longer period to complete the block or uh, uh, *ja* the block programme and the I'm still thinking it ran away.

R: Uh, can I go back to what you just said now, you spoke about the frustrations of COVID19. Can you elaborate further on that, what do you mean when you speak of frustrations?

P-H: I was so, so frustrated because like I said we had to divide classes, a class of what we can teach we can teach a class of 150 at a go so we had to divide them into

three (3) meaning a class of fifty (50), meaning you do a content three times. So a way that you supposed to do in a day, you have three days to do where and some of the students they won't get the same information because you change as you go to the next class. The other thing is as educators as well because our kids were at home we had to teach them, we were doing their homework at home and the information that we had to teach them we don't know as well. So it was just a lot of frustrations being at home not knowing what is gonna happen... yes

R: I see participant G you had your hand raise, you can continue and add your input.

P-G: Thank you Mr Modise, uh my input is there was uh during COVID-19 when the students were in class, the students had to when they were taught in class they had to go home they had to be released before the actual time that they were supposed to be released that is when they come in at 07:45 AM and they had to go home at 16:30 – 16:45 PM because of COVID due to the fear of a cross-infection they had to go home at about 13:00 PM, so the rest of the work they had to do it themselves at home and then the other thing is there was a lot of absenteeism in teachers and students it was the same because of this challenge of COVID-19 that is all that.....

R: Can we go back to what you just said when you spoke of students being released before the actual time, I would really want you to elaborate further on that, how do you mean by that statement?

P-G: That meant that instead of the students being released after their periods being released at 16:00 PM to go home after all the lessons so instead they will be released at 13:00 PM, they are released before the actual time that they were supposed to be released because of the fear of the pre-cross infections....

R: Okay, you also spoke of absenteeism from the students and lecturers uh, how do mean by that, can you elaborate more on that...

P-G: I didn't put it right when I said absenteeism because it was not a deliberate thing, they were affected by this pandemic thing which they had to go to consult and then they were most of them they were booked off.

R: Okay, uh participant E I see you've got arm raised, you can add your input.

P-E: Uh thank you Mr Modise I'm participant E, my experience during the COVID-19 pandemic was there has to be measures, measures had to be developed to provide

offside learning with the results students were accommodated at like for an example Mafikeng psychiatric hospital and the, the venue which was used for teaching and learning was just too big, there was a lot of echo and it was winter time the air cons were not working and the drainage systems were not functioning well, was no water. For me the environment was not conducive to learning with the results students had to be released earlier than expected each and every time because there was no water for sanitation.

R: As you are speaking to me now what is coming to your mind that you really feel like this one I must share, as you are talking to me now..

P-E: The thing is a lot had to, uh, for an example if you had to do a work of two periods, we had to do more like four to five periods in a short of time trying to cover the time whereby students will be released earlier and like I said the environment was totally unacceptable, there was a lot of smell for the students, it was cold it was winter the hall was too big for group of students…

R: As I'm listening to you now you spoken about more periods, can you please elaborate more on that, like how do you mean by that by having more periods?

P-E: Okay thank you sir, a lot of information had to be shared within uh, a short uh, period of time whereby the facilitator had to cover the information that had to be shared in the afternoon but due to those challenges, students had to be released around 13:00 PM like my colleague had already alluded to that 13:00 -13:30 so information for the afternoon had to be done before 13:30 before the students were released…

R: Okay thank you any other output from other colleagues, uh participant C….

P-C: Yes uh thank you sir thank you I am participant C, my experience was uh we had to face lot of added activities because of the COVID rules and regulations like uh, we were not used to screening students and we were expected to screen them before they entered classroom and during the teaching processes or activities we were also expected to include certain intervals so that the students will be able to decontaminate the desks and decontaminate their hands, and over and above that we were also expected to sort of, when we were doing the facilitation because the group had to be divided, we had to run the groups concurrently like one lecturer will then be expected to prepare a module or a lesson plan maybe for the module that she is not acquainted

with so it was also an added activity which took a lot of our time and lot of our energy thank you.

R: Is there anything else that is coming to your mind in terms of experiences, uh you had during COVID, uh is there anything that comes to your mind in relation to teaching and learning?

P-C: I think that is that because uh like uh let me add into that because if like I said if you had to prepare for a module that you are not acquainted with so it took lot of your time, a lot of your energy, lot of discipline you know I don't know, lot of many other things.

R: When you speak about being not being acquainted to the module, how do you mean by that statement? Can you elaborate?

P-C: It means then that you have to go sit internalize the module before you internalize prepare, prepare yourself for to, to go and share information with the students that is what I mean.

R: Is there any other input, a let's give participant F then we come back to you.

P-F: Thank you Mr Modise, the other experience we had was the online teaching and learning regarding the WhatsApp teaching and learning because the most of the leaners could not internalize the content, it was too difficult for them and they become overwhelmed as also there were no group discussions for others to come and try to explain the content to each other. The other experience that we had was that because we did not have contact learning session these students did not have experiential learning most of the time, because with us it was mostly clinical course that we were we were running during the COVID-19 cause of the strict protocol that were imposed on us, we could not really do experiential learning so that the students could correlate theory with practice, that was our main problem regarding learning thank you.

R: Uh, you spoke about a number of things that I want to go back and iron and I ask you about, you've spoken about students not being able to internalize the and being too difficult for them, can you please elaborate, how do you mean by that?

P-F: Thank you Mr Modise uh especially those with learning disabilities because we know that we have different types of students, those ones who learn fast it was more

easier for them to learn with this online teaching but the one with learning disabilities was difficult.

R: Okay you also spoken of students not having or not being exposed to experiential learning, can you please elaborate on that's statement, how do you mean by that?

P-F: Thank you Mr Modise in that statement I mean like because we are doing theory together with clinical practices, the thing is when you introduce uh, a system via online let me make an example of a respiratory system you will be teaching them regarding the anatomy how we examine this system but unfortunately we could not go to the patient to do the clinical skills so it was too difficult for them because when COVID was not there immediately after we have introduced a system then we go to a patient to instil that skill.

R: Okay participant E you hand uh your arm raised

P-E: Oh I also wanted to add another point that during the time modules had to run parallel, different modules will be facilitated to different students but in the same room. So at the end the next week we exchange, the lectures will exchange and facilitate different modules to same students I don't know whether you get me, we've got group A and group B and they will be doing two different modules and the at the end of the week the modules are exchanged go back to group A and then the other lecturer will go back to group B at the end when they write tests you will see that there are some problems or some challenges whereby students will be a little bit will be confused because with the R425 they are used to go through the module and write the, uh do the assessment at the end of the module but because they were dealing with two modules at the same time and write these two assessment at the end. You'll you will realise that they will give a response to this to this module but the response will be from a very different module so that caused a little bit of uh, of confusion on the students.

R: Okay, uh, participant B, let me give you a chance to say something.

P-B: Danki Mr Modise most of the points has been said that I was going to say but also for the college it was very costly to hire venues and some of those venue which were not user-friendly like the, the other venue where we were like they already said a there were some problems, no effective ablution facilities, no water, no electricity and all that was affecting the, the teachers and the students especially when there

was no electricity, uh, teaching could not be effective because uh the lecturers could not use the projectors so that we, we experienced a lot because of the electricity that was not there and also as they already said that a theory should be correlated with uh, uh, practice. We had a problem with placing the students to the clinical facilities because of the numbers, the number of students we could not place a large number of a students at the same time because we were allocated numbers, the facilities will tell us how many students we should place and also accompanying those students it was a problem because we feared a infection from COVID-19. So if we went to see the students we had to make means on how to see them without being involved with the patients.

R: Okay, can I now move to the second question because some of the things participants, uh, are bringing forth what we should be looking into in the following question. Now here is the second question, how did you conduct teaching and learning during COVID-19 pandemic, how did you conduct teaching and learning during the COVID-19 pandemic?

R: Or before that I thought there was a hand raised from participant A, maybe she will like us to go back to the first question maybe she want to add something and participant C let's give you chance participant A and move to the next question.

P-A: I thank you Mr Modise uh, as much as COVID-19 was a unexpected hostile but it brought positive aspects to teaching and learning. Number 1, the principles of infection controls were reiterated everybody in the country had to learn about principles of infection control and with us as a nursing education institution and the students being nursing education recipients those were reiterated and we could actually see for some of us that, uh even with the basic hand washing procedure uh, because every five minutes would want to go and wash as the other participants said it brought fear into our soul, if you had touched a surface we just thinking of those microbes now as you wash five minutes ago you washed your hands but as you are washing you could see that the water is dirty again and we were surprised personally was surprised. So I reiterated that and we were also telling students that we don't just use the sanitizer but there are time periods for rubbing in, so those are the, the things good things that we learnt from COVID and we have taken them beyond COVID . The other thing as we said the college was not ready with the information management systems but we had to learn very fast to new technology, all of us now we really know

how to operate a Zoom meetings, we can effectively use other methods of uh, uh, technology which we were not well conversed with previously so those are some of the good things that COVID brought to the nursing education and our college actually benefitted because for many years they didn't as back as 2013 the college has been requested for things but was never coming forth but now with the challenge that we having and with the prerequisite of the CHE as a IMS it has been one of the prerequisite for the accreditation. Finally the college could actually could get the IMS, it's rolling out basically so those are some of the positive things which were brought out by COVID-19 into education and teaching.

R: Uh, participant C, is there anything that you wanted to add?

P-C: I just wanted to add that we had to add that we had to live with grief, sorrow and trauma and maybe one would have expected that we were debriefed but then I would like to say uh, uh, it also brought up positive uh, uh, I don't know how to put it because then we could manage our emotions and we could deal with it you know internally so that is another aspect that we have learnt. So it was a sort of a teaching tool for us to manage other life aspect thank you.

R: Now back to the second question, second question is how you conducted teaching and learning during COVID-19 pandemic, any input from the participants?

P-C: I think we have elaborated a little bit more on that when we were doing the first question to say yes the classes had to be separated because we were allowed only a certain number of students and we uh, in the first instance at the beginning of the pandemic there was no contact session not at all, it only came when now the rules started to be eased where we had to divide classes into smaller groups and where we had to run classes concurrently and where we had to share groups of students as lecturers. Most of us had indicated that we were using Zoom you know virtual teaching methods to conduct classes thank you.

R: Any other input from the participants, participant A

P-A: Thank you Mr Modise, there uh, I'll come to the end-results of teaching and learning the, the summative assessments, we have universities who have been for years member of, who have been on higher education and as a result they have for years they have been using the Information Management Systems but as a quality insurance from our system we had to bring them manually, physically to them. Now

with the COVID in they were basically closed for the entire year, working, they were working online so we could not have contact with them and our activities as a college had to continue with the exams. So new ways of doing things were brought in, we had to send them, our examinations electronically, ensuring that exams are safe still, encrypting them and then they would send back the papers uh, and we would use the uh, the corrections, we would correct send them back and they would be signed and then encrypted and send back them back to the college so that was the new way of doing things and of course it has benefited the college in the long run because our college has two uh, uh the university which is quality assuring us has got another campus over 300 kilometres away so we did not have to take a trip of over 200 kilometres away, we could just do that online so it was a positive thing.

And then the other thing with the uh, the teaching, uh we asking the nursing educators we are saying let us close the gap between theory and practice, but it brought some challenges to us as different campuses belonging to one college particularly I want to say in one of the OSCEs as uh, uh examination station was on the CPR (cardiopulmonary resuscitation) but because of COVID things had changed. Patients were no longer been given mouth resuscitation but now the tool was talking about mouth resuscitation which was prepared before COVID so some of the educators still insisted that the students should do that which was a hazard and we had to include our Director of Nursing Education and also to call the South African Resuscitation Council so as to have a consensus as our examiners are centralised.

R: Any other, uh, input on how did you conduct teaching and learning during the COVID-19 pandemic? Maybe you have said it as a response in the previous question but now that you are looking back at it now, is there anything that comes to your mind that you feel like you need to, to share?

R: Okay, let's move to the third question, what challenge did you experience during teaching and learning in the period of COVID-19, challenges specifically regarding teaching and learning during the period of COVID-19 what are they, participant A?

P-A: One of the challenges already alluded to was uh, uh, either students or educators would become sick, would become uh, uh, affected, infected by COVID-19 and if you have been a close person, a contact with some of your colleagues and that meant that maybe an entire team would have to be booked off, that was a challenge. And the

same was also happening in the classes where you find that today, especially after weekends that a number of students will not come to class because they are presenting with flu-like symptoms. So that was a challenge and now with the problem that we had that we were not doing online teaching, it was difficult on how to close that gap.

R: Is there any other input? Yes participant G.

P-G: Thank you Mr Modise, I think the other challenge was it was very difficult for the teachers to teach wearing a facial musk where the students some of them couldn't hear clearly what the teacher was saying, it was not they couldn't hear properly what you want to say I think that one was a challenge also.

R: Participant D?

P-D: Yes thank you Mr Modise, like my colleagues have said having said that there were many infections which we had to be isolated or in quarantine so it, it, it also bringing back to saying the blocks were extended because if we expected to remain to be in class for three weeks then almost a thirty or fifty percent of the class had to go home for isolation or for quarantine. It simply means we are going to come back and take off from where we left, if we had two weeks in class then it mean the block or the class will be extended for the other week or two so it posed a larger load of work on us.

R: Any other input, participant B?

P-B: It was also difficult for the students to come and consult at the lecturers offices because of fear of infections.

R: Participant H

P-H: Thank you Sir, the other challenge that we had was high failure rate because just like we said teaching was not an easy thing, uh, most of the students confused the content, when they were asked, uh, let me say question from participant H they will provide information from participant Z that led to the confusion of the content and leading to high failure rate. The other thing there was, I don't know if it was an experience or the challenge, there was that kind of stigmatization from us as lecturers or the employees when you start coughing everyone will like uh, uh, what can I say,

we were like they will run away from you even if you get in my office you were like coughing there I'll start spraying all over the place or even spraying you as a person.

And even those that were diagnosed with COVID when they come back they were like they have uh, *leper lepera ja lepera* you people like they were scared of you, leprosy I don't know.

R: Any other input, I don't want the same person dominating the group neh I want input from the other participants, anybody.... Okay participant A

P-A: The other issue was with placement, remember that our province is vast we are placing our students in vast areas of the province now during COVID pandemic the burning issue would be transportation because there were protocols about capacity of the cars that we had so it was a real problem maybe you want to send twenty students to Rustenburg where the capacity is high but the transport that we had should be fifty percent uh, uh, occupied so you can't send all the students there and it was a real problem for facilitators or educators to make their placements because even at the clinical facilities which are accredited the numbers of students were reduced as well that we would only take this, only this much and it was further exacerbated that we are not the only institution that is placing in those areas. So we had to come together with our other colleagues from other institutions and place, other students were placed on night duties and some they would come today on duty tomorrow not to be on duty and then they could not acquire all required hours then, hence the extension.

R: Any other input okay let's move to the last question...how did you overcome the challenges you experienced during the COVID-19 pandemic?

P-F: Thank you Mr Modise, mostly we did revisions where we left prior to COVID-19 and all the contact that were done online during COVID-19 so that the, the students could at least gain some knowledge and skills. The other thing we intensified clinical accompaniment where possible so that they could be able to correlate theory with practice.

R: The last question is let me repeat it for those who maybe missed it... the last question is how you overcame the challenges that were experienced during the COVID-19 pandemic? Participant A

P-A: To deal with our own personal fear of infections and also to reduce infection rate we aimed at reaching herd immunity. So all staff members, educators, support staff and even the students we encouraged to be immunized that could not be forced we were not coerced into doing that but a time and two there were presentations where they were encouraged and that was done and the uh, uh, educators, students, staff members, were allowed to go to different clinical institutions where immunization was been done. So a lot of our staff members were immunized and all, all, weekly on Mondays there will be statistics and it was showing an increase in the number of people who were getting immunized.

R: Any other input, participant C.

P-C: Thank you Mr Modise, I think as we have alluded we complied with the rules and regulations of COVID-19 like a decontamination at uh, frequent intervals and by screening ensuring that whoever that comes into the institutions does not have a high temperature and does not cough and stuff like that. So that is how we managed it.

R: Any other input, participant E

P-E: Thank you Mr Modise adding to it by complying uh, also by wearing of masks. Sometimes it will be a problem with some of our students where they were not be able to access a masks, the school was able to give some masks to the students when they are at the facilities thank you.

R: Any other input, yes participant D.

P-D: As I already indicated that one of my challenges was we had to facilitate online, to do online facilitations whatever that was facilitated online we re-facilitated it with contact sessions.

R: Is there anything that comes to any participant's mind regarding how you overcame the challenges that were experienced during the COVID-19 pandemic? anything that comes to your mind participant A?

P-A: Where there were discrepancies or where we did not see eye to eye with our colleagues as I alluded to, to, were we were looking to closing the gap between theory and practice, we involved our principals so that those challenges should be uh, attended to but ensuring that we don't compromise any life.

R: Is there any other input?

P-A: And just to say as a result of that our tool was changed, our CPR was changed we just did uh, chest compressions only, no mouth resuscitation because COVID-19 was being, uh, pass through aerosols. If we were going to allow our students to have a direct contact with the CPR doll, all of them going for it, then any person who might have been infected would actually infect other people.

R: Participant C

P-C: A the other thing is that uh, like I alluded earlier on concerning the emotions of grief, sorrow and trauma we had to deal with those emotions ourselves and through divine intervention, here we are still today thank you.

R: Any other input from other participants? In the absence of any other input I would like to thank you for being part of the session for agreeing to participate and for participating. If you have any questions this is your time to ask any questions... if there are no any other questions I would greatly appreciate you.

P-C: I would like to know what is now going to happen after this, after we have participated here?

R: What normally happens is if you want recordings to be made available to you it will be made available to you, the researcher will make this findings of the study available to participants to know the outcome of the study. So there will be a dissemination programme where participants will get feedback on and get the results of the study. Thank you so much for your time and for participating.

ANNEXURE I: CERTIFICATE OF LANGUAGE AND TECHNICAL EDITING

Compassionate about Editing
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18 August 2023

Declaration by language and technical editor

To whom it may concern

I, Prof Dr Cheryl Nikodem, declare that I have duly edited the mini-dissertation of **Kebuseditswe Sylvia Gontse (16517806) Experiences of nurse educators regarding teaching and learning during COVID-19 pandemic at a Nursing Education Institution in the North West Province**

It remains the student's responsibility to ensure that the regulations of the University have been followed.

Moreover, the student is responsible for reviewing the edited document before submission for examination.

Errors in the CONTENT are not the responsibility of the editor.

Yours sincerely

Cheryl Nikodem

