

THE EXPERIENCES OF CLINICAL SUPERVISORS INTERACTING WITH UNDERGRADUATE NURSING STUDENTS IN A REMOTE ONLINE CLINICAL LEARNING ENVIRONMENT DURING THE COVID-19 PANDEMIC AT A UNIVERSITY IN THE WESTERN CAPE

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ABSTRACT

Background: In the year 2020 the skills laboratory methodology for a Baccalaureate undergraduate nursing programme had to precipitously adjust to remote online clinical learning, because of the immediate closure of higher education institutions due to the rapid global spread of Covid-19. Clinical supervisors had to swiftly adapt to a new method of clinical teaching and learning, while experiencing the concomitant complexities of the new methodology.

Aim: This study explores and describes the experiences of clinical supervisors at a university in the Western Cape in interacting with undergraduate nursing students while swiftly adjusting to the use of remote online clinical learning sessions during the Covid-19 pandemic.

Design and methods: The study adopted an exploratory descriptive and contextual qualitative approach. Semi-structured interviews were conducted with eight clinical supervisors involved with remote online clinical learning, who voluntarily consented to take part in the study. Thematic analysis was used to code the data that was collected and conceptualise themes, which were verified by an independent coder. The **findings** indicate four main themes relating to the clinical supervisors' experiences of facilitating remote online clinical learning that emerged from the data which were: clinical supervisors' experiences of their ability to use remote online clinical learning; preferred online learning management system of the institution and its potential; clinical supervisors' fears and anxiety associated with use of technology for remote online clinical learning; and clinical supervisors' awareness of continuous professional development for using digital technology.

Ethical considerations: Ethics approval for conducting the study was sought from the Humanities and Social Sciences Research Ethics Committee of the university where the study was carried out. Informed consent was obtained from participants before they entered the study; they had the right to voluntary participation and could withdraw at any stage should they wish to do so. The researcher ensured anonymity to protect the identity of participants.

Conclusion: The findings of the study provide insight into the clinical supervisors' experiences of swiftly having to implement remote online clinical learning for the undergraduate nursing programme. Numerous challenges were experienced due to inadequate preparation for remote online clinical learning during the Covid-19 pandemic. The provision of good quality devices, for example laptops and mobile devices, is essential to ensure that the clinical supervisors can cope with the educational demands of this environment. The School of Nursing could invest in virtual and augmented reality that could enhance the delivery of the clinical skills development of the nursing programme. Continuous professional development should be prioritised and provided to the clinical supervisors to address gaps in digital literacy education.

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KEYWORDS

Clinical learning

Clinical supervisor

Remote online clinical learning

Undergraduate nursing student

Undergraduate nursing programme



LIST OF ABBREVIATIONS

CAL	-	Computer-assisted learning
Covid-19	-	Coronavirus disease of 2019
CPD	-	Continuous professional development
HEI	-	Higher education institution
MOOC	-	Massive open online course
OLMS	-	Online learning management system
ROCL	-	Remote online clinical learning
SANC	-	South African Nursing Council
UWC	-	University of the Western Cape
WHO	-	World Health Organization



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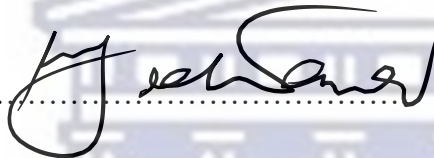
DECLARATION

I, Mankalima Ivy Jodwana, student number 4077986, declare that:

This thesis is my own work, and all the sources used are indicated and acknowledged in the accompanying references. The study was approved by the Humanities and Social Sciences Research Ethics Committee of the University of the Western Cape, in terms of its methodology and ethics considerations, and therefore complies with the research and ethical standards of the University of the Western Cape.

Date: January 2023

Signed.....



This thesis has been read and approved for submission by:

Signed

Dr. Jeffrey Hoffman

Date: 25 July 2023



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“Research is the cornerstone for the development of any profession or discipline.”

M. I. Jodwana

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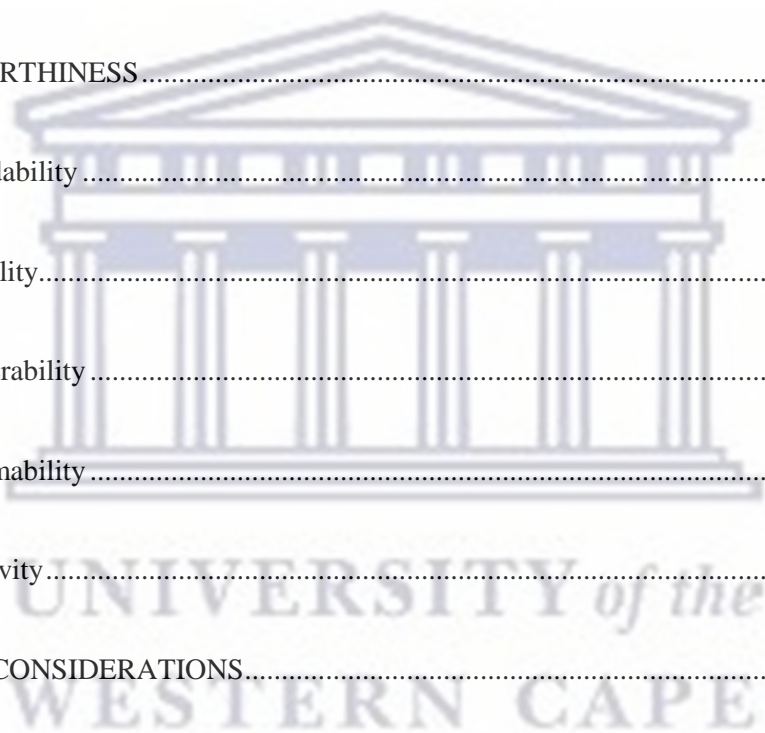
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CHAPTER ONE

OVERVIEW OF THE STUDY

1.1 OUTLINE

This chapter serves to orientate and introduce the research protocol that guided the research study. It will provide a background as to what informed the problem statement and assisted the researcher to formulate the research questions, research aim and objectives of this study. Lastly, this chapter will briefly introduce the research tradition and methodology that the study followed in order to achieve its aims and objectives.

1.2 ORIENTATION TO THE STUDY

In December 2019 a novel coronavirus, named Covid-19, was discovered in Wuhan, China (Wu et al., 2020). The rapid spread and severity of this deadly virus globally resulted in the declaration of Covid-19 as a pandemic by the World Health Organization (WHO) in March 2020 (WHO, 2020). The pandemic forced immediate closure of all schools, businesses, and higher education institutions (HEIs) in South Africa. An announcement made by the South African Government included key interventions such as lockdown level 5, which stipulated that for the period of lockdown people will be confined to their abode unless they perform an essential service, have to obtain essential goods or services, and/or are collecting a social grant pension or seeking emergency lifesaving or chronic medical attention. Gatherings were also prohibited, except for limited numbers at a funeral (Disaster Act, South African Government News Agency, 2020). All HEIs were thus prohibited from carrying out their normal operations and had to change from face-to-face contact to a formal blended process of learning.

HEIs in South Africa that offered nursing training and education were not excluded from these emergency interventions to combat Covid-19. A swift and precipitous move to remote online clinical learning (ROCL) ensued, whereby adopting online clinical learning platforms became essential for both clinical supervisors and undergraduate nursing students (Meyer, 2020). The emergency ROCL required availability of the following resource materials for the clinical supervisors to be able to function effectively: internet connectivity, laptop with updated software and speed, adequate data bundles, and educational technologies such as using Google Meet and navigating Microsoft Office applications to facilitate lesson plans to develop materials for educational purposes. The clinical supervisors had to swiftly engage in ROCL without prior training and development (Tanga, Ndhlovu, & Tanga, 2020), which was not without challenges.

1.3 BACKGROUND

Digital technology and e-learning platforms are not new to HEIs in South Africa. However, in nursing, professional nurses responsible for clinical supervision, who are primarily responsible for providing clinical learning opportunities to undergraduate nursing students, were not prepared for the sudden transition in 2020 to accommodate the Covid-19 pandemic. Clinical supervisors are professional nurses who are qualified and competent to provide support to undergraduate nursing students in simulated environments and in clinical practice (Muthathi, Thurling, & Armstrong, 2017; Donough & Van Heerden, 2018). According to Hoffman and Daniels (2020), clinical supervisors need to be clinical experts in clinical teaching and learning, to ensure that the required clinical learning is operationalised during undergraduate nursing studies. Inadequately prepared supervisors will result in an incomplete integration of theory and practice. The role of the clinical supervisor is primarily associated with socialising nursing students into the role of professional nurse.

The Covid-19 pandemic meant that the clinical supervisors were confronted with a situation where they needed to move from face-to-face interactions and activities in the simulated skills laboratory and clinical practice to adopt e-learning as a learning resource, while still ensuring adequate learning in terms of clinical competence. Computers, computer literacy and mobile cellular phones with internet access were essential to maintain interaction with students while the pandemic completed its course. Not much is known about this unique situation that was induced by occurrence of this global pandemic. Previous research has explored aspects of e-learning practices at HEIs in terms of the satisfaction essentials of multi-generational student cohorts undertaking online courses (Yawson & Yamoah, 2020). Other research endeavours have focused on infrastructure needed for information and communication technology (Bozkurt & Sharma, 2020). The authors stated that due to the Covid-19 pandemic and global education crisis, emergency ROCL interventions had to be put into practice, with about 1.5 billion students and academic staff being affected.

The aim of this study is to explore and describe the experiences of clinical supervisors interacting with undergraduate nursing students while swiftly adjusting to the use of ROCL sessions during the Covid-19 pandemic at a university in the Western Cape.

1.4 PROBLEM STATEMENT

At a selected School of Nursing in the Western Cape, ROCL was implemented to facilitate clinical learning during the Covid-19 pandemic. In this context the clinical supervisors had to facilitate ROCL. Anecdotally, challenges were experienced by the clinical supervisors, with anxiety, stress and fear related to limited technological skills and preparation for ROCL impacting on their perceived performance as clinical supervisors. Literature indicates that ROCL is associated with various factors that relate to emotions experienced as frustration,

anxiety, worthlessness, fear, and stress due to the sudden change from face-to-face to online interaction (Gause, Mokgaola, & Rakhudu, 2022), and states that both educators and students were not ready to use information technology for teaching and learning. Nurse educators reported not being content ready and not having access to resources that could enable them to use information technology for teaching and learning (Gause et al., 2022). It was also stated in this study that content readiness and access to resources are key fundamentals for the use of information technology for teaching and learning. These can be coupled with feelings of inadequacy and a lack of capacitation in terms of technology, and the abrupt transformation to a digital medium of instruction. A study conducted in Israel colleges revealed that the colleges were unprepared for the immediate change from face-to-face traditional teaching and learning methodology to the online learning. Many of the practicing teachers lacked proper training in online teaching, and the technology had to be incorporated into the teaching and learning processes. Schmidt & Rony, (2020) reported that many teachers were caught unprepared and lacked the necessary knowledge and skill to cope.

Poor internet accessibility can also contribute to this stress (Fishbane & Tomer, 2020). This study therefore intends to explore the experiences of the clinical supervisors who were required to provide clinical facilitation in an ROCL environment.

1.5 RESEARCH QUESTIONS

The following two research questions guided the aim and objectives of the study:

- What are the experiences of clinical supervisors interacting with undergraduate nursing students in a remote online clinical learning environment during the Covid-19 pandemic at a university in the Western Cape?

- What are the clinical supervisors' learning needs in terms of keeping updated and abreast with new developments in remote online clinical learning?

1.6 AIM OF THE STUDY

The aim of this study was to explore the experiences of clinical supervisors interacting with undergraduate nursing students while swiftly adjusting to the use of ROCL sessions during the Covid-19 pandemic at a university in the Western Cape.

1.7 OBJECTIVES OF THE STUDY

Objective 1: To explore the experiences of the clinical supervisors of interacting with undergraduate nursing students while swiftly adjusting to the use of an ROCL environment.

Objective 2: To describe the clinical supervisors' learning needs in terms of keeping updated and abreast with new developments in an ROCL environment.

1.8 RESEARCH METHODOLOGY

This section includes a brief description of the research methodology adopted in this study. A detailed description will be presented in Chapter Three of this thesis.

1.8.1 Research approach and design

This study employed a qualitative research approach, and was facilitated through an exploratory, descriptive research and contextual design to extract the essence of the experiences of the clinical supervisors interacting with undergraduate nursing students while swiftly adjusting to the use of ROCL sessions during the Covid-19 pandemic. Qualitative research is

defined as a broad range of research designs and methods used to study phenomena (Brink, Van der Walt, & Van Rensburg, 2018).

1.8.2 Research setting

The study was conducted at a School of Nursing at a university in the Western Cape where the clinical supervisors are employed. The school is part of a Faculty of Community and Health Sciences which accommodates the largest intake of undergraduate nursing students (approximately 150) per year in South Africa. The school offers a four-year and a five-year extended undergraduate programme for a Bachelor of Nursing degree. Two programmes are thus currently offered by the university to be used in this study, as regulated by the South African Nursing Council Regulations 425 and 174 (SANC, 2013).

1.8.3 Research population

The population refers to all of the individuals that the research problem is concerned with and who meet the criteria that the researcher is interested in studying (Polit & Beck, 2017). The population consisted of 40 clinical supervisors assigned to supervise nursing students at all year levels of the clinical programme of the Bachelor of Nursing undergraduate degree at this University in the Western Cape. The core function of the clinical supervisors is to guide, mentor and assist each student with clinical learning and teaching in order to achieve learning outcomes. During Covid-19 this role evolved to include ROCL sessions.

1.8.4 Research sample and sampling

A non-probability method, namely purposive sampling, was used for the selection of a maximum of 12 participants, and data collection continued until data saturation occurred (Brink et al., 2018). According to Brink et al. (2018), non-probability purposive sampling means the

selection and inclusion of participants who know the most about the study phenomenon. This study included participants who could provide in-depth information and who could explain in detail their experiences of and understanding about the study problem. The researcher therefore intentionally included as participants in this study clinical supervisors who were involved in ROCL between the years 2020 and 2021, during the initial lockdown level 5 period of the Covid-19 pandemic. Therefore, members of the sample would be able to explain their experiences regarding adopting of ROCL methods.

1.8.5 Inclusion and exclusion criteria

Inclusion criteria: Brink et al., (2018) define inclusion criteria as the key features of the target population that the researcher will use to answer the research question of a study. All clinical supervisors who were employed as a clinical supervisor between March 2020 and March 2021 and who were involved in ROCL, were eligible for inclusion in this study.

Exclusion criteria: Brink et al., (2018) defined exclusion criteria participants who meet the inclusion criteria but present with other characteristics that could interfere with the success of the study. In this study the researcher excluded clinical supervisors who were employed after March 2021 and those who were not involved in ROCL during the Covid-19 pandemic.

1.8.6 Data collection procedures and methods

Semi-structured interviews were conducted to collect the data. According to Brink et al. (2018) the semi-structured interview is a method of data collection in which an interviewer obtains responses from a participant through an online or face-to-face interview. Participants were recruited using an email in which information about the study and informed consent forms were included. This email further specified the options available for interviews to be conducted

at a place or mode convenient to the participants. The options were as follows: online interviews could be conducted through Google Meet, Zoom, Microsoft Teams, video conferencing, telephone calls or WhatsApp's virtual platforms; face-to-face interviews could be conducted by means of physical contact between the interviewer and the interviewee. All interviews that were conducted were audio recorded to allow for verbatim transcriptions to provide an accurate account of the data collected. A data collection instrument comprising a semi-structured interview schedule was used to facilitate the collection of data during the study.

1.8.7 Data collection instrument

The data was collected using a semi-structured interview schedule (see Addendum C). The instrument included six questions that explored the following dimensions based on the e-learning pedagogical framework: existing capabilities and capacities, key strengths in teaching and learning new technologies to adapt and to adopt, understanding technology required to solve issues and increase educational quality, and recognising the evolving nature of e-learning.

A pilot interview was conducted to test the instrument and to develop the interview skills of the researcher (Van Rensburg et al., 2018). The findings were included in the final data analysis.

1.8.8 Data analysis

Thematic analysis was used to analyse the data collected from the semi-structured interviews (Braun & Clarke, 2014). The six steps used for data collection and thematic data analysis, and which guided the researcher are: familiarising yourself with your data, generating initial codes, searching for themes, reviewing themes, defining and naming themes, and finally producing the report. These six steps will allow the researcher to become familiar with the data while

engaging with the transcripts. It will allow the identification of codes which will later be developed into themes and subthemes which will allow the researcher to formulate the final research report. The steps followed will be described and applied to the study in Chapter Three that contains the research methodology. Atlas.ti version 9 was used to process the transcripts, which facilitated the thematic analysis of the data collected.

1.9 TRUSTWORTHINESS

Trustworthiness or rigour of the study refers to the degree of confidence in the data, interpretation, and methods used to ensure the quality of a study (Pilot & Beck, 2017). The researcher made interventions and judgements of trustworthiness through developing the dependability, credibility, transferability, confirmability, and reflexivity of the study, as outlined in detail in Chapter Three.

1.10 ETHICAL CONSIDERATIONS

Ethics clearance was obtained from the Humanities and Social Sciences Research Ethics Committee at the University of the Western Cape (UWC) (Addendum E). Permission was also requested from the registrar of the institution (Addendum F) and the director of the School of Nursing to conduct the study (Addendum F).

Informed consent was obtained from all participants and will be kept safe for record keeping. The ethical considerations outlined below were explained and adhered to, as prescribed in the information sheet (see Addendum A).

In terms of confidentiality and anonymity, the researcher will ensure that all identifiable information is removed from the interview transcripts and shall keep all records and transcripts of recordings nameless (Polit & Beck, 2017). Confidentiality and anonymity of the information

will also be maintained during the dissemination and publication of the results. Recorded data is kept safe in a cabinet with a lock and key and the soft data will be protected with a password to maintain and uphold confidentiality (Van Rensburg et al., 2018).

The participants (clinical supervisors) were assured that the information will only be available to the researcher and her supervisor, and that any communication between the researcher and the participants will remain confidential.

Polit and Beck (2017) state that three broad ethical principles are highlighted in the Belmont Report of ethical principles, namely beneficence, respect for human dignity and justice. These were adhered to throughout this study.

1.10.1 Principle of beneficence

According to the Belmont Report, researchers have a duty to minimise harm and maximise benefits, which includes the following: a) The right to freedom from harm and discomfort. In this study the researcher had an obligation to avoid, prevent and minimise harm. The researcher ensured that the duration of the interview schedule would be 30–60 minutes. The participants in this study were not subjected to unnecessary fatigue, or risks of harm or stress (Polit & Beck, 2017). The researcher ensured that no harm resulted from participating in this study and participants were allowed to withdraw at any time during data collection if they wished to do so, without being penalised; b) The right to protection from exploitation. According to Polit and Beck (2017), the study should not place the participants at a disadvantage or expose them to damage, including the reassurance that the information they provide will not be used against them. The researcher in this study ensured that the relationship with all participants was healthy and good throughout this study.

1.10.2 Respect for human dignity

This principle ensures that humans are treated as autonomous agents who can control their actions. They should have the right to self-determination, meaning that the participants can voluntarily decide whether to take part in a study without risk of prejudicial treatment, the right to ask questions, and the right to withdraw from the study without any threats (Polit & Beck, 2017). In this study the researcher respected the participants' rights for human dignity, and they were made comfortable throughout the interview process as they discussed their experiences of interacting with the undergraduate nursing students in an ROCL environment during the Covid-19 pandemic.

1.10.3 Justice

This principle stipulates that the researcher should ensure the participants' right to fair treatment. Selection of the participants should be based on the study requirements, not on the group's vulnerability (for example, poor people or prisoners). The researcher should ensure equal distribution of benefits or honour any promised stipend (Polit & Beck, 2017). In this study the researcher ensured that all participants met the requirements for inclusion and were treated fairly throughout the study process. Justice was also ensured by approaching clinical supervisors who were involved at the beginning of the ROCL for undergraduate nursing students at the university under study, who had experience in the new method of clinical teaching and learning.

1.11 SIGNIFICANCE OF THE STUDY

The findings of this study will provide the School of Nursing with information about clinical supervisors' experiences in terms of the ROCL environment, and how they coped with assisting undergraduate nursing students to achieve the requisite learning outcomes. The study will

provide recommendations to the School of Nursing based on the findings of the study, to provide support to the clinical supervisors to ensure that they have acceptable coping mechanisms. Further, the findings of the study will be used to develop policy and practice guidelines for clinical supervisors linked to their expressed ability to adapt to and adopt new approaches pertaining to ROCL.

1.12 OPERATIONAL DEFINITIONS

Operational definitions of terms used in this study are indicated below.

Table 1.1: Operational definitions

<p>Clinical learning</p>	<p>Clinical learning environment refers to the integration of theory and practice by the undergraduate nurse to gain important clinical experience and student preparation for the professional nurse role in a clinical environment (Flott & Linden, 2016).</p>
<p>Clinical supervisor</p>	<p>A clinical supervisor is a professional nurse who is qualified and competent to independently practice comprehensive nursing to provide support to undergraduate nursing students (Muthathi, et al., 2017)</p>
<p>Online learning management system (OLMS)</p>	<p>This is a form of software that enables educational institutions, including HEIs, to create and manage lesson plans,</p>

	<p>training courses, short discussion questions, flash slides, creative quizzes, videos, online classroom-based education, training materials and tools online. A learning management system which assists the educational institutions to deliver training materials to students quickly and efficiently (Aldiab et al., 2019), for example Blackboard, massive open online courses (MOOCs) and computer-assisted learning (CAL) (Meyer, 2020).</p>
<p>Remote online clinical learning (ROCL)</p>	<p>Encompasses the use of fully remote learning solutions for instruction or education that would have been delivered face to face or blended courses, that will return to the initial arrangement once the crisis or emergency has subsided (Hodges et al., 2020).</p>
<p>Undergraduate nursing student</p>	<p>A person registered in a category under section 31(1) to practice nursing or midwifery in terms of the Nursing Act, No. 33 of 2005. It refers to a student at a college or university who has not yet received a degree (Colour Oxford Dictionary and Thesaurus, 2002, p. 667).</p>

<p>Undergraduate nursing programme</p>	<p>A programme that prepares undergraduate nursing students to become professional nurses (Nursing Act, No. 33 of 2005).</p>
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1.13 OUTLINE OF THE STUDY

The current study consists of six chapters, which are briefly described below to orientate the reader.

Chapter One

In this chapter the researcher is orientated by providing relevant information for a general overview of the study. Additionally, this chapter contains a description of the research methodology and processes for trustworthiness followed in this thesis.

Chapter Two

This chapter consists of a literature review, in which the researcher considers the international as well as local contexts.

Chapter Three

The researcher discusses the qualitative research methodology that was employed in this current study. This includes an overview of the approach and design, the research setting,

population, sampling methods, data collection process, pilot study, research ethics, data analysis process, as well as the trustworthiness of the study.

Chapter Four

The researcher presents the results of the data analysis, which includes direct quotations from participants' transcripts, which are used to describe the results and overall experiences of the clinical supervisors who had been involved in the remote online clinical facilitation for the undergraduate nursing students.

Chapter Five

Here the researcher presents a refined analysis of the initial analysis, which is compared with international and national literature. The themes and categories are interrelated and discussed in detail.

Chapter Six

This chapter presents a summary of the findings and the limitations of the study, followed by the recommendations based on the findings of this study.

1.14 SUMMARY

The key components for the chapters that follow have been outlined in this introductory chapter; consequently, it orientates the reader through the introduction and background of the study. The researcher also highlights the important components of the research process, namely the problem statement, research questions, aims of the study, objectives, methodology,

significance of the study, and operational definitions, and provides an outline of the study. The following chapter comprises the literature that was reviewed by the researcher.



CHAPTER TWO

LITERATURE REVIEW

2.1 INTRODUCTION

This chapter encompasses a literature review, which is a systematic process used to retrieve information that provides an outline of existing similar literature regarding the research topic of interest. The researcher accessed the following sources to identify and obtain information: Mendeley Library, UWC Library, Google Scholar, Endnote, and various authors' articles with similar research study information. The following keywords will be applied throughout the research study: experiences, remote online clinical learning, clinical supervisor, clinical supervision, Covid-19 pandemic, undergraduate nursing student, undergraduate nursing programme.

2.2 PRESENTATION OF THE LITERATURE REVIEW

According to Burns, and Grove (2011), a literature review is an organised, written presentation; therefore, the researcher should conduct a literature review to discover existing similar or associated studies which can serve as a basis for the study at hand (Brink et al., 2018). This literature review presents the researcher's knowledge of the most recent existing data that has been published on this topic by other scholars.

2.2.1 Digital transformation in higher education

According to Kopp, Grobinger and Adams (2019), digital transformation in the framework of HEIs can be regarded as the summary of all digital processes required to accomplish a transformation process that gives HEIs the opportunity to positively apply digital technologies

optimally. Ribeiro et al. (2021) state that in applying measures to uphold social distancing to control rapid transmission of Covid-19, schools moved their instructional activities to remote learning platforms, and with this migration came several challenges. One major issue is that the migration led to enforced adjustment of the attitudes of education coordinators, supervisors, and learners regarding the significance of online learning (Bozkurt, & Sharma, 2020). Furthermore, these authors commented that online learning fundamentals are based on technology, which is dependent on internet facilities, Wi-Fi access and availability of data bundles.

2.2.2 Responses to the Covid-19 pandemic

According to Sia, & Abba (2021), in response to the Covid-19 pandemic the Malaysian Government implemented online learning strategies for HEIs, consistent with the WHO guideline on Conditional Movement Control, which meant that all classes in HEIs were moved to e-learning. Yau, Yeung and Lee (2022) state that data was collected from 145 students and 31 teachers in two Hong Kong HEIs, and the findings revealed that teachers were mostly more negative about online teaching and learning than the students were. A suggestion was made that during future online learning experiences: (1) teachers and students should set up opportunities together to evaluate online interactions, (2) teachers should not be concerned about the potential discomfort of using cameras for class activities, and (3) teachers should pay more attention to feedback delivered by the students. If the teachers could understand these gaps, this will provide understandings on more strategic communication and planning to manage the expectations and enhance the online experience for both teachers and learners.

A study conducted in universities in the United Kingdom during 2020/2021 aimed to explore the experiences and perceptions of virtual and blended learning approaches in response to the

Covid-19 pandemic and national lockdown regulations (Finlay, Tinnion, & Simpson, 2021). The findings showed that there were advantages and disadvantages to virtual learning only and blended learning approaches, which may have an impact on student satisfaction in the undergraduate sport and exercise sciences group, which preferred face-to-face blended learning, and the online learning be applied more to science-based courses (Finlay et al., 2021).

According to Chen, Wathen and Speciale (2020), when facilitators and instructors conduct online training, individual counselling and maintenance of the student's healthy relationship within the sphere of technology is important to advance the delivery of the programme, as is ensuring that the programme integrates meaningful teacher-student relations. Assessments were delayed remaining the focus of instruction when technology is integrated, this allowed time to re image modes of instructions and course content. Jacob et al. (2021) stated that academic activities at the University of Cape Town were temporarily suspended due to the Covid-19 pandemic on 16 March 2020. Health science educators had to move and adapt to online platforms after declaration of a National State of Disaster by the President of South Africa on 15 March 2020, followed by national lockdown. The reason for suspension of clinical staff included consideration of the safety of the students and all health educators.

2.2.3 Preparedness for online learning and teaching

Gurley (2018) conducted a study at 58 international HEIs to explore and examine differences in educators' preparedness to teach, their teaching presence in facilitation and their perceived teaching presence behaviours in the existing online learning environments. This study highlighted that the teachers' presence is crucial to achieving student learning outcomes. A statistically significant difference was found between faculty who completed certification

courses in preparation to teach online learning where the teacher was present for facilitation as opposed to those who received only on-the-job training.

Ko and Rossen (2017) provide the following three suggestions to ensure preparedness in the online teaching environment. Firstly, ensure that the instructors are equipped with skills to operate within the environment; new technologies and techniques are emerging all the time, and the online learning may be conducted in an asynchronous format, allowing for access and posting by students at different times during the week. Secondly, take into consideration that the online environment is dynamic; it is important that online environments should gradually evolve to incorporate new resources and technologies. Thirdly, the instructor needs to do a self-assessment as to what is required, what his/her current abilities are, and how to acquire new technologies.

According to Whittle et al. (2020), a framework has been designed for practical application by teachers who currently are engaged in emergency remote teaching environments, and for future emergency remote environments. Participatory design approaches were used to highlight and identify challenges which the teachers encountered and potential solutions. The study included 30 teachers, with exposure of participants to online video sessions, and a 30-minute focus group to discuss challenges and to elaborate on solutions. Evolving themes with two frameworks for creating a learning environment were synthesised from these phases, namely Sawyer's (2005) framework and Garrison and Arbaugh's (2007) community of inquiry framework – to generate the emergency remote teaching framework. Sorensen (2009) described this approach as methodological, further reasoning that the theories served as tools for participating in knowledge construction. The teachers had seen themselves performing well during emergency remote teaching and the inquiry assisted them to identify mistakes. This inquiry for an emergency remote teaching environment was termed a hidden curriculum (Whittle et al., 2020).

Hodges et al. (2020) recommended the framework not as an evaluation for the student or teacher only, but as an effective approach for learning with the aim of identifying strategies that will lead to success in continuing or future emergency remote teaching environments.

2.3 THEORETICAL FRAMEWORK

The e-learning pedagogical framework will be adopted in this study (Salmon, 2005). E-learning is complex and involves shifts in understanding and behaviour. The e-learning pedagogical framework as proposed by Salmon (2005) is structured around four quadrants which comprise its core elements:

- Quadrant 1 is representative of the existing capabilities and capacity of the clinical supervisors. In this quadrant attempts will be made to explore what the skills and competences of the clinical supervisors are.
- Quadrant 2 requires deployment of key strengths in teaching and learning new technologies, adapting, and adopting new behaviours. This will be unpacked by identifying the coping mechanisms of the clinical supervisors entailed when they had to convert to ROCL.
- Quadrant 3 recognises that an understanding of computers, internet access and mobile cellular phones will be required for preparation and conducting of clinical online sessions, thus improving educational quality. In this quadrant the clinical supervisors' understanding of computers and other communication technology will be explored.
- Quadrant 4 recognises the evolving nature of e-learning, and that new technologies and ideas will emerge (Gregory & Salmon, 2013; Salmon, 2005). This quadrant will reveal the development needs of the clinical supervisors as they articulate the evolving nature of ROCL.

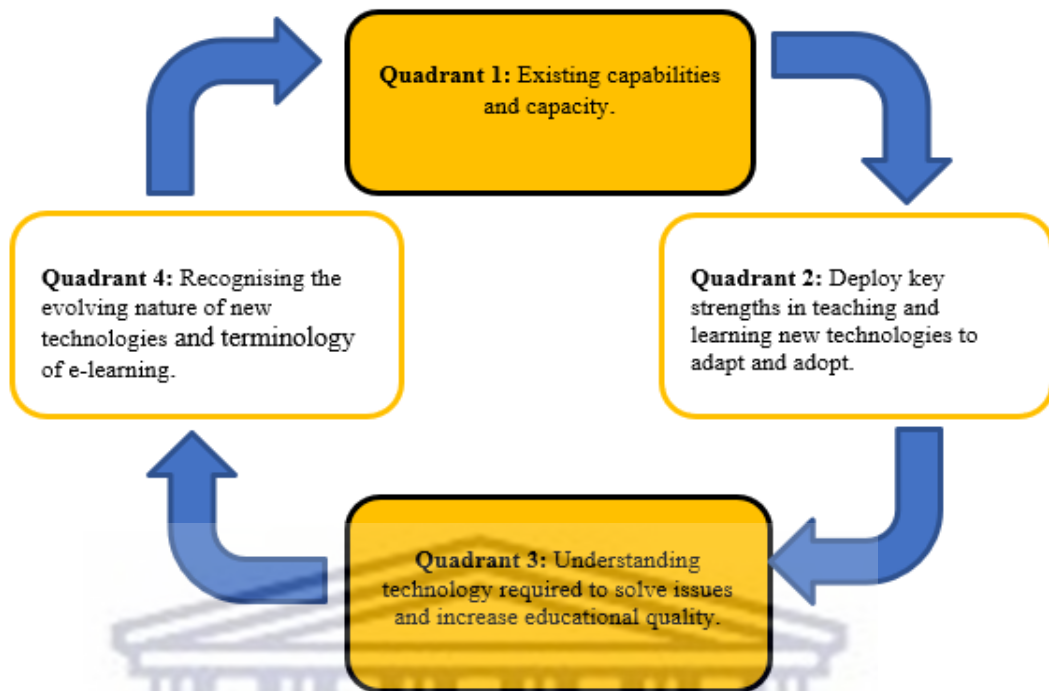


Figure 2.1: Utilising the e-learning pedagogical framework (Salmon, 2005).

2.3.1 Application of the e-learning pedagogical framework to the study

The e-learning pedagogical framework is based on four quadrants according to Salmon (2005). This framework provides interventions and adaptations to apply in terms of when and how to adopt e-learning practices within an HEI and would thus serve to provide an ideal framework to explore the phenomenon of clinical supervisors who suddenly had to adapt to teaching and learning strategies presented in a remote online environment to facilitate their core key performance areas and practices.

2.3.2 Application of e-learning pedagogical framework to the objectives of the study

The study included two objectives, namely:

- i) To describe the experiences of the clinical supervisors in interacting with undergraduate nursing students while swiftly adjusting to the use of ROCL.

- ii) To explore and describe the clinical supervisors' learning needs in terms of keeping updated and abreast of new developments in ROCL.

The framework allowed the researcher to direct the study to explore the dimensions of the e-learning pedagogical framework as mentioned in Figure 2.1 (Gregory & Salmon, 2013; Salmon, 2005). The four quadrants of the e-learning pedagogical framework were used to provide more meaning to the objectives developed for this study. Table 2.1 provides a description of how the objectives were based on the e-learning pedagogical framework in this study.

Table 2.1: Applying the e-learning pedagogical framework to the study objectives.

E-learning pedagogical quadrants	Objectives of the study
Existing capabilities and capacity	To describe the experiences of the clinical supervisors of interacting with undergraduate nursing students while swiftly adjusting to the use of remote online clinical learning.
Deploy key strengths in teaching and learning new technologies	To describe the experiences of the clinical supervisors in interacting with undergraduate nursing students while swiftly adjusting to the use of remote online clinical learning.

Understanding technology required to solve issues and increase educational quality	To explore and describe the clinical supervisors' learning needs in terms of keeping updated and abreast of new developments in remote online clinical learning.
Recognising the evolving nature of e-learning and that new technologies and ideas will emerge	To explore and describe the clinical supervisors' learning needs in terms of keeping updated and abreast of new developments in remote online clinical learning.

2.3.3 Application of e-learning pedagogical framework to structure the data collection instrument.

Objective 1: The researcher used the framework to describe the experiences of the clinical supervisors of interacting with undergraduate nursing students while swiftly adjusting to the use of an ROCL environment. The researcher used the first two steps of the framework to seek and describe:

- a) The clinical supervisors' abilities and capacity to interact with the undergraduate nursing students in ROCL, use of relevant, updated technology skills and competencies, level of comfort when using online instructional clinical platforms, previous acquired knowledge on use of new technology, and the ability to navigate different online clinical instructional platforms.

b) The key strengths in teaching and learning new technology to adapt to and adopt new behaviours. The supervisors' responses in understanding new technology and its challenges to solve technical issues were also addressed in this framework, expressed as the ability and capability to use technology and interact with students online, ability and experience in using technology, level of comfort when using the remote online platform, ability to navigate online clinical platforms and use different online strategies to increase students' educational quality, previous acquired knowledge on technology use which assisted them online, challenges in attaining the new capacity, whether there was formal training, incapability and inexperience with the online clinical learning platform, including incapability to upload lesson plans on the Ikamva platform.

Objective 2: The researcher used the framework steps 3 and 4 to explore and describe the clinical supervisors' learning needs in terms of keeping updated and abreast with new technology when interacting in the ROCL environment:

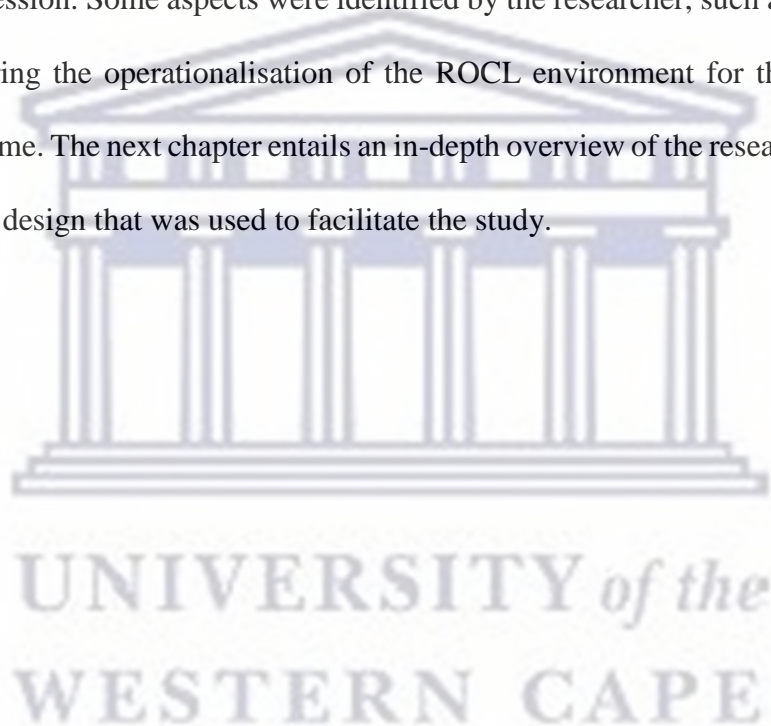
c) Understanding technology required to solve issues and increase educational quality, including the readiness and response to emergency transition. The ROCL environment was explored, with references to the feelings of clinical supervisors towards the instruction and learning method; the ability of the clinical supervisors to engage with technology to bring about clinical skills and training in an online environment, How the clinical supervisors navigated to designing resources and materials for the online clinical learning environment, challenges experienced with the online platform, improvising to open access. Strategies applied to encourage student participation and engagement.

d) Recognising the evolving nature of e-learning and that new technologies and ideas will emerge, personal development regarding ROCL was look into and the training and

developmental needs of the clinical supervisors. This objective also strived to understand the extent of available training opportunities. Other issues were the provision of material and resources, such as sufficient data bundles, and new, updated technical devices for the supervisors for online clinical learning.

2.4 SUMMARY

This chapter provided an overview of relevant literature to define ROCL within the HEI and the nursing profession. Some aspects were identified by the researcher, such as challenges and implications during the operationalisation of the ROCL environment for the undergraduate nursing programme. The next chapter entails an in-depth overview of the research methodology and the research design that was used to facilitate the study.



CHAPTER THREE

RESEARCH METHODOLOGY

3.1 INTRODUCTION

In this chapter the researcher highlights the research methods used to conduct the current study. The chapter commences with an overview of the research approach and design, followed by the research setting, research population, sampling method, inclusion and exclusion criteria, the pilot study, data collection, data analysis, and trustworthiness of the research study, including the ethical considerations.

3.2 RESEARCH APPROACH AND DESIGN

The study was conducted by using a qualitative research paradigm. Qualitative research is defined as a broad range of research designs and methods used to study phenomena (Brink et al, 2018) and will be applied in this study to explore, gain an understanding of, and describe the essence of the experiences of clinical supervisors in interacting with undergraduate nursing students while swiftly adjusting to the use of ROCL sessions during the Covid-19 pandemic. This qualitative research study employed an exploratory, descriptive research and contextual design to extract the essence of the clinical supervisors' experiences.

An exploratory research design in qualitative research is a methodological approach that explores research questions that have not previously been studied in-depth (George, 2021). This design is aimed at getting to know more about a particular topic of interest, with data collected directly from the participants of the study. In this study the researcher collected the data directly from the clinical supervisors who were interacting with undergraduate nursing students at a university in Western

Cape on a remote online learning platform during the Covid-19 pandemic, in order to obtain the richest, most accurate information.

A descriptive design is used to determine and answer questions about current problems in practice, and where more information is required (Brink et al., 2018). The researcher used a descriptive research design to accurately describe the experiences of the clinical supervisors of interacting with the undergraduate nursing students in an ROCL environment at a university in the Western Cape during the Covid-19 pandemic.

A contextual research design is used to collect in-depth information through interviews with the participants, which may include observations and understanding of encounters. The findings are presented by giving detailed descriptions of participants' experiences and feelings, grouped into themes. Contextual design focuses on the lived experience of humans, and how they interpret those experiences (Korstjens & Moser, 2017). The researcher collected field notes while trying to interpret and understand the participants' experiences and feelings of interacting with undergraduate nursing students at a university in the Western Cape in an online clinical learning environment during the Covid-19 pandemic. Similar themes were grouped together, which will assist in compiling the final report.

3.3 RESEARCH SETTING

The study was conducted at the School of Nursing at a university in the Western Cape where the clinical supervisors are employed. The School of Nursing is part of the faculty of Community and Health Sciences, which accommodates the largest intake of nursing students per year in South Africa. The school offers a four-year and a five-year extended undergraduate programme for the Bachelor of Nursing degree, as regulated by the SANC (Regulation 425 and Regulation 174), and

nursing students from these were part of this study, in terms of assessing clinical supervisors' experiences of working with them in ROCL during Covid-19.

3.4 RESEARCH POPULATION

The population refers to all of the individuals about whom the research problem is concerned, and who adhere to the criteria that the researcher is interested in studying (Polit & Beck, 2017). The population will consist of 40 clinical supervisors assigned to supervise nursing students at all year levels of the clinical programme, to guide, mentor and assist with the ROCL for each student to achieve the learning outcomes.

3.5 RESEARCH SAMPLE AND SAMPLING

The non-probability method of purposive sampling was used for the selection of a minimum of 12 participants, and data collection continued until data saturation occurred (Brink et al., 2018). Non-probability purposive sampling means the selection and inclusion of participants who know the most about the particular study phenomenon (Brink et al., 2018). It is based on selecting research participants who the researcher believes are the typical and most common representatives of the population under investigation.

The researcher selected participants who she believed represented, the population under investigation, in order to obtain the richest, most in-depth information to answer the research question. Data was collected via semi-structured interviews using an interview guide; further probing questions were used to add to the information that was received. Interviews were audio-recorded to ensure that no information was be lost, and the recordings were transcribed verbatim.

3.5.1 Inclusion and exclusion criteria

All clinical supervisors who were employed at the university between March 2020 and March 2021 and who were involved in ROCL were eligible for inclusion in this study (Brink et al., 2018).

Brink et al. (2018) defined exclusion criteria as where the potential study participants meet the inclusion criteria but present with other characteristics that could interfere with the success of the study. The researcher excluded clinical supervisors who were employed after March 2021 and/or who were not involved in ROCL during the Covid-19 pandemic.

3.6 DATA COLLECTION METHODS

Semi-structured interviews were conducted to collect the data. According to Brink et al. (2018) a semi-structured interview is a method of data collection in which an interviewer obtains responses from a participant through an online or face-to-face interview. Participants were recruited by sending an email which explained the study; informed consent forms were obtained, and they were given the option of having the interviews conducted at a place or in a mode that was convenient to them. All interviews were audio recorded with their permission to allow for verbatim transcriptions to be made.

The data collection instrument for this study entails a semi-structured interview schedule (Addendum C) that was used to facilitate the interview. The instrument includes six questions that explore the following dimensions of the e-learning pedagogical framework: existing capabilities and capacities, key strengths in teaching and learning new technologies to adapt and to adopt, understanding the technology required to solve issues and increase educational quality, and recognising the evolving nature of e-learning (Table 3.1).

Table 3.1: Formulating the data collection instrument.

Framework quadrants	Questions
Quadrant 1: Existing capabilities and capacity	What are your existing capabilities and capacity in terms of using technology to conduct remote online clinical learning?
Quadrant 2: Deploy key strengths in teaching and learning new technologies	What are the key interventions that you deploy/use in technology to interact in remote online clinical learning? Probe: Tell me more about what you just indicated in terms of remote online clinical learning.
Quadrant 3: Understanding technology required to solve issues and increase educational quality	Tell me about your ability to increase educational quality for the students while using remote online clinical learning. Probe: What strategies did you use?
Quadrant 4: Recognising the evolving nature of e-learning and new technologies	Can you tell me how you will keep yourself updated regarding remote online clinical learning?

A pilot interview was conducted to test the instrument and to allow the researcher to acquire and develop interviewing skills (Van Rensburg et al., 2018). The findings of this interview were included in the final data analysis.

3.7 DATA ANALYSIS

Thematic analysis was used to analyse the data collected from the semi-structured interviews, as outlined by Braun and Clarke (2014). The six steps for data collection and thematic data analysis, and which guided the researcher are as follows: familiarising yourself with your data, generating initial codes, searching for themes, reviewing themes, defining, and naming themes, and finally producing the report. These are outlined further below.

3.7.1 Step 1: Becoming familiar with the data.

After the participants granted their permission to take part in the research study, the researcher collected data by using audio-recordings and taking written notes to capture all verbal communication generated via the interview schedule, to ensure that no information was lost. Personal reflections were added after each interview, to make sense of the written notes. All audio-recorded interviews were uploaded and stored on a laptop with password protection for safekeeping. This enabled the researcher to play the audio-recordings repeatedly and to familiarise herself with the data that was obtained. This was followed by transcription of the audio-recordings into verbatim text. Once all of the interviews were transcribed, the researcher approached the study supervisor to review the transcriptions to assess whether the interviewer may or may not have inserted any of her own assumptions or views in place of those of the participants.

3.7.2 Step 2: Generating initial codes.

The researcher listened to the audio-recordings repeatedly, reading and re-reading the transcripts, in this way becoming familiar with their content. The transcripts were subsequently uploaded, and initial codes were assigned using Atlas.ti version 9.

3.7.3 Step 3: Searching for themes.

At this point the researcher printed out the code report using Atlas.ti version 9, and patterns were then identified among the codes manually. This was followed by the manual assignment of preliminary categories to these printed codes. The researcher then searched for and grouped the categories into preliminary themes, which could be distinguished from each other in Atlas.ti version 9.

3.7.4 Step 4: Reviewing themes.

The themes were reviewed and refined, and subthemes were presented in table format in Microsoft Word. These were then reviewed by the supervisor. Findings were further presented in the form of an in-depth description, with direct quotations from the participants, to expand upon and explain the themes and add to the richness of the findings. This is described in depth in Chapter Four.

3.7.5 Step 5: Defining and naming themes.

Themes consisting of categories and codes were printed as a report. The researcher refined and interpreted the provisional themes, categories, and codes, to produce more identifiable themes, categories, and codes. Later the assigned codes were reviewed and refined again, to identify any further similarities and patterns and to validate the existing categories and themes.

3.7.6 Step 6: Producing the report.

Once the themes, categories, and codes that emerged from the data were clear, the researcher began to reflect upon and write up the experiences of the clinical supervisors of interacting with the undergraduate nursing students at a university in the Western Cape in an ROCL environment during the Covid-19 pandemic.

3.8 TRUSTWORTHINESS

The trustworthiness or rigour of the study refers to the degree of confidence in the data, interpretation, and methods used to ensure the quality of a study (Pilot & Beck, 2017). The researcher made judgements regarding trustworthiness through developing the aspects described below.

3.8.1 Dependability

Dependability is demonstrated by the findings of the qualitative research study being applicable to similar populations with similar occurrences (Brink et al., 2018). In this research study the data was collected from clinical supervisors using a semi-structured questionnaire (Addendum C), which allowed the researcher to be consistent during this phase of the study.

3.8.2 Credibility

In a qualitative study credibility means that the data accurately and relevantly represents the participants' experiences and can be checked by asking the participants of the study to confirm the accuracy of the transcripts (Braun & Clarke, 2014). Once the interview was transcribed, the transcription went through a process of member checking and received validation of the accuracy of the data that was recorded (Pilot & Beck, 2017).

3.8.3 Transferability

Transferability means that the methods and findings of the researcher can be applied to a similar context. The researcher provided full details about the sample, the research setting, and the methods (see page 29), so that in future other researchers will be able to follow the decisions that

were made relating to the research study and understand why those decisions were made (Brink et al., 2018).

3.8.4 Confirmability

Polit and Beck (2017) state that confirmability is where a research study's results are derived from the participants and the study context, not the researcher/s' biases. Creswell and Clarke,(2017) termed this member checking, which refers to determination of accuracy of qualitative findings by sharing the final report with the participants to confirm this. The researcher kept a record of the entire process throughout data collection and analysis, by making anecdotal notes to ensure that an accurate account of the participants' experiences was provided. The data collected reflected the voices of the participants (Brink et al., 2018).

3.8.5 Reflexivity

Reflexivity refers to the researcher's awareness of self as part of the data she is collecting. The researcher was aware of the part she played in this study, which did not reflect on her, since this could have consciously affected the data, she obtained from the participants (Polit & Beck, 2017).

3.9 ETHICAL CONSIDERATIONS

In terms of the necessary permissions, ethics clearance was obtained from the Humanities and Social Sciences Research Ethics Committee at the University of the Western Cape (UWC). Permission was requested from the registrar of the institution and the director of the School of Nursing to conduct the study and was granted.

Polit and Beck (2018) state that there are three broad ethical principles highlighted in the Belmont Report of ethical principles, namely beneficence, respect for human dignity and justice. These

were introduced in Chapter One and were used to maintain acceptable ethical standards in this study.

3.9.1 Beneficence

The researcher attempted to ensure that there was no harm in participating in this study and participants were allowed to withdraw at any time during data collection period, without being penalised. The researcher ensured that the duration of the interview schedule was 30–60 minutes, and that the participants were not subjected to unnecessary fatigue, risks of harm or stress (Polit & Beck, (2017). Participants also have the right to protection from exploitation. According to Polit and Beck (2017) the study should not place the participants at a disadvantage or expose them to any damage, including the reassurance that the information they provide will not be used against them. In this study the researcher ensured that her relationship with all participants was healthy and good throughout.

3.9.2 Respect for human dignity

This principle ensures that humans should be treated as autonomous agents, who are capable of controlling their actions. They should have the right to self-determination, meaning that the participants can voluntarily decide whether to take part in a study or not without risk of prejudicial treatment, with the right to ask questions and the right to withdraw from a study without any threats, (Polit & Beck, 2017). The researcher respected the participants' right to human dignity and ensured that they were made comfortable throughout the interview process, when they were able to discuss their experiences of interacting with the undergraduate nursing students in an ROCL environment during the Covid-19 pandemic.

3.9.3 Justice

This principle stipulates that the researcher should ensure the participants' right to fair treatment. The selection of participants should be based on the study requirements, not on the group's vulnerability – for example, poor people or prisoners should not be exploited. The researcher should ensure equal distribution of benefits or honour any promised stipend (Polit & Beck, 2017). The researcher of this study ensured that all of the participants met the requirements of the inclusion criteria and were treated fairly throughout the study process.

Furthermore, justice was ensured by approaching clinical supervisors who were involved at the beginning of the ROCL with the undergraduate nursing students at the university under study, and who therefore had experience in this new method of online clinical learning.

3.9.4 Informed consent

Informed consent was obtained from all participants and then documents are kept safe for record keeping. The ethical considerations were explained and adhered to, as prescribed in the information sheet (see Addendum A).

3.9.5 Confidentiality and anonymity

The researcher ensured that all identifiable information was removed from the interview transcripts, keeping all records and transcripts of recordings nameless (Polit & Beck, 2017). The confidentiality and anonymity of the information was also maintained during the dissemination and publication of the results. Recorded data was kept safe in a cabinet with a lock and key and the soft data is protected with a password to maintain and uphold confidentiality (Van Rensburg et al., 2018).

In terms of privacy, the clinical supervisors were assured that the information will only be available to the researcher and her supervisor, and that any communication between the research and the participants will remain confidential.

3.10 SUMMARY

In this chapter the researcher provided a detailed overview of the entire research approach and design, research setting, population, inclusion and exclusion criteria, sampling method, pilot study, data collection, data analysis, and means of ensuring trustworthiness. In conclusion, this study employed a qualitative research approach using an exploratory, descriptive, and contextual design.



CHAPTER FOUR

PRESENTATION OF THE FINDINGS

4.1 OUTLINE

In this chapter the researcher presents an overview of the findings generated from the semi-structured interviews conducted to explore the experiences of clinical supervisors interacting with undergraduate nursing students at a university in the Western Cape in an ROCL environment during the Covid-19 pandemic. A profile of the participants is provided, followed by a description of themes and categories that emerged from the data, analysed according to Braun and Clarke's (2014) steps for data analysis. These are illustrated by verbatim excerpts from the semi-structured interviews.

4.2 PROFILE OF PARTICIPANTS

The information on the eight study participants is summarised in Table 4.1. All participants included in this current study met the inclusion criteria. The researcher interviewed one male and seven females between the ages of 35 and 60 years, who had graduated between the years 2010 and 2018. The settings where the participants carried out their duties varied from public health services to HEIs and community health centres located in the Cape Town Metropolitan area of the Western Cape Province, South Africa. The pilot interview data was included for data analysis.

Table 4.1: Profile of participants

Participant	Place of employment	Duration of interview	Date interviewed
P1	School of Nursing at an HEI in the Western Cape	1 hour 3 mins 56 seconds	01.08.2022
P2	School of Nursing at an HEI in the Western Cape	35 mins 52 seconds	13.08. 2022
P3	School of Nursing at an HEI in the Western Cape	43mins 59 seconds	13.08.2022
P4	School of Nursing at an HEI in the Western Cape	39 mins 12 seconds	16.08.2022
P5	School of Nursing at an HEI in the Western Cape	15 mins 56 seconds	17.08.2022
P6	School of Nursing at an HEI in the Western Cape	32 mins 17 seconds	21.08.2022
P7	School of Nursing at an HEI in the Western Cape	35 mins 20 seconds	23.08.2022
P8	School of Nursing at an	1hour 2 mins 27 seconds	21.10.2022

	HEI in the Western Cape.		
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4.3 PRESENTATION OF THEMES AND CATEGORIES

The initial analysis of the data collected from the in-depth interviews using the interview guide schedule with six open-ended questions (Addendum A), generated four themes and 14 categories, which are listed in Table 4.2. This analysis was further refined, as itemised in Table 4.3.

Table 4.2: Initial themes and categories that emerged.

No.	Themes	Categories
1.	Clinical supervisors' experiences of their ability to use remote online clinical learning	<ul style="list-style-type: none"> • Positive reports on their ability to adapt to using technology when interacting with students. • Ability to navigate teaching and learning strategies of different online platforms. • Challenges expressed by the clinical supervisors.
2.	Clinical supervisors' experiences with the use of technology to conduct online clinical learning	<ul style="list-style-type: none"> • Potential of online learning management system. • A platform for creative means to blend different teaching and learning strategies and methodologies. • Challenges to relay skills laboratory methodology when engaging students online.
3.	Clinical supervisors' challenges and motivation in use of	<ul style="list-style-type: none"> • Supervisors' readiness and response to emergency transition to remote online clinical learning environment.

	technology for online clinical learning	<ul style="list-style-type: none"> • Digital and technological resources and materials available for online learning. • Environmental and contextual factors influencing digital transformation and online learning. • Connectivity, internet access and loadshedding compromising online clinical learning environments. • Perceptions of students' emotional and mental wellness and learning needs due to rapid transition to online learning.
4.	Clinical supervisors' awareness of continuous professional self-development.	<ul style="list-style-type: none"> • Training and development to keep updated and abreast with evolving technology is a requirement. • A need to develop capacity in students to be able to engage in online clinical learning. • Provision of material and resources for online clinical learning to increase educational quality.

4.3.1 Theme 1: Clinical supervisors' experiences of their ability to use remote online clinical learning.

Most of the participants reported that an online clinical learning management system was the preferred environment provided by the institution under study, which was accessible to interact with the undergraduate nursing students during ROCL to achieve learning outcomes. The participants further reported that due to the Covid-19 pandemic they were confronted with a

situation where they needed to move from face-to-face interactions and activities in the simulated skills laboratory and clinical practice to adopt e-learning without the necessary preparation.

4.3.1.1 Category 1: Positive reports on ability to adapt to using technology when interacting with students.

Participant 6 expressed her positive ability to use technology and interact with undergraduate nursing students on ROCL:

P6: *I try to keep up with technology being a young person, so I have been able to set up our online presentations, getting the students to interact and participate in, not like live, but in our contact sessions but also trying to get them to watch live things while we are doing the presentations. So as far as capabilities go, I try to, like I said, I try to keep up with the times.*

Another participant also explained that during her undergraduate and postgraduate studies she gained experience in accessing and managing online technology. This previous experience assisted her to interact whilst using ROCL with the undergraduate nursing students during the Covid-19 pandemic:

P3: *My undergraduate programme in my 4th year and when I was doing my postgraduate and it was helpful when Covid-19 came, I was able to manage my students during that time.*

Participant 4 reported the ability to use technology using own devices, access Microsoft software and an internet connection and navigate other online platforms:

P4: *Am able to use technology use my computer and use Microsoft, PowerPoint, e.g. I am able to use the internet, I also have devices – I can use my phone for WhatsApp, Facebook, and other technology. So, I can say that I am about 9 out of 10 equipped to use technology.*

Participant 8 also confirmed that previous knowledge on how to use technology assisted her in the ROCL environment:

P8: *I think that it was a matter of going into all the resources that you have acquired over the years. I would not even say over the months, but over the years, putting it together and looking at how you could move from one point to another to improve the teaching using the online learning management system.*

4.3.1.2 Category 2: Ability to navigate teaching and learning strategies required for different online platforms.

Participant 6 emphasised the need for keeping herself updated regarding technological aspects if Ikamva, the method of clinical learning, is moving towards digital transformation to accommodate the undergraduate students:

P6: *So, we are moving into digital in any case in terms of our strategies of teaching. So just keeping myself updated with regards to that and you must remember now we also dealing with a generation of students that are more technologically advanced, that want the technology aspect of Ikamva.*

Participant 8 mentioned the knowledge she acquired during the time that she conducted ROCL in interacting with the undergraduate nursing students:

P8: *So even for me, if there is something that I do not understand and if there is something I would look for easier ways to explain, or if I need more information for the students for my session, I go and I Google that information, so that it is available, and I would snapshot some things and use that.*

Participant 4 reported that as a team of clinical supervisors they received guidance and support on how to be functional on the Ikamva online platform, as they were required to structure lesson plans and to test the undergraduate nursing students' level of understanding:

P4: *As clinical supervisors we are not use to operating or being functional on Ikamva, so her guiding us and showing us how to go to the forum and where to write what and also to help us structure on how we ask the questions.*

4.3.1.3 Category 3: Challenges expressed by the clinical supervisors.

Participant 1 reported that she did not know how to use the online learning management system (OLMS) to facilitate skills development. She further expressed concern about the availability of the equipment or tools – and yet she needs to deliver quality education to the undergraduate student nurses:

P1: *For me it was a bit of a puzzle, because how are you going to teach these skills online? What is the equipment, what are the tools*

that I need or that I have or we as a group have in order to make sure that we deliver quality education to our students?

Participant 5 expressed incapability and unfamiliarity with the online clinical learning platform and inability to upload lesson plans for interacting with the undergraduate nursing students:

P5: *So, I didn't have a lot of experience, especially not online, because we as nursing educators, we were more practical, so we were busier in the skills laboratory and followed up students.*

Participant 3 reported being unable to upload ROCL lesson plans on the Ikamva platform:

P3: *I couldn't manage to upload my lesson plan on Ikamva platform.*

This theme and its categories showed that most of the participants were able to make a swift transition to remote online learning. However, some participants were not so fortunate to be able to make a smooth transition.

4.3.2 Theme 2: Preferred online learning management system of the institution and its potential.

Most of the participants reported that the OLMS provided by the institution under study was easily accessible to interact with the undergraduate nursing students in the ROCL environment to achieve learning outcomes. The participants further reported that due to the Covid-19 pandemic they were confronted with a situation where they needed to move from face-to-face interactions and activities in the simulated skills laboratory and clinical practice to adopt e-learning. It can therefore be stated that the OLMS had the potential to facilitate matters during the time of contingency, as it allowed the creation of lesson plans and uploading of virtual content to facilitate learning. This was evident

in the following categories of the second theme: (1) potential of the OLMS, (2) a platform for creative means to blend different teaching and learning strategies, and (3) challenges in relaying skills laboratory methodology when engaging students in the online environment.

4.3.2.1 Category 1: Potential of online learning management system

Participant 4 stated that he could access and upload learning resources and engage with the undergraduate nursing students to enhance online clinical learning and attain and achieve learning outcomes, by using the OLMS:

P4: *So, the online learning management system, it's an application that is provided by the university where I am working. It is an application that guides the students in terms of their course work. Assignments can be loaded there, and students get extra information on them of what is required of them to do. Some instructions were from the lecturers; it can also be used to facilitate live chatting and group forums are also available.*

Participant 5 indicated the use of the OLMS platform to create lessons plans and engage with the undergraduate nursing students to assist them towards reaching competencies:

P5: *... use of the online learning management system a lot because we had to create lesson plans to structure our clinical sessions.*

Participant 3 reported that the undergraduate nursing students were exposed to Ikamva group discussions and different online clinical learning environments to acquire certain clinical skills:

P3: *Strategies, we were preparing the lesson plan for the students and short questions and long questions for the students and multiple choice, so we can upload that work to students on Ikamva platform and ask the students to discuss those questions in group discussion and chatroom.*

4.3.2.2 Category 2: A platform for creative means to blend different teaching and learning strategies and methodologies.

A few participants reported that the undergraduate nursing students were exposed to the OLMS to engage with different students in group discussions to reflect on certain clinical skills (as indicated by P3 in the previous excerpt above).

Participants 1 and 4 explained how they used video presentations to encourage students' participation during ROCL:

P4: *It is videos that are prepared for the students, so we ask them to go and view the video and give us a step by step of what did they see in the video, if it was done correctly and if there were things that was not done correctly and so forth.*

Participant 1 was using the online video feature so that the students could see her whilst executing.

P1: *online clinical skill remotely to instill the positive mind to the undergraduate nursing student towards learning.*

I would switch on my video or camera so that the students are able to see while I am busy teaching and explaining to them about the breast exam.

4.3.2.3 Category 3: Challenges in relaying skills laboratory methodology when engaging students online.

Participant 1 expressed the complexity of other clinical skills in that it was not easy to demonstrate or execute them online for the undergraduate nursing students. Sometimes she had to demonstrate the skills using herself as a model, trying to allow the students to visualise the skill being demonstrated to them remotely:

P1: *I relied on my family member personally recording me demonstrating a skill, for example on my family member; let's say abdominal palpation, how am I going to show the student online as a clinical supervisor the grips for example or an SF measurement?*

Participant 6 emphasised the complexity of conducting online clinical learning. It is difficult to deliver the actual demonstration of the clinical skills by using an online platform:

P6: *Yes, there is a video, but I mean a presentation where they can see, okay, this is part of the implementation of removal of sutures; okay, sterility – opening up of my sterile field and actually having a picture to show how your trolley should be set.*

Participant 8 learnt to adapt to new online clinical learning methods to interact with the undergraduate nursing students online:

P8: *We went into adapting in a new way of teaching after we had realised what we were actually dealing with and that the studies of the students had to continue. So, it made us go into learning again as a*

clinical supervisor and not just learning with regard to what you are going to teach and learning new skills.

4.3.3 Theme 3: Clinical supervisors' fears and anxiety associated with use of technology for remote online clinical learning.

Participants in this quadrant expressed similar challenges, experiences and concerns encountered while interacting with undergraduate nursing students in the ROCL environment. Some participants indicated that they did not have the necessary skills expected for digital competence or adequate information to conduct ROCL. They experienced fear and anxiety due to the unfamiliar nature of the OLMS. The participants indicated feelings of being overwhelmed, anxious, and not understanding the ROCL environment. They reported that their devices were old and slow, their data bundles were insufficient, and also that their home environments were not conducive to ROCL.

4.3.3.1 Category 1: Supervisors' readiness and response to emergency transition to the remote online clinical learning environment.

Participant 5 verbalised being unprepared for the sudden migration from in-person skills sessions to blending the skills laboratory methodology with the ROCL environment:

P5: *... with the Covid-19 pandemic we were actually thrown into the deep side because now we were actually supposed to do online instead of face to face.*

One participant reported being overwhelmed by not understanding the application of technology and how to communicate online with the undergraduate nursing students:

P8: *At first it was a bit overwhelming and also one would disconnect or not understand and had to learn, how to communicate with the student online.*

Participant 5 reported feeling that her stress levels were elevated by having to navigate an unfamiliar remote online clinical environment:

P5: *There will be anxiety and all the fears and all of that, you know, to navigate our way through the online learning management system.*

Participant 3 expressed her frustration at not being in possession of a device with software that was up to speed to conduct ROCL with the undergraduate nursing students:

P3: *I don't have a good laptop because that old one I still have, and as a clinical supervisor we don't get a laptop from the university.*

Participant 5 reported having to buy her own laptop in order to interact with the undergraduate nursing students in the ROCL environment:

P5: *I had to go and buy myself a laptop during the Covid-19 because the laptop that I had from the university was actually outdated, so I couldn't use it. So that is why I had to buy myself a laptop, so that I can interact with the students so that learning can still take place.*

4.3.3.2 Category 2: Digital, technological resources and materials available for online learning.

Participant 2 reported of lack or insufficient data bundles coupled with the use of old laptop which was slow and challenging during remote online clinical learning:

P2: *I was using my laptop; it was an old laptop, and the speed was very slow so if I can get the speed software device in order for me to engage with the student without any disruption together with the provision of data bundles and also the provision of a workshop and in-service training programme to update to keep myself updated in conducting the session.*

A few participants highlighted the challenge of not receiving data bundles supplies from the university under study, utilized own resources to conduct online clinical lessons, for the undergraduate nursing student:

P1: *We weren't given data or data bundles or ja so I made use of my own personal Wi-Fi, I made use of my own personal cell phone in order to do the recordings.*

P4: *reported that she encountered financial implications due unavailability or insufficient data bundles to interact with the undergraduate nursing student. Use of own internet connection was also a financial challenge*

P4: *I had to buy data because I was using data every day. So, my bill for internet was high it went up, because of constant communication and constant online activities that is the challenge I could say was for me.*

4.3.3.3 Environmental and contextual factors influencing remote online clinical learning.

Participant 8 reported that she did not have a conducive environment at home, with limited space to conduct ROCL, which was also the case for students.

P8: *... also, that your home space became your workspace, that is something that is defined, and I know with regard to students what a difficulty it was for them working at home online, and some of them not having all the resources and also having your family in the background or children in the background.*

Participant 7 reported a lot of environmental issues which compromised interaction with the undergraduate nursing students in the ROCL environment:

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P7: *Also, the network was a problem. It was a problem if ever there is a situation whereby it's windy or rainy – where I'm staying there is a lot of all those things that are happening, those natural disasters that I'm talking about. I always lose network, so now it was quite difficult for me to engage with students. And also, the noise pollution where I'm staying, I'm staying in a main road, there are a lot of cars passing by on a daily basis.*

4.3.3.4 Category 4: Connectivity, internet access and loadshedding compromising online clinical learning environments.

Participant 1 reported electrical interruptions as affecting her connection to online clinical learning and engaging with the undergraduate nursing students:

P1: *We also had the loadshedding at the time. So that was also very challenging for me. So, you would be in a session and then it is loadshedding and if there is loadshedding your Wi-Fi is disconnected, and you cannot continue with your session.*

Participant 4 reported experiencing electric disconnections while busy on a live online clinical session with the undergraduate nursing students:

P4: *When it comes to the actual online thing, there were challenges with the internet, and we had challenges with the loadshedding.*

4.3.3.5 Category 5: Perceptions of students' emotional, mental wellness and learning needs due to rapid transition to online learning.

Participant 4 reported that students experienced loss of concentration during ROCL due to the long sessions:

P4: *the students also had problems. Some of the students did not even have computers and their phones were not smart phones and because everyone was at home and the students went to their actual homes where the internet is a huge problem, for two seconds they would be in and out again, they would not really participate fully on some days, and those are the challenges that I had during that time.*

Participant 7 reported that some students could not engage online because of the geographical area where they stayed had no internet access:

P7: *Even also the students, they were taken out of res because of the number of cases of Covid-19 pandemic. Most of our students they are staying in rural areas You know what's happening in rural areas. There is no network at all. So, it was quite difficult.*

4.3.4 Theme 4: Clinical supervisors' awareness of continuous professional development towards using digital technology.

Most of the participants reported that they were able to login on the Ikamva platform from previous experience. They could navigate various online platforms and were in possession of basic computer literacy skills. Some of the participants strongly emphasised that they were unable to

upload lesson plans to the Ikamva platform, the structural platform used to interact with the undergraduate nursing students in the ROCL environment.

4.3.4.1 Category 1: Training and development to stay updated and abreast of evolving technology is a requirement.

Participant 4 verbalised that supervisors need to stay updated and abreast of technological advances to be able to guide, support and direct the undergraduate nursing students online:

P4: *I think if more training can be provided, specifically for a clinical supervisor, and the videos that we have can get updated to accommodate the times that we use it, because some of the videos that we are using is outdated and do not serve the purpose of the session.*

....

Participant 7 has identified the need to be trained in and develop technical skills:

P7: *I'm saying those kinds of trainings are very important, Microsoft Excel and through the library, so all in all its trainings and also to attend seminars and conferences that are related to what we know, what we are supposed to do according to our scope of practice as clinical supervisors.*

Participant 2 recommended in-service educational training and provision of new devices to capacitate her for better performance:

P2: *The use of workshops and in-service training will be helpful if they were providing for me. It will be a good thing to attend workshops and*

in-service training and also the speedier software devices will help and provision of data bundles.

4.3.4.2 Category 2: A need to develop capacity in students so that they can engage in the online clinical learning.

Participant 8 indicated that the students should also be trained on how to access online clinical learning environments:

P8: *Students had to adapt to the new norm, because some of them, i can imagine, were also not on board with regard to how to go onto Google, and how to move through the chat line in the discussion forum. We would find that some students would tell us that they are only logging in a half an hour later, because of the challenge of not knowing how to get on.*

Participant 1 indicated the need for provision of materials and resources for the students and supervisors to interact with the online clinical learning environment:

P1: *And from the student's point of view, is the student going to be provided with an updated device, how is it going to be incorporated in their learning, how are they going to acquire what they need from the school or from their clinical programme? We can if we have the resources, I think.*

4.3.4.3 Category 3: Provision of materials and resources for online clinical learning to increase educational quality.

Participant 8 highlighted the need for provision of resources and technical devices to allow clinical supervisors to empower themselves to be more efficient, thus increasing educational quality:

P8: *If we have other devices, like I have a small tablet which I then put information on and I can show them this information in the skills laboratorys.*

Participant 1 emphasised the importance of availability of resources and materials for use in online clinical learning activities to assist the undergraduate nursing students to achieve learning outcomes:

P1: *I mean it would defeat the purpose. If your resources are not 100% working then it defeats the whole online purpose, then you might as well stand in front of the class and teach.*

4.4 MAIN FINDINGS

The initial findings presented in Table 4.2 yielded 4 themes and 14 categories. In consultation with the researcher's supervisor, the data analysis process was further refined, after which the refined data generated the 4 themes and 9 categories specified in Table 4.3.

Table 4.3: Refined categories and codes

Theme 1: Clinical supervisors' experiences of their ability to use remote online clinical learning

Categories	Codes
<p>1.1. Positive reports on their ability to adapt to using technology when interacting with students</p>	<p>(a) Updated and abreast with technology due to previous experience</p> <p>P4: Am able to use technology, use my computer and use Microsoft, PowerPoint, e.g. I can use the internet; I also have devices. I can use my phone for WhatsApp, Facebook, and other technology. So, I can say that I am about 9 out of 10 equipped to use technology.</p> <p>P6: I try to keep up with technology being a young person, so I have been able to set up our online presentations, getting the students to interact and participate in, not like live, but in our contact sessions, but also trying to get them to watch live things while we are doing the presentations. So as far as capabilities go, I try to, like I said, I try to keep up with the times.</p> <p>P2: From my experience as a student, I was able to use the Ikamva platform and go through the discussion forum.</p> <p>P6: So, we are moving electronic in any case in terms of our strategies of teaching. So just keeping myself updated with regard to that, and you must remember now we are also dealing with a generation of students</p>

	<p>that are more technologically advanced that want the technology aspect of Ikamva.</p> <p>P4: Am able, I can communicate with them via Ikamva, and via emails, I don't have a problem I am able to.</p> <p>P3: I think I can use different strategies of teaching and go through the study more so I know I can be able to support the students.</p>
	<p align="center">(b) Ability and capability to use technology.</p> <p><i>Comments as reported above from P2 and P4 also apply here.</i></p>
	<p align="center">(c) Previously acquired knowledge on technology assisted the supervisor online.</p> <p>P8: I think that it was a matter of going into all the resources that you have collected over the years. I would not even say over the months, but over the years, putting it together and looking at how you could move from one point to another to improve the teaching.</p> <p>P2: During lockdown prior knowledge developed during my undergrad where help me a lot during lockdown as we were using Ikamva site during my undergrad.</p>
<p>1.2. Ability to navigate</p>	<p align="center">(a) Ability to navigate Ikamva online platform and emails.</p>

<p>different online platforms teaching and learning strategies required</p>	<p>P4: I am able, I can communicate with them via Ikamva, and via emails. I don't have a problem; I am able to.</p> <p>P3: My undergraduate programme in my 4th year and when I was doing my postgraduate, and it was helpful when Covid-19 pandemic came – I was able to manage my students during that time.</p>
<p>Theme 2: Preferred learning management system of the institution and its potential</p>	
<p>Categories</p>	<p>Codes</p>
<p>2.1. Potential of online learning management system</p>	<p>(a) Different platforms used online learning, chat room, group forum and WhatsApp.</p> <p>P4: Some instructions from the lecturers. Ikamva can also be used for live chatting, like you are chatting on WhatsApp, which was the group forum.</p> <hr/> <p>(b) Integrate blended audiovisuals with WhatsApp platform.</p> <p>P7: Upload videos for students and after that you have to discuss all those videos on Ikamva and also on WhatsApp groups, and also even the scenarios, we have to upload the scenarios on Ikamva and also on WhatsApp groups.</p>

<p>2.2. A platform for creative means to blend different teaching and learning strategies.</p>	<p>(a) Some clinical skills are complex and could not be conducted online.</p> <p>P6: Yes, there is a video, but I mean a presentation where they can see, okay, this is part of the implementation of removal of sutures; okay, sterility – opening up of my sterile field and actually having a picture to show how your trolley should be set.</p>
	<p>(b) Could not envision how to do skills in an online environment.</p> <p>P1: For me it was a bit of a puzzle because how are you going to teach these skills online. What is the equipment, what are the tools that I need or that I have or we as a group have in order to make sure that we deliver quality education to our students.</p> <p>P6: The E-learning site, the Ikamva platform which is the electronic platform where they can do where we did the classes so a lot of it was from there and it was rather challenging to do for example a Google Meets.</p>
<p>2.3. Challenging to relay skills laboratory methodology when engaging students online</p>	<p>(a) Lack and use of outdated technical devices to connect online, purchase of new devices to connect online</p> <p>P5: I had to go and buy myself a laptop during Covid-19 because the laptop that I had from the university was outdated ... so that is why I had to buy myself a</p>

laptop, so that I can interact with the students so that learning can still take place.

P1: In the very beginning in the hard lockdown, we weren't provided with equipment like the laptop from the university or school.

P2: I was using my laptop and it was an old laptop and the speed was very slow, so if I can get a speedy software device for me to engage with the students without any disruption, together with the provision of data bundles and also the provision of a workshop and in-service training programme to update and to keep myself updated in conducting the session.

(b) Insufficient data supply resulting in connectivity issues

P2: We had to buy data bundles and you find out in the middle of the discussion you don't have enough data bundles to connect.

P5: We actually ran out of data.

P3: ... in the beginning I had not enough data to engage with the students as the university hasn't provided the computer for the supervisor.

P7: Because it was level 5 lockdown, and we have to work from home, and I didn't have a quality laptop to use and also data is expensive.

P2: The same problem of the lack of data bundles on the other side or poor connectivity due to the environment that the student was in at that time, so

	that makes the student unable to connect during the session.
Theme 3: Clinical supervisors' fears and anxiety associated with use of technology for remote online clinical learning	
Categories	Codes
3.1. Challenges with virtual platform	<p>(a) Collegial support to upload information online.</p> <p>P8: We had like 4–5 supervisors in a group, so like one of us would do the presentations and the others would communicate on the chat, and if the students weren't participating or they weren't interacting the supervisor would actually then type in the chat group. ... Find a picture on Google or download a video from YouTube and also then liaise with my colleagues because you also have to be very careful that you don't share any video that is not in line with our clinical learning programme.</p> <p>P3: The coordinator of the extended curriculum programme assisted us to upload the lesson plan at the beginning and the PowerPoint presentation.</p>
3.2. Device and connectivity challenges	<p>(a) Challenges with loadshedding and connectivity for online learning</p> <p>P1: We also had the loadshedding at the time. So that was also very challenging for me. So, you would be in a session and then it is loadshedding, and if there is</p>

	<p>loadshedding your Wi-Fi is disconnected, and you cannot continue with your session.</p> <p>P7: Also load shedding played a serious role also there because you will be busy conducting a presentation or lecture, and then there is loadshedding.</p> <p>P1: So, I pay for my own private uncapped Wi-Fi and my electricity bill doubled up because suddenly we are all at home. Everybody is working from home. So, if I have a session, I needed to be online ... I needed to make sure that my battery or the laptop is plugged in, so the electricity bill increased.</p>
<p>Theme 4: Clinical supervisors' awareness of continuous professional development for using digital technology</p>	
<p>Categories</p>	<p>Codes</p>
<p>4.1. Clinical supervisors' awareness of continuous professional development for using digital technology</p>	<p>(a) Continuous professional development for clinical supervisors</p> <p>P5: Continuous training is necessary to equip myself, and then also in-service training and then continuous education, and then like practice so that I can get used to the online platform for teaching and learning.</p> <p>P2: The use of workshops and in-service training will be helpful if they were providing for me. It will be a good thing to attend workshops and in-service training and speedy software devices will help and provision of data bundles.</p>

	<p>P1: Yes, I am able to do the presentation, but things change, things evolve, and so I need to update and evolve my skills and my knowledge as well.</p> <p>P4: I did not have formal training ...I've learned by familiarising myself as I am still a student as well, so being exposed to using a computer like three times a week, that is how I gained the skill.</p> <p>P6: In terms of learning new strategies, how to make things more interactive, and there have been two or three online workshops that I attended in terms of how to present, how to make presentations more effective for a student, and I think it was last year 2021.</p>
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4.5 SUMMARY

In this chapter the researcher presented the findings that emerged from the data analysis. The aim of this study was to explore the experiences of clinical supervisors interacting with undergraduate nursing students at a university in the Western Cape while swiftly adjusting to the use of the ROCL environment during the Covid-19 pandemic. The clinical supervisors had to immediately adapt to a new method of clinical learning in order to accommodate the undergraduate nursing students and achieve learning outcomes. The clinical supervisors expressed positive feedback on their ability to adapt to using technology, including challenges and motivations. The emphasis was on the importance of training and development to keep updated in and abreast of evolving technology, and provision of material and resources for online clinical learning to increase educational quality.

CHAPTER FIVE

DISCUSSION OF THE FINDINGS

5.1 OUTLINE

The discussion of the results is presented in this chapter and related to the available evidence in the existing literature. The study had two objectives: 1) to describe the experiences of the clinical supervisors of interacting with undergraduate nursing students while swiftly adjusting to the use of an ROCL; and 2) to explore and describe the clinical supervisors' learning needs in terms of keeping updated and abreast of new developments in the ROCL environment. The findings of this study are therefore discussed with these objectives in mind.

Table 5.1 contains a summary of the main findings that emerged from the questions explored during the semi-structured individual interviews.

Table 5.1: Themes and categories

No.	Themes	Categories
1.	Clinical supervisors' experiences of their ability to use remote online clinical learning	<ul style="list-style-type: none">• Positive reports on their ability to adapt to using technology when interacting with students.• Ability to navigate the different teaching and learning strategies required by various online platforms.
2.	Preferred learning management system of the institution and its potential	<ul style="list-style-type: none">• Potential of online learning management system.

		<ul style="list-style-type: none"> • A platform for creative means to blend different teaching and learning strategies and methodologies. • Challenges in relaying skills laboratory methodology when engaging students online.
3.	Clinical supervisors' fears and anxiety associated with use of technology for remote online clinical learning	<ul style="list-style-type: none"> • Supervisors' readiness and response to emergency transition to an ROCL environment. • Environmental and contextual factors influencing digital transformation and online learning.
4.	Clinical supervisors' awareness of continuous professional development for using digital technology	<ul style="list-style-type: none"> • Training and development to keep updated and abreast of evolving technology is a requirement. • Provision of materials and resources for online clinical learning to increase educational quality.

5.2 OVERVIEW OF THE MAIN THEMES

The researcher conducted data analysis to extract relevant information from within the data collected from the semi-structured interviews, as well as to attach meaning to it (Brink et al., 2018). In this current study the data analysis was executed to ensure meaning and interpretation of the data set, which resulted in the generation of the main themes which are discussed below.

5.2.1 Theme 1: Clinical supervisors' experience of their ability to use remote online clinical learning.

The participants reported their own individual experiences regarding their abilities and capabilities while facilitating the undergraduate nursing student programme in an ROCL environment in a university in the Western Cape province. Previous experience assisted some of the participants with their ability to navigate the online clinical instructional platform provided by the university under study. The online clinical instructional platform created by the university under study therefore needs to ensure that all participants are capacitated and competent to access it.

5.2.2 Theme 2: Preferred online learning management system of the institution and its potential.

For increasing educational quality for the undergraduate nursing students, the participants reported that they used the OLMS provided by the university under study. They had to adapt and adopt new behaviours in learning new technology and be able to solve online technical problems. The participants needed to navigate online clinical learning platforms, checking on their coping mechanisms in terms of ability to upload presentations and images, scenarios, and lesson plans and to interact with undergraduate nursing students online to increase educational quality. They also incorporated different strategies to aid with the new defined online clinical learning environment to interact with the undergraduate nursing students and achieve learning outcomes. Audio-visual material that was converted for online use, formulation of PowerPoint presentations with images, use of blended videos with group discussions, use of lesson plans and quizzes for online clinical learning were planned according to the curriculum guidelines. In addition, the preferred clinical OLMS, and the opportunities it provided assisted the clinical supervisors and students to access the platform with a great deal of flexibility in terms of time and space.

5.2.3 Theme 3: Clinical supervisors' fears and anxiety associated with use of technology for remote online clinical learning.

At the beginning of this theme the participants' fears and anxieties were highlighted as challenges in terms of using technology, since it was difficult to replace and simulate clinical face-to-face sessions using the OLMS platform for the undergraduate nursing students. The participants further reported that they were less skilful in the technology, and that negatively influenced their performance with the OLMS platform in terms of logging in and uploading lesson plans to engage with the group of students allocated to them. In addition, the clinical supervisors did not understand the online clinical learning environment as it was unfamiliar to them; subsequently, they experienced fears and anxiety associated with use of technology for ROCL. According to (Magaldi and Fayne's, 2021) study conducted at university level, without specific training on how to teach on screens or shape behaviour in an online classroom, candidates were overwhelmed when it came to getting young students to engage in learning appropriately online via screens.

5.2.4 Theme 4: Clinical supervisors' awareness of continuous professional development for using digital technology.

The participants emphasised the importance of continuous professional development in terms of using technology through the provision of training to upgrade their skills sets in use of computers, Microsoft and other software, and the OLMS. The participants emphasised the need to be updated and kept abreast of the new technology by attending in-service training programmes, workshops and seminars directed to teaching and upskilling of clinical supervisors, to improve their own key performance areas while using the OLMS. The training will assist the participants to keep updated with new technology and e-learning practices. They also need provision of new technology devices, such as new and updated laptops with higher software speed, mobile cellular smart

phones, headphones, and internet access in order to interact effectively with the undergraduate nursing student online.

5.3 DISCUSSION OF THE CATEGORIES UNDER EACH THEME

5.3.1 Theme 1: Clinical supervisors' experiences of their ability to use remote online clinical learning.

Clinical supervisors reported on their abilities and capabilities to use the remote online learning environment to interact with undergraduate nursing students online during the Covid-19 pandemic, and how they coped in assisting the students to achieve requisite learning outcomes. A swift and sudden move to ROCL was enforced, whereby adopting online clinical platforms became essential for both the clinical supervisors and the undergraduate nursing students (Meyer, 2020). The pandemic resulted in an abrupt change at all educational institutions and directed new ways of working, including nursing habits, nursing practice, and the approach to teaching and learning (Gause et al., 2022). This theme yielded two categories: positive reports on ability to adapt to using technology when interacting with students; and ability to navigate different teaching and learning strategies required by various online platforms.

5.3.1.1 Category 1: Positive reports on ability to adapt to using technology when interacting with students.

The clinical supervisors gave positive feedback regarding their abilities and capacity to navigate, access, and interact in an ROCL environment, due to previous training they possessed from their undergraduate studies. It is important to explore the relevant skills and competencies they possess. Meyer (2020) states that accelerated training was provided to teachers and students in the first two weeks after closing at the University of Tunis in Tunisia, to familiarise them with both standard and specific software, and academic deans organised the distribution of courses according to their

administrative lists. Esterhuizen (2020) advocates for normalising online contact sessions, even if Covid-19 has been eradicated, because it provides the ability to communicate with large groups of students and to provide notes, voice notes and videos. Furthermore, the author indicated her ability to render individual attention to each student online. In the study conducted by Oliveria et al. (2021), with interviews conducted on personal adaptation at the Department of Industrial Engineering of the University of Portugal, most interviewees felt comfortable with adopting new technologies because they had previous experience of using related technology in other contexts and considered themselves as digital natives. In addition, the participants in this study verbalised a level of comfort and capability in the use of online technology, and that some training on use of technology was offered by the university under study, but it was not enough. The following codes emerged within this category, namely: (a) updated and abreast of technology due to previous experience; (b) ability and capability to use technology and interact with students online; and (c) previously acquired knowledge on technology assisted the supervisors online.

5.3.1.1.1 Updated and abreast with technology due to previous experience

One participant reported that her ability and capabilities to stay updated with technology as a young person allowed her to be able to set up online presentations, get the students to interact and participate in activities presented during online contact sessions, and to get them to watch live audiovisuals. The participant reported that she was watching live online streams to keep updated with the times and new technology. This concurs with the results of a study in the Republic of China, which found that medical education is driven by imparting the relevant knowledge and skills to persons who are seeking to become physicians, which involves highly interdisciplinary courses, clinical experience and rapid and ongoing knowledge updates, so that they are prepared to respond better to current and future trends (Jiang et al., 2021).

5.3.1.1.2 Ability and capability to use technology and interact with students online.

In this study some participants highlighted their ability to use technology and interact online with the undergraduate nursing students, while others stated that they acquired technical experience and knowledge through conducting online clinical learning sessions. According to Van de Hyde and Siebrits (2019), the e-learning technologies are usually under-utilized within the learning environment in South Africa, and the need for and use of e-tools is of extreme importance at national HEIs, to teach in the context of a global education transformation (Mashau, & Nyawo, 2021).

5.3.1.1.3 Previously acquired knowledge on technology assisted the supervisors online.

Some of the participants reported previous experience with an online learning environment as a student nurse and postgraduate student assisted them to interact online with the undergraduate nursing students during the Covid-19 pandemic. According to a study conducted at the University of KwaZulu-Natal (Van de Hyde & Siebrits, 2019), it is critical to introduce both academics and students to innovative educational technologies to improve both teaching and learning practices. However, as much as information technology and systems will assist with computer literacy, the modules do not include teaching about e-learning sessions (Mashau & Nyawo, 2021).

5.3.1.2 Category 2: Ability to navigate different teaching and learning strategies required by various online platforms.

The participants reported their concern at being less skilful, less capacitated, and unfamiliar with navigating MS Office applications for facilitating lesson plans to develop materials for educational purposes. In this category the ability to navigate different online platforms by the clinical supervisors should be unpacked and their coping mechanisms when they had to convert to ROCL due to the sudden closure of schools globally and HEIs in response to the Covid-19 pandemic.

This resulted in rapid shifts to replace face-to-face blended methodology with various forms of technology for clinical supervisors to navigate different online platforms which used various learning strategies. DUBY et al. (2022) state that the sudden closure of schools and education institutions globally as a response to Covid-19 resulted in rapid and dramatic shifts to replace in-person teaching with various forms of technology-based, remote and distance education. This is further emphasised by a study carried out at the University of Limpopo in South Africa, that asked lecturers if they had been trained to produce teaching and learning materials tailored to an e-learning environment, where an overwhelming 92.1% of educators indicated that they had never been taught how to do so (Kekana & Mogoboya, 2022). The following codes emerged under this category: (a) ability to navigate Ikamva online platform and emails; (b) Ikamva learning platform and Google Meet used as students' online learning environment.

5.3.1.2.1 Ability to navigate Ikamva online platform and emails.

The participants stated that it is crucial to have ability and technical skill to navigate different online clinical learning platforms and use learning strategies, as this is a requirement for uploading lesson plans and the modified study guide for online clinical learning for interacting with the undergraduate nursing student online. According to Jiang et al. (2021), when incorporating clinical simulation education into online education, this should be carefully distinguished and properly used in accordance with study stages and relevance of the available programme; also, decisions around matching these with the undergraduate nursing students should be made by the clinical supervisor when strategising clinical learning sessions. Some participants expressed a level of comfort with online learning and use of the OLMS provided by the university under study.

5.3.1.2.2 Ikamva learning platform and Google Meet used as students' online learning environment.

The participants reported that the university under study provided an OLMS, where the instructional online clinical learning activities were to be uploaded so that the undergraduate nursing students could login in order to access lesson plans and interact with the clinical supervisor online. Participants further verbalised that they needed to be guided on how to upload lesson plans to the online platform provided. Gewin (2020) stated that guidance and support need to be provided to teachers in order to facilitate their work.

5.3.2 Theme 2: Preferred online learning management system of the institution and its potential

The participants reported that they used the OLMS provided by the university under study, and had to adapt to it and adopt new behaviours, and incorporate different strategies to interact with the undergraduate nursing students to achieve learning outcomes. Revised materials included audio-visual material converted for online use, formulation of PowerPoint presentations with images, use of blended videos with group discussions, and use of lesson plans and quizzes for online clinical learning, all planned according to the curriculum guidelines. The available literature discussed the migration from blended skills laboratory methodology to use of OLMS during ROCL, and the most frequently mentioned tools were video-conferencing systems, Zoom, Microsoft Teams, and Google Meet. Many universities had to move from face-to-face teaching to online teaching very rapidly, and adopted video-conferencing to replace the traditional face-to-face teaching sessions. The emphasis on use of OLMS during the lockdown period, including ROCL which is in line with the use of the main institutional systems, and that most universities already had and used to upload materials. was also mentioned in the findings of Bond et al. (2021). This theme yielded two categories: potential of the online learning management system; and a platform for creative means to blend different teaching and learning methods.

5.3.2.1 Category 1: Potential of the online learning management system

The potential of the OLMS highlights this as the future preferred method for online clinical learning to interact with undergraduate nursing students. The participants highlighted the importance of being capacitated in the use of this online platform, and its accessibility and availability, including the need for guidance in the delivery of educational content through e-learning methods. Jiang et al. (2021) provide 12 tips for teaching students online under unfavourable and critical conditions. The emphasis is on the second tip, which states that “rapid shift to a complete e-learning environment demands more well-organised teaching and learning activities, whereby the clinical supervisors and students have choices to make, which are more convenient and personalised to suit their needs, this method of e-learning is known as flexible learning” (Jiang et al., 2021, p. 3). The following codes emerged under this category: (a) different platforms used online learning, chat room, group forum and WhatsApp; and (b) integrate blended audiovisuals with WhatsApp platform.

5.3.2.1.1 Different platforms used online learning, chat room, group forum and WhatsApp.

The participants reported provision of an OLMS online site to interact with the undergraduate nursing students in the ROCL environment, and also used other online platforms like chat rooms, discussion forums and WhatsApp to try and reach out to the undergraduate students. The findings of Gillis and Krull (2020, pp. 283-299), concur: “I added PowerPoints in VoiceThread to each lesson plan instead of sending out my discussion lecture notes; I also added two live Zoom discussion classes, but I gave them the option to complete those days’ lesson plans on their own.”

5.3.2.1.2 Integrate blended audiovisuals with WhatsApp platform.

The participants reported that they were provided with an OLMS as a site for preparing blended audiovisuals and lesson plans, and converted standardised module guides for online clinical

learning, including scenarios and learning material, for the undergraduate nursing students to access and post answers online. Mashau and Nyawo (2021) state that searching for and identifying useful teaching resources that may already exist will save time on formulating new lesson plans.

5.3.2.2 Category 2: A platform for creative means to blend different teaching and learning methods.

Participant 1 expressed that it was not easy to demonstrate or execute certain clinical skills to the undergraduate nursing students on the ROCL platform. Sometimes she had to demonstrate the skill using herself as a model, trying to assist the students to visualise the skill being demonstrated to them remotely. Other participants experienced similar challenges which were affecting their engagement with the undergraduate nursing students on the ROCL. Students themselves had also verbalised concerns, such as lack of and use of outdated technical devices to connect online, resulting in them having to purchase new devices in order to continue with online activities. According to the findings of Adedoyin and Soykan (2020), instructors for teaching and learning stated that students without updated technological devices might find it hard to meet some of the technical requirements of online learning, while students cited using outdated devices that were not compatible, coupled with inadequate data supplies. The following two codes emerged under this category: some complex clinical skills could not be conducted online; and could not envision how to convey skills in an online environment.

5.3.2.2.1 Some complex clinical skills could not be conveyed online.

Most participants reported that it was difficult to simulate clinical skills in an ROCL environment because of their complexity; supervisors could not envisage or devise how to portray clinical skills in a remote online environment. The participants reported feeling inadequate and less competent in the use of the online environment, which was unfamiliar to them, compared to the blended face-

to-face skills laboratory methodology. Lack of and lack of use of technical devices to conduct/access the online clinical platform also played a role here.

5.3.2.2.2 Could not envision how to convey skills in an online environment.

Most of the participants reported that they had challenges in devising how to simulate clinical skills online. They verbalised that they do not have the necessary equipment and tools to guide the undergraduate nursing students on the remote online clinical platform. They were never orientated by the university under study on how to use the learning management system provided or the virtual platform to conduct online clinical learning sessions. The participants further reported that they have no knowledge and skill on how to convert the module guide which is used as a standardised guideline in order to conduct and portray clinical skills for the undergraduate nursing students online.

5.3.2.3 Category 3: Challenges in relaying skills lab methodology when engaging students online.

In this category all of the participants reported similar challenges which prohibited them from relaying clinical skills laboratory methodology online. They also verbalised that there was a lack of technological skill to convert the clinical module guide for online use. Above all they reported critical issues that were affecting the ROCL environment which were related to lack of resources and materials, non-availability of updated technical devices, poor connectivity, and non-conducive home environments, including non-availability of internet connections due to geographical infrastructure. These factors were compromising both the clinical supervisors and the undergraduate nursing students. Meyer (2020) stated that a major challenge, which was constantly reported in the survey, seemed to be linked to bandwidth. Network deficiencies and the weakness of the network strongly constrain all kinds of

communication that distance learning implies. In addition, Meyer (2020, p. 2) emphasised the need for preparation of educators, who expressed a strong demand for training which could be either formal or through a “learning process for pedagogical practice with these tools. The age of the teacher then plays a role, with young people proving to be more flexible than their elders on the use of online technology.” The following two codes emerged from this category: lack of and use of outdated technical devices to connect online, and purchase of new devices to connect online; and insufficient data supply resulting in connectivity issues.

5.3.2.3.1 Lack of and use of outdated technical devices to connect online, and purchase of new devices to connect online.

The participants reported challenges which they experienced while interacting with the undergraduate nursing students online during the lockdown period. These included the use of technical devices that were slow with outdated software, which would cause interruptions during the online clinical learning sessions. Students from a low socio-economic background found it difficult to connect online due to having no internet access and fell behind with the online sessions. Fishbane and Tomer (2020) stated that students with no internet access were most vulnerable to falling behind or encountering additional challenges in meeting up with others in online learning. Non-conducive home environments were also reported by most of the participants in this study, as everyone was at home during lockdown period. According to Adedoyin and Soykan (2020) disturbances could include family members and pets making an unexpected appearance or interrupting the online learning participants’ attention during the online teaching and learning process.

5.3.2.3.2 Insufficient data supply resulting in connectivity issues.

Participants reported that challenges of insufficient data supplies resulted in interruptions during live online clinical sessions with the undergraduate nursing students. They reported using their own internet access or were compelled to postpone or reschedule online sessions so that they could go and buy additional data bundles, and the students were experiencing similar situations. Loadshedding or cutting of electricity supply also contributed to the interruptions, including device connectivity during online clinical sessions; all participants reported experiencing this challenge, including the undergraduate nursing students. According to Ferri, Grifoni and Guzzo (2020) a lack of resources, including access to educational technologies and the internet, coupled with an inadequate learning environment, can result in losses or reductions in educational achievement.

5.3.3 Theme 3: Clinical supervisors' fears and anxiety associated with use of technology for remote online clinical learning.

The participants highlighted feelings of being overwhelmed, less skilful coupled with fears and pandemic related anxieties as challenging in terms of using technology in ROCL environment, which was difficult to simulate clinical face to face methodology with ROCL environment, for the undergraduate nursing student. The participants reported that they did not possess the technical skill expected for digital competence and felt not performing well enough to guide and direct the student online, with use of technology and use of online clinical platforms. The participants further reported that they were not effectively ready to deliver high quality instruction remotely. The following statement confirms the participants' report by defining the readiness to teach online as "the state of faculty preparation" to teach online. Personal readiness for online clinical learning was analysed together with technological and pedagogical content knowledge, Institutional support being viewed as the indicator of the contextual readiness for online teaching and learning and upload lessons plans to engage with the group of undergraduate nursing students allocated to

them. In addition, they did not understand the online clinical learning environment as it was unfamiliar to them,” (Duby et al., 2022). This theme yielded two categories: challenges with the virtual platform; and challenges with devices and connectivity.

5.3.3.1 Category 1: Challenges with virtual platform, devices, and connectivity

Participants in this study reported challenges that included the following: utilising and navigating virtual platforms in the online environment was new and unfamiliar, they could not log into this platform and had to seek other means to conduct clinical sessions online, and the high number of undergraduate nursing students allocated to them online. Most participants claimed that they depended on collegial support in order to be able to connect online. According to Kekana and Mogoboya (2022), adequate training of lecturers on how to develop training and learning material is consistent with e-learning, as the pedagogy is important. The following code emerged under this category: collegial support to upload information online.

5.3.3.1.1 Collegial support to upload information online.

Participants reported that they were dependent on collegial support in order to navigate the online platform and clinical learning sessions, and to upload information to use online. It was also reported that support received to interact with the undergraduate nursing students came from the coordinators of the programme. Some of the participants reported that the information communication service and technology department of the university under study assisted while they were interacting in the ROCL environment. According to Jiang et al. (2021) the creation of a responsive educational ecosystem is essential, including enlisting educators and learners to be supportive of various learning modes, and that administrators work more closely, with assessment teams to supervise the quality of various efforts in order to help smooth the transition. Early adopters of technology should take the lead.

5.3.3.2 Category 2: Challenges with devices and connectivity

In this category the participants repeatedly reported issues with the availability of devices to conduct online clinical learning, which hampered e-learning and undergraduate nursing students' ability to attain and achieve learning outcomes. Poor connectivity was also a delaying factor in terms of participants' ability to achieve the goals which were expected of them in their key performance areas. Poor connectivity due to technical errors and non-availability of internet access were the major issues reported by the participants, and this included not possessing the necessary mobile devices to connect online. These findings are supported by those of a study conducted at the University of Limpopo (Kekana & Mogoboya, 2022), which showed that some of the students from remote areas of the province struggled with internet connectivity due to poor development and infrastructure, while a shortage of electricity also affected internet connection. South Africa is facing a serious problem of loadshedding currently which affects e-learning. The following code emerged under this category: challenges with loadshedding and connectivity for online learning.

5.3.3.2.1 Challenges with loadshedding and connectivity for online learning

Most participants reported a challenge which had a negative impact on their endeavours to conduct ROCL, in the form of repeated experiences of blackouts of electricity known as loadshedding, which was one of the economic issues experienced in South Africa. This impacted both clinical supervisors and students and would result in disruption of the network while online clinical lessons were taking place.

5.3.4 Theme 4: Clinical supervisors' awareness of continuous professional development for using digital technology.

The data highlights the need for professional development in terms of using technology. The training offered by the institution under study was not sufficient or was too general and not specific to the training needs of the clinical supervisors. The participants felt less competent to conduct online clinical learning activities for the undergraduate nursing students and verbalised the need for empowerment and information on in-service education, training, and workshops on e-learning and digital technologies. According to Jiang et al. (2021, pp. 283-299), there is a need for “provision of training and support for multiple technological products and online education platforms to help instructors create, produce and present educational material online, establishing systems which link to training and support regarding the network issues.” This theme yielded one category: upgrading devices for moving swiftly to technology for online learning skills.

5.3.1.1 Category 1: Upgrading devices for moving swiftly to technology for online learning skills.

Participants expressed their frustration at not possessing a device with high-speed software to conduct ROCL with the undergraduate nursing students, and the devices being used needed to be upgraded. One participant expressed concern about the lack of availability of the equipment or tools, although she needed to deliver quality education to the undergraduate student nurses. Some participants expressed not being in possession of the main element to make this possible. Jiang et al. (2021) also cited this challenge, and it was suggested that flexible learning goes far beyond singular improvements like pedagogy or technology enhancement; for example, schools need to ensure that faculty, staff, and students receive and use the right equipment, software, and training to be able to interact at a distance. The following code emerged under this category: continuous professional development for clinical supervisors.

5.3.1.1.1 Continuous professional development for clinical supervisors

The participants reported their concern at non-efficient delivery in the online clinical learning environment, as this was an unplanned practice and no prior training and development for online learning to engage with undergraduate nursing students was offered by the university under study. The training offered during the lockdown period of the Covid-9 pandemic was general and not specific to the participants of this study. The participants verbalised that they wish to attend in-service training and education programmes and workshops pertaining to the application of updated technology and e-learning approaches in online education, to improve their future academic performance, competencies, capabilities, and interaction online. The need for provision of updated technical devices was also reported by the participants. Bond et al. (2021, p. 16) stated that a “larger number of teachers can be assumed to have not yet had extensive experience in providing other formats of online learning”.

In addition, the clinical supervisors need to be inspired in the technology space, in order to guide and support the undergraduate nursing students to achieve learning outcomes and subsequently attain and maintain competencies. The institution under study needs to revise institutional policies and to have a contingency plan in place in readiness for use in the case of future disasters.

5.7 SUMMARY

In this chapter the findings of the data analysis of the experiences of the clinical supervisors interacting with undergraduate nursing students at a university in the Western Cape during the Covid-19 pandemic were discussed. Discussion of the findings revealed that the clinical supervisors of the institution under study who are primary responsible for providing clinical learning opportunities to the undergraduate nursing students were not prepared for the sudden digital transition in 2020. Chapter Six provides a summary of the main findings as well as the

limitations of the study, recommendations that emerged from the findings, and the conclusion of the study.



CHAPTER SIX

SUMMARY OF FINDINGS, LIMITATIONS, RECOMMENDATIONS AND CONCLUSION

6.1 OUTLINE

In the previous chapter the findings of study were presented and discussed. This final chapter comprises a summary of the main findings, the limitations of the study, and recommendations based on the findings of the study, followed by the conclusion of the thesis.

6.2 SUMMARY OF THE MAIN FINDINGS

Four themes emerged from the semi-structured interviews that were conducted with eight clinical supervisors from the university under study. The main findings under each theme are summarised below.

6.2.1 Clinical supervisors' experiences of their ability to use remote online clinical learning.

The experiences of the clinical supervisors as participants of this study at an HEI in terms of their capabilities and capacity to interact with undergraduate nursing students in a remote online learning environment were critically explored in this theme. This encompassed their knowledge and skills to navigate the digital platform, and the participants' level of competencies regarding pedagogical e-learning, coping mechanisms and acceptance arising from the sudden migration from use of a blended face-to-face skills laboratory methodology to an online learning management system (OLMS) for clinical learning, which was provided by the institution under study.

The participants' previous knowledge in terms of using technology, including their level of comfort, was explored in this theme. The participants' skills set for application of software in an OLMS was questioned by the researcher, as most of the clinical supervisors expressed incapability and inexperience to upload lesson plans to this platform. Some participants could work with the technical devices but had no idea of how to operate on the platform they were instructed to use, and one participant stated that for her it was "a bit of a puzzle" because she did not know how to teach the clinical nursing skills online. Another concern of hers was the availability of equipment and tools, and how she was going to get the message across to the undergraduate nursing students online to increase educational quality. The participants' experience as undergraduate and postgraduate nursing students assisted some of them in that it provided them with some level of comfort with the use of an OLMS.

It was evident that the clinical supervisors who were the participants of this study were not ready to operate, be functional on or interact with the undergraduate nursing students at the HEI online, as they were less skilful and less competent in the use of e-learning. In addition, the pedagogical approaches in online education were a challenge, and the OLMS used by the HEI was unfamiliar to them.

6.2.2 Preferred online learning management system of the institution and its potential.

The OLMS was the preferred platform that the HEI expected the participants to use to interact with the undergraduate nursing students online during the Covid-19 pandemic. The lockdown regulations instituted by the South African Government forced the immediate closure of all schools, including HEIs, to prevent the spread of the deadly virus globally. The clinical supervisors who were the participants of this study are responsible for providing clinical

learning opportunities to the undergraduate nursing students and had to respond urgently to the new online system to guide, mentor and support their students.

The participants reported that they were not prepared for this transition, and adapting to and adopting the necessary new behaviours was a challenge to them, as they reported that they could not connect to the OLMS in order to convert audio-visual material for online clinical learning and to blend PowerPoint presentations with images for discussion online. It was difficult for the clinical supervisors to read the students' faces and estimate the impact of knowledge acquisition online. Different online platforms had to be navigated to increase the students' educational quality, and the participants reported that some of the clinical skills required to be used online to facilitate learning were complex, and it was difficult to correct or fix technical problems that were encountered online.

One of the participants reported that she did not know how to visualise and present clinical skills in an online learning environment. The participants felt obligated to use different strategies and approaches to upload lesson plans, prepare presentations with images, and convert the simulated clinical module guide for online learning to assist the undergraduate nursing students to gain and maintain competencies online. The participants verbalised that they themselves were not skilful enough to direct the undergraduate nursing students online or to solve problems related to technology usage. Some reports were about the students' behaviours in the online learning engagement, such as not logging in according to the planned online sessions, and not responding to online activities that had been prepared to achieve outcomes.

The participants reported that they had to upload quizzes and short discussion questions to improve educational quality for the undergraduate nursing students. A discussion forum and

chat room were among the online platforms used for knowledge acquisition, although some students were not engaging with these. WhatsApp groups were formed to encourage the undergraduate nursing students to engage online and ensure that no students would be left behind. The participants also reported that some students were sick or had lost members of their family to the Covid-19 pandemic, which resulted in them being absent online. This would result in continuous online learning with no cut-off time, in order to accommodate the students with such situations.

The participants confirmed that they had to increase the duration of online clinical lessons to ensure compliance among, with one stating that a clinical skill that would take a few minutes if they were to present it face to face had to be split over two days when presented online. The practical skills had to be improvised online, as confirmed by participants. Key features were uploaded on the OLMS using announcements, videos, and scenarios for the undergraduate nursing students to watch, and they also had to formulate groups of students online and use a discussion forum for them to answer questions that were prepared online.

The participants reported the importance of being on time for online clinical sessions, as the undergraduate nursing students would not log in or log out because they were not sure if they were accessing the correct online training programme. Adequate preparation was needed prior to engaging with the undergraduate students online.

The participants demonstrated resilience and a sense of determination to prepare online clinical lesson plans using the preferred OLMS provided by the university under study, despite the challenges encountered in the remote online learning environment.

6.2.3 Clinical supervisors' fears and anxiety associated with use of technology for remote online clinical learning

In this theme the researcher explored and analysed the application of technological devices and availability of equipment, together with the technological and pedagogical content knowledge, including the participants' understanding of other communication technologies. The following challenges were highlighted by all of the participants: being overwhelmed and experiencing frustration, stress and anxiety related to fear, owing to possessing limited technological skills and knowledge to prepare for the OLMS. The participants felt emotionally drained, as there were numerous challenges with the ROCL which impacted on their perceived performance as clinical supervisors. These were also associated with internet access and purchasing of expensive data bundles at the beginning of the Covid-19 pandemic; the participants verbalised that internet access was a problem, and data was expensive because they had to use it every day, would run out of data and it needed to be bought often. One participant expressed that she had inadequate data supplies, resulting in the live interactive online sessions being cut off; then she had to postpone the session to go and buy data, in order to resume the online clinical learning with the undergraduate nursing students.

The participants reported that the undergraduate nursing students had similar challenges of inadequate data supply, and there would then be no response from them on the discussion forum or in the chat room. The students would send WhatsApp text messages to report that their data was depleted and requesting the participants to open the online platform until late so that they could utilise the night-time data bundle, which various online network service providers make available free of charge. The participants articulated that they were physically exhausted as they had to engage with the undergraduate nursing students online after hours in order to assist them to reach their learning objectives.

The use of their own, old devices to prepare for using an OLMS was reported to be challenging. One participant stated that she did not have the correct device that could be upgraded, and she could not purchase new devices as all retailers were closed due to the Government lockdown level 5 restrictions, as the deadly virus was taking its toll. Most of the participants informed the researcher that they were using their own laptops, which were old and outdated with slow software speeds; sometimes such laptops would crash in the middle of the online session, forcing the participant to reschedule it for after hours.

The connectivity interruptions were part of the challenges reported and were experienced by all of the participants during the ROCL period, as everybody was at home during that time, the electricity usage was high, family members would be using their own laptops, and the supply would cut off instantly, compromising the online clinical learning time schedules. Supervisors also experienced increased electricity bills. The undergraduate nursing students were also affected by these challenges, with lack of technological devices to participate online, or making use of their own smart phones to take part. Difficulty in keeping track of the students' listening skills was noted; one of the participants reported that it was very difficult to keep track of the students in terms of them listening to what was being taught, since it was not being done using face-to-face skills laboratory methodology.

Loadshedding or electricity power cuts were a major issue that affected all households, schools and businesses, including HEIs, and compromised connectivity during the online clinical learning sessions. It was also reported that the students' attendance during the online learning sessions could not be monitored. The participants reported that students would be seen logging in to the online sessions, but when the participants would ask a question they would discover that no-one was answering.

The participants reported that the geographical infrastructure was challenging, for both the supervisors and some of the students, as parts of the country were underdeveloped in terms of infrastructure. The lockdown restrictions forced all of the HEIs to close, and the participants and undergraduate students were sent home. Some students had no access to Wi-Fi and internet connectivity, which resulted in them being unable to take part in the OLMS offered by the university under study. The participants reported that they received data after two months, as the university under study entered negotiations with the network service providers to allow zero-rated services on data bundles.

However, it was clear that numerous challenges were still being experienced by the participants. For example, environmental challenges were also reported; one of the participants stated that there were network problems where he lived whenever the weather was rainy or windy. He would then lose network connectivity, and it would be difficult for him to engage with the undergraduate nursing students in the ROCL environment.

Noise pollution was also an aggravating factor in terms of these challenges, when participants stayed on busy roads. Noise was also viewed as one of the interruptions, since during this period everyone in the household was at home.

It was clear that the abovementioned challenges compromised the OLMS which was prepared for the participants in this study to interact online and assist the undergraduate nursing students to attain learning outcomes. The participants indicated that data bundles are no longer an issue of concern, and students had been provided with laptops so that they could connect online. However, technological devices and materials, including equipment, had still not been provided to all participants by the university under study.

6.2.4 Clinical supervisors' awareness of continuous professional development for using digital technology

This theme sought to explore the training and developmental needs that the participants required to be met in order to function efficiently and confidently in using the OLMS provided by the university under study, and the participants' learning needs in terms of keeping updated and abreast of new developments as they articulate the evolving nature of ROCL. All participants in this study repeatedly stated that continuous professional training is necessary to equip themselves, as is exposure to in-service education and training programmes to equip them for the online clinical learning platform, e-learning and digital technologies. The participants demonstrated eagerness to learn new technologies and new strategies to make things more interactive online.

Some participants stated that they wished to be trained on Microsoft Excel and using the library, to attend training such as seminars and conferences related to what they are supposed to do, and to be trained according to their scope of practice. One participant commented that there had not been any formal training, and that while a few workshops were offered by the university, these were general in nature and not directly targeted at them. Another participant stated that online clinical learning enhances a paperless environment and better time management, and that self-development for upskilling in online clinical learning is needed. A third participant voiced that she is planning to study further to gain more exposure to technology.

The findings of this study highlighted participants' individual wishes as follows: they wanted new technical devices to be provided for the supervisors, to increase educational quality. They also wished to be trained in different technology programmes and to acquire new technological

skills in order to be innovative. As one of the participants noted, it would defeat the whole purpose of online clinical learning if the resources are not in 100% working order, so it is important to provide the main elements in order to make online clinical learning possible. Participants also confirmed the importance of recognising the evolving nature of technology in order to meet students' expectations and to stay updated in terms of what the undergraduate nursing students' curriculum expectations are. Ongoing training will assist in upskilling the clinical supervisors.

The need for continuous professional training and development in terms of e-learning and new technology was clearly established in this study. The clinical supervisors need to keep abreast of new technology, with the provision of training that is specific to them, as they felt less competent and less skilful in terms of dealing with the digital transformation.

6.3 LIMITATIONS OF THE STUDY

The study was conducted at, and participants were recruited from one HEI in the Western Cape in South Africa, and hence the researcher could not obtain richer information. The fact that the study was conducted at only one of the four universities in the Western Cape that trains nursing students means that data cannot be generalised beyond the study context. The population of this study consisted of 40 clinical supervisors who had obtained the qualification associated with being a professional nurse. Therefore, the findings of this study are limited to one setting and cannot be generalised to other contexts.

6.4 RECOMMENDATIONS FOR EDUCATION AND PRACTICE

The clinical supervisors should be prepared in advance during an orientation period at the HEI to equip them for any unforeseen disruptions in the face-to-face skills laboratory methodology, by integrating opportunities for alternative methods for teaching online.

The HEI should integrate remote online clinical learning as part of the overarching teaching methodology, to ensure that the clinical supervisors are able to present educational material online using various technological platforms.

Integration of artificial intelligence (AI) and virtual reality (VR) into the learning and teaching methodology of the undergraduate nursing programme will allow flexibility to improvise on demonstrations and even practising the skills. This will create unique opportunities to accommodate and allow the provision of online clinical sessions.

Continuous professional development should be prioritised and provided to the clinical supervisors to address gaps in digital literacy education among them, for example in-service training on how to upload clinical lesson plans and interact with the undergraduate nursing students online. This will ensure that competence levels are achieved and will allow the clinical supervisors to keep up with and abreast of the evolving nature of e-learning and new technology.

A fast and reliable internet connection and adequate resources to facilitate online learning need to be available, as do suitable hardware and software for accessing the online learning platform. Digital learning devices, such as smartphones, tablets, laptops, and internet data, need to be provided to all clinical supervisors at the HEIs to allow them to perform effectively during the online clinical learning sessions. Provision of a dedicated space would be ideal to ensure a

conducive physical space and environment for learning. Designing a clinical online learning model for the clinical supervisors would empower and enhance their performance.

6.4 RECOMMENDATIONS FOR FUTURE RESEARCH

This research study should be expanded to other HEIs which have operationalised a clinical supervisors' programme in their undergraduate nursing course, in order to formulate policies that would safeguard and assure the quality of the remote online practices of clinical supervisors while navigating online learning management systems.

Further research should be carried out to explore the clinical supervisors' knowledge and practices regarding pedagogy and its impact on clinical learning within the online academic environment.

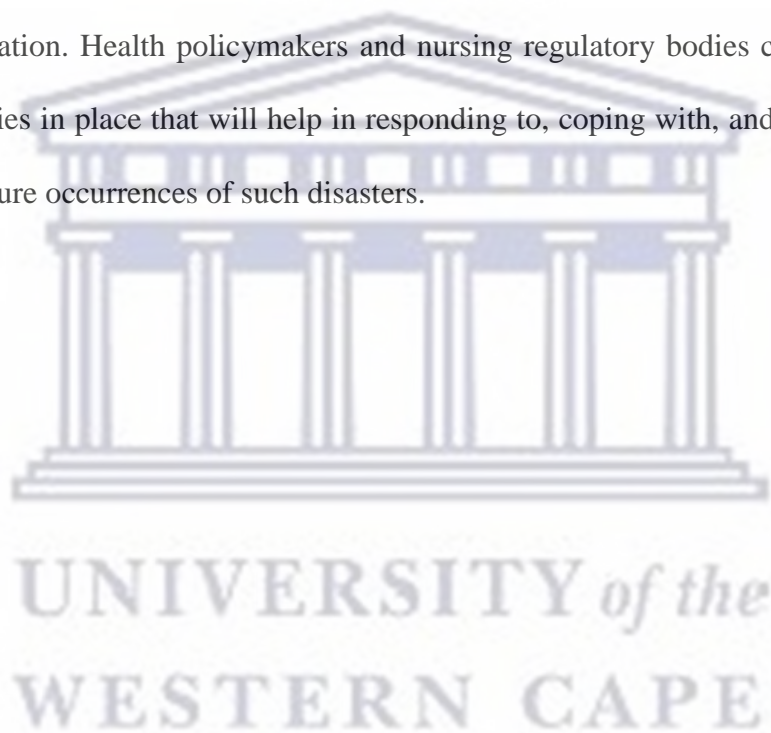
Likewise, the attitudes and behaviour of students towards online learning should also be investigated in order to add to the existing body of knowledge.

6.6 CONCLUSION

This study explored the experiences of clinical supervisors interacting with undergraduate nursing students in a remote online clinical environment during the Covid-19 pandemic. Numerous challenges were experienced due to inadequate preparation for online clinical learning during the Covid-19 pandemic. The provision of devices, for example laptops and mobile devices, is essential to ensure that the clinical supervisors can cope with the educational demands of this environment.

It is recommended that clinical simulation should be expanded to include AI and VR in remote online learning platforms. Further support should be given to the clinical supervisors who have difficulties in accessing the OLMS by providing devices and access to data to facilitate this.

The impact of Covid-19 on nursing education has also been shown in other parts of the world; however, if adequate measures are put in place by way of disaster preparedness and pre-planned justification strategies, future crises like Covid-19 will have less impact on nursing education. Health policymakers and nursing regulatory bodies countrywide should put policies in place that will help in responding to, coping with, and recovering quickly from future occurrences of such disasters.



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ADDENDA

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ADDENDUM A:

INFORMATION SHEET

Project Title: *The experiences of clinical supervisors interacting with undergraduate nursing students in a remote online clinical learning environment during the Covid-19 pandemic at a university in the Western Cape*

What is this study about?

This is a research project being conducted by Mankalima Ivy Jodwana at a university in the Western Cape. As a clinical supervisor you are a suitable candidate to be included in this study, and I would like to invite you to participate in this research study. The aim of this study is to explore and described the experiences of clinical supervisors interacting with undergraduate nursing students in a remote online clinical learning environment during the Covid-19 pandemic at a university in the Western Cape.

What will I be asked to do if I agree to participate?

You will be asked to participate in a semi-structured interview that will be held online or in a face-to-face encounter according to your preference to ensure your safety during the covid 19 pandemic. The interview will consist of questions that will assist the researcher to understand your experiences as a clinical supervisor interacting with undergraduate nursing students in a remote online clinical learning environment during the Covid-19 pandemic at a university in the Western Cape. The interviews will be approximately 45-60 minutes or until you as the participant has answered all the researcher's questions.

Would my participation in this study be kept confidential?

The researcher will endeavor to protect your identity and the nature of your contribution in the research study. The researcher will ensure that all identifiable information will be removed from the interview transcripts. The confidentiality and anonymity of the information will be maintained during the dissemination and publication of the results. Data will only be accessible to the researcher, the supervisor and those involved in the study and will only be kept for at



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least five (5) years after the results have been published in accordance with the institution's policy.

In accordance with legal requirements and/or professional standards, we are required to disclose to the appropriate individuals and/or authorities any information that comes to our attention concerning child abuse or neglect or potential harm to you or others. In this event, we will be required to break confidentiality to fulfil our legal responsibility to report to the relevant authorities.

Information Sheet/Privacy Notice

In terms of the requirements of the Protection of Personal Information Act (Act 4 of 2013), personal information will be collected and processed:

No personal information other than informed consent to will be required to participate in this study. Your participation will be kept confidential during the study, and it will not be disclosed to any other person except the researchers of the study. No information will be shared with any person outside the UWC. Your participation will be anonymous and the interview transcript will be kept for a period of five (5) years by the institution. No information that is personal will be disclosed in the thesis or any publication that will be as a result of your participation in the study.

What are the risks of this research?

Participating in a research study involving human interactions, sharing own experiences, or relating to others carry some degree of risks. However, the researcher has an obligation to ensure the well-being of participants is guaranteed and participants are comfortable during interview sessions and are able to discuss their situation or problems. The researcher will ensure that she maintains therapeutic measures which will include to reassure the participant during the interview by providing them time out or the option to terminate the interview if distress is experienced. If the participant experiences any discomfort such as fatigue, emotional distress the researcher will make an appointment for the participant with the staff wellness program at the institution where the study is conducted., with prior arrangement with staff at



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the staff wellness Centre, and she will also follow up to ensure that the participant has recovered/is feeling better.

What are the benefits of this research?

There is no financial benefit for participating in this study. However, the outcome of this study will provide the School of Nursing with an understanding of clinical supervisors' experiences in terms of the remote online clinical learning environment, and how they coped with assisting undergraduate nursing students to achieve requisite learning outcomes. It will also provide recommendations based on the results of the data collected. Recommendations will be provided in terms of guidance and support for clinical supervisors linked to their expressed ability to adapt to, and adopt, new approaches pertaining to remote online clinical learning. This will ultimately assist the undergraduate nursing students to obtain and maintain competency in the clinical practice environment, which is an integral part of the nursing curriculum, even in times of crisis.

Do I have to be in this research, and may I stop participating at any time?

As a clinical supervisor, your decision to either participate or not will not affect the study, and there will be no harm in participating in this study. You are allowed to withdraw at any time during data collection period, without being penalised. Your participation in this research is voluntary.

What if I have questions?

Mankalima Ivy Jodwana from the School of Nursing at the University of the Western Cape is undertaking this research study. If you have any questions about the research study itself, please contact Mankalima Ivy Jodwana, contact number: 0724274961, mjodwana@uwc.ac.za.

For any other queries regarding this study and your rights as a research participant please contact:

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This research has been approved by the University of the Western Cape's Humanities and Social Sciences Research Ethics Committee.

Humanities and Social Sciences Research Ethics Committee

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ADDENDUM B: CONSENT FORM

Title of Research Project: *The experiences of clinical supervisors interacting with undergraduate nursing students in a remote online clinical learning environment during the Covid-19 pandemic at a university in the Western Cape*

Please tick the boxes to show understanding and agreement of the below points:

- The study has been described to me in language that I understand.
- My questions about the study have been answered.
- I understand what my participation will involve, and I agree to participate of my own choice and free will.
- I understand that my identity will not be disclosed to anyone.
- I understand that I may withdraw from the study at any time without giving a reason and without fear of negative consequences or loss of benefits.

I agree to be [audiotaped] during my participation in this study. (Choose your answer)

Yes No

Privacy notice:

In terms of the requirements of the Protection of Personal Information Act (Act 4 of 2013), personal information will be collected and processed:

- I hereby give consent for my personal information to be collected, stored, processed and shared as described in the information sheet.
- I do not give consent for my personal information to be collected, stored, Processed and shared as described in the information sheet.

Participant's name.....

Participant's signature.....

Date.....



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ADDENDUM C:

Semi Structured Interview Schedule

Title: *The experiences of clinical supervisors interacting with undergraduate nursing students in a remote online clinical learning environment during the Covid-19 pandemic at a university in the Western Cape.*

1. What are your existing capabilities and capacity in terms of using technology to conduct remote online clinical learning?

2. What are the key interventions that you deploy/use in remote online clinical learning technology to interact in remote online clinical learning?

Probe: Please tell me about these challenges?

3. What challenges did you encounter whilst engaging with remote online clinical learning?

Probe: Please tell me about these challenges?

4. Tell me about your ability to increase educational quality for the students whilst using remote online clinical learning? Probe: what strategies did you use?

5. How will you keep yourself updated and abreast regarding remote online clinical learning?

6. How do you think that you can use remote online clinical learning to increase educational quality for your students?

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Addendum D: Interview transcript

Interviewer: Welcomed the participant and thanked her for availing herself for the research interview.

Participant: It's my pleasure.

Interviewer: Our research study revolves around the time when there was rapid spread and the severity of the deadly virus Covid-19 globally. Which resulted in the immediate closure of all schools, businesses including Higher Education Institutions in South Africa. A lockdown situation on a level 5 which was instituted by the South African Government to prevent the spread of the deadly virus. The clinical supervisors had to adapt to a new method of clinical learning from face-to-face skills lab methodology to remote online clinical learning for the undergraduate Nursing students, so I would like you to reflect all that we will be discussing today around that time. Thank you so much, could you briefly introduce yourself to me?

Participant: I am a clinical supervisor. I was working at that stage I was working already for my 5th or 6th year at UWC as a clinical supervisor. At that stage I was only moved to BNUR 2, before the Covid 19 lockdown and working remotely. At the time I was working at New Somerset Hospital, prior to that I was working for 5 years, I was working with the BNUR 3 team. The reason for the switch was, because of the new curriculum and the community skills, which had to be handed over to the students and to also assist colleagues with the community skill which was now in the new curriculum. So, during Covid I then had to assist with across the line, hence working remotely to assist across the line remotely with all year levels, and not only BNUR 2 and BNUR 3 so that is just a brief introduction of myself and also with regards to the skill at UWC as a clinical supervisor.

With regard to the impact, I would say firstly I think with everyone in general one went into a total shock at the sudden notification by the President regarding the lockdown and the harsh lockdown at that time, which meant it took time for us to recover and continue with the services and for me, personally I think that it took two weeks, because I think we went into adapting in a new way of teaching after we had realise what we were actually dealing with and that the studies of the students had to continue. So it made us go into learning again as a clinical supervisor and not just learning with regard to what you are going to teach and learning new skills. You had to work with your laptop with new apps on your laptop with regards to how you are going to work and communicate and also to look at your resources which you had at home, because we could not go into campus.

Interviewer: Thank you for that rich information. Now it brings us to the beginning of our interview schedule. It is going to compose of six questions that will have probes in between. I would really love us to really engage with this information that you just given. To have in-depth knowledge about your experience during that time? We will go to question number 1.

Participant: Yes, I am fine.

Interviewer: What are your existing capabilities and capacity in terms of using technology to conduct remote online clinical learning and what were you able to do?



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Participant: I think with that question, I need to start at the very beginning, with regard to what you have at home. We had to upgrade, because we were not allowed to go out you know to shops and internet café and those things were all closed. Which meant that we had to find ways to develop new apps on your laptop at home, and also we had to find things that are compatible for the software that are on your devices. I also had to use my phone in conjunction with my laptop, because sometimes was not compatible and the other one was compatible. So this sort of opened my mind up, we were given training on Ikamva which I unfortunately could not make, because I wasn't connecting due to poor internet connection, but I had to go onto the Ikamva and teach myself how to actually manoeuvre myself and move around on Ikamva, not only for my BNUR 2 and BNUR 3 skills, but also for BNUR 1, because we had to be on chatroom. We had to be in the discussion forum and we had to do online skills lab sessions. We had to learn on how to respond to the google invitation, because google at that stage wasn't something that everyone was familiar with, but with time it was part of the learning process for all of us and that we started off with our online chat with students on the chat room and also with the discussion forum, and I think that was a gradual process which brought me into the computer literacy, if I can put it as skill. Where one had to learn to communicate with students without actually having face to face with the student, but rely on the information. So of the things I know about myself of which did improve at that time is that I had to type very quick and regard to the chat room and the discussion forum. Also I needed to go into Ikamva the previous day to see what resources were uploaded for the students to have a reference to. So that I could also give information and also add information with what I had in mind for my references or the books that I had at home, which I could use and reference with the students. So there are skills that I may say that are mentoring online, which was develop. At first it was a bit overwhelming and also one would disconnect or not understand and had to learn, how to communicate with the student online. So that the student and with your teaching could be on the same page. So, it meant that even we had to prop, so that we can get students to understand what was actually expected of them, but all in all it was a new way of learning an overnight new way of learning. We did not have a choice, but get ourselves upskilled and also sometimes it is a challenge of course it can be due to the rate we had to adapt to, but also one had to make use of what the University had on Ikamva and make use of your students who had the skills already, and also teach yourself the skills that you did not have, and that was something at that stage to. It may have been difficult is second nature now to continue with both face to face and we are still doing online teaching. I think hopefully that would answer your first question.

Interviewer: That was such rich information, you really could connect and tried your utmost best to reach out thank you so much. Can we get to the second question now? What are the key interventions that you deployed meaning that you used in remote online clinical learning environment to interact with your undergraduate nursing students?

Participant: What I think for me that I had to get used to was we had to come on board on what was the new norm. Which one had to adapt to and also that it meant that you were working with a student who you had to be compatible with that you could not see,



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but you had to know what the student was actually requiring with regard to the objective. So that meant that we had to go read and pay more attention to what was on Ikamva, like I have mentioned already and that one also had to learn on how to make things more a joy able and more understanding with this remote online teaching. I had to learn how to put PowerPoints together to gather information which would be beneficial to the student and also to make it of such a nature need and it will enhance the interest of the student and off course not to have face to face. Also what was my point whenever I have put information together. I have used one of my colleagues who would assist with the digital part. If there was anything additional that could be put on and link where students could use as a reference and get a video. So that it could enhance the PowerPoint also with regard to our chatroom, the discussion forum and I would already have a plan on introduction or a scenario which we used to work on quizzes or scenarios which was given prior to the student who went into the discussion forum to already have a plan or an introduction or a plan which we worked on a quiz of the scenarios which was given previously to the students. So when we went into the chatroom or when we went into discussion forum the student had already gone through the necessary information to be able to be part of the group discussion that was taking place, that was not face to face, and it became very interesting and one got to know the students, even though you did not see the faces, because of the students communication on these online chats and discussion forums. One had to also learn to be prompt if it was started at 08:30 am. We had to be set-up and already present at 08:30am. Student would not login or logout, because they are not sure if they are logging into the right training program. So it took from us to be prepared prior for the student. I hope that answered your question.

Interviewer: Thank you. I would really want to get more info on the part of the students you had to see and also login. Did you have a specific timeframe where you had to login with your students and what did you do if maybe when the students did not login?

Participant: In that place we had to use, for me I had to be logged in at least 15 minutes prior to when we are going to start. So whoever logs in they would be able to see that we are present and were a team of about 5 lecturers and 3 clinical supervisors who were working remotely and also doing the chatroom, the discussion forum with the students and then we were also doing the google training. The invitations would go out the day before so that the students can be aware of what is going to take place. So the emails would go through and we would make sure as the clinical supervisors that we would be 15 minutes before the time that we are already logged in, but what we did prior to the sessions is that we would have a quick chat with each other. So we all knew how we are going to communicate who is going to take the first 15 minutes who is going to take the 2nd 15 minutes, because these were long sessions. Sometimes sessions up to 4 hours a day, and then we would be with a different group in the afternoon with another 4 hours. So there had to be prior preparation or just a quick meeting with the people who are going to work with you. When we logged on and it was already time to start and we noticed that the students had not logged on. We would actually put the information on the discussion forum or on the chat room to say that the session is going to start and this is how long the time is going to be and if it is possible that the students could login, because the session will be commencing shortly. And with this notices that



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we've put on the students would come gradually, because what happened is that they would find that they are not the only once there they were too shy to speak, too shy to type and we would see them, but they are not actually interacting. So we had to prompt online or we had to prompt in the chatroom, the discussion forum to get the student and personally address their names greeting them. We always started by greeting the students if the students were on, so when they come on they would know we are already there and we are waiting and that is going to be the discussion and when we see students come on. We would greet the students and if there are students who are giving input we would make it clear that we have received and that is grateful for the interaction just to encourage and motivate your students.

Interviewer: Thank you. Do you think this method or these strategies that you used they worked well?

Participant: There are two answers to the question. I think if you have no option we would say that it did benefit the students, because it promoted learning and also promoted a different type of skill to focus on a listening skill, and not just focus on a face to face you know a presentation or training. So it developed almost liked a multi-purpose type of training for students to adapt to, but it is always better, because we know that face to face, because I know that sometimes it causes a little bit of frustration or there was some fatigue when students were not communicating. Students were present, but the students were not given. You can only prompt to a certain point and you cannot prop anymore so I do not think you can replace the face to face with an online 100%, but it is something that you can use in conjunction with the face to face, so the silence was sometimes a bit frustrating and also one was not always sure that the students understood, because of the way they responded and for me that was sometimes a little bit difficult, are we on the same page. How do you try and get the students to be on the same page. Sometimes we had to simplify or use an example or a scenario so that the student could be put back in line with what the objective was in the session. So it did not solve all the problems, but we learned that when a particular student had a problem. We would ask the student to make contact with us, whether it is on the chat not with the chat with the rest of the group, but via WhatsApp or if the student could send an email and then to clarify whatever it is that the student did not understand it had to be done in that way. There was no other alternative unfortunately, because we were not doing face to face. So, we would send additional information to students who are struggling, it could be sent on email, or it could be done on a conversation on WhatsApp.

Interviewer: Thank you so much. You have reply worked hard during this lockdown to get this message through to the students on remote clinical learning. Now we are moving to the 3rd question. What challenges did you encounter whilst and engaging with remote online clinical learning during this pandemic period?

Participant: I think that question poses a lot of thing in my mind as I am having now this conversation, because it was not just about the learning. We were experiencing a lot of sorrow and challenges in our own personal life due to a lot of our friends and colleagues passing due to Covid. So that was also for us to adapt and our own personal challenges and also to be able to continue with the student training and



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also while we were doing student training we had to realise that students were also going through their own challenges with regard to family who was effected and family who had passed on and even some students when we did our training on online. We could hear some students are not well, but they were still online and we would even advise the students that if you are not well, not to talk and if possible just to give us their information and we will get back to you, only to find out that the student had covid. So did family members also have covid. So for me that was very difficult time to do the training, because you did not want to do the training, but because of a lot of personal dilemmas which you had to face with, and also if you did not have the correct devices that you could not upgrade, because you could not go to the places they were all closed. You had to use the minimum and to the best of your ability and also that your home space became your work space, that is something that is defined and I know with regard to students what difficulty it was for them working at home online and some of them having all the resources and also having family in the background or children in the background. People were not allowed to go out at that stage so they had to continue with their learning online and with a lot of interruptions taking place at that time around them, they just had to continue or for that matter the students were not well. So what we tried to do was to at least get the critical thinking still going. So to give support and encourage the students in a very I would say assertive way, because we also had to realise that we needed to be compassionate, not knowing what the students challenges were when they were getting their training or online teaching once it is done, because students had to adapt to the new norm, because some of them I can imagine was also not on board with regards to how to go onto google how to move through the chat line in the discussion forum. We would find that some students would tell us that they are only logging in an half an hour later, because of the challenge of not knowing how to get on and how they had to manoeuvre themselves and the place where they are supposed to correct themselves and say that you are not in the chat room we are in the discussion forum or vice versa, so you need to log on to the chat room. With regard to students they had to multitask, because it meant that they had to do reading and typing and when you go to the discussion forum or you go onto the chatroom. We found that we could not always reach the amount of students online. Which meant that some of the chats you had to go back to be able to see if you did cover all your aspects which you had to be covered during that session, because if you have 60 students logging on the messages that is coming through or the communication that goes through quiet fast, because you are trying to communicate that with the students. With regard to our google meet training is to do the skills training. We found a lot of challenges, because firstly there was no face to face, secondly the students could not always identify with the equipment that was required, because we made the PowerPoints and we were not faced with the skills lab at that stage. So a lot of the PowerPoints was based on overseas YouTube videos and students had to then watch those so we then had to explain to them that we may be a 1st world country we are still a 3rd world country so we had pictures and showed them that we are still using that equipment. I know that when we were doing the emergency training, and also I think when we were doing nasal gastric surgeon with one of the groups. It was very difficult for them to identify that it is something that they used to have in the skills lab and now they have to do it online. Also we were not doing face to face, so eventually we had to adapt to a



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certain way and bring some information by doing it on video. So that they could at least understand, but that was not always possible, because you know connectivity something you do not have control over. So we had to continue with our PowerPoint. Someone would be presenting, and someone would do the PowerPoint and somebody to do the register, so that you could check who is there and who is not there. The register had to be done at the beginning and in the middle and just before we end by someone else, and someone had to monitor the chat box, if we were doing the online training. We then learned to work with each other with regard to this so that there was a better flow and consistency with regard to what we were teaching the students. Later on it became easier, because students were not so shy any longer to be able to communicate with us while we were busy with the training. We gave them time for questions and also after PowerPoint in the slide we would also ask if there were any questions. How we would encourage them with regard to this was to mention that the more you participate the easier it is for us to see who was actually in that training for the register purposes. And when the students realised that it made it easier for the register, they realised that it is better to attend and participate and give some information or an answer to add to the training, you know that is very good. When that started happening. I think we were just getting into it we were back to face to face. Where it was becoming more enjoyable and where there was a better communication between students and with us online. We had to return back to the old way of doing things if I can put it that way.

Interviewer: Thank you, that was really an effort to integrate your practice during this time that was really difficult for everyone to connect. Now as I was listening, you were talking to me about connectivity that was not good. Do you want to elaborate on that part of connectivity?

Participant: I am Sorry Ms. I'm just thinking of not all of us at that stage had internet at home, and you always had to have data, so that you could use your data to connect to your laptop, so that you could use it from your phone, and I think at the beginning, we were not given data at that point, because these things were not pre-received as what was required for us to do the work online, but later on because of the challenge regard to using a lot of data I think that people later on realised that it was necessary and for management it was necessary for those that are working remote would need to have data, so that we wouldn't have a problem with limit connectivity, because sometimes it was just due to your network, or it was due to the fact that you ran out of data, because of the long hours that you had to be online, and that sometimes you would also had your devices that had to be charged, because if you had a 4 hour session in the morning you are going to have another 4 hour session in the afternoon. The time was to short, you know when you had to connect to a charger for your device. It meant that you had to charge your devices, getting up at night to change devices so that all your devices are at least charged the batteries are full, so that you stay connected, but what we did to help each other and other on the team. We would sit with our devices next to us so that we could



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with each other and say that I am losing connectivity, can you login or can continue with that PowerPoint. That's why the person that is doing the was not the same person that was presenting, so that at least there was a There was always a plan B. So, if there was a silence then a WhatsApp will go to one of the other colleagues to say that I am not connected at the losing connectivity. I think also, because sometimes there was so many of us that we would just fall out of the stream and then the other colleague can continue until you get back or you are able to continue with the PowerPoint. We did find a way eventually of how to do it, so that it works. I mean we even picked up with the students who would be coming on and going off, because they are losing connectivity and we understood that 100%, because the same would happen to us. Sometimes you would fade away and sometimes you would just be cut off completely. That was due to us that was not always in control. I hope that answers that question.

Interviewer: Thank you. You are really saying that you worked as a team, supporting each other at these times of working remotely at home. Can you also just tell me did you have any financial implications in this whole scenario that you have been explaining to me as a challenge?

Participant: At the beginning stages there was a lot of money that was being spend on data and also I had one challenge, where I had to upgrade my laptop completely in the covid time I had to go and get myself another computer, because the word and that kind of things were not anymore able to... they were needed to be upgraded and the only way to do it was to go and get myself another laptop. So, yes there were those financial challenges and then there were certain, uhm I know with myself I had to go and get antivirus, because we were busy with so many things, preparing for students with a YouTube videos and things like that, that I had to get that package also. So those financial implications were mostly data. I had to change my laptop and also that uhm there was the antivirus which I also had to get and I also had to upgrade my word document.

Interviewer: That was really means and ways of trying to see that no student will be left behind during this lockdown period and during this new way of learning clinical skills from face to face to remote online clinical skills Did you manage to overcome, did you perhaps try to get the message to go through with all your endeavours that you tried to do?

Participant: I think with regard to like you are saying trying. Like for me there was a lot of personal development there were things that I did not know the skills with regard to working online and using the computer and so on, which I was not thinking that I would be able to use, because we were not just doing online work as in only doing the chatroom discussion forum. We had to mark tutorials. We had to mark quizzes. We had to mark normal exam papers for students, which we had to do on google and you had to edit the document and mark it. There was a lot of personal



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development which was done and also that it taught us also how to do research, because if you didn't know how to do it. You had to research on how to do it. I know for many, many evenings I would lie in bed and I would be on YouTube to get information with regard to how to find a short cut on how to do certain things. So, it is not a problem now for me if there is information that I require, because that the new norm taught me how to help myself if there was something I had a challenge with. It also taught me if one was passionate about your career and also about what you were doing with the students with regard to it was always wanting to do your best and giving your best. So, we would look for ways on how we are going to improve it with our next session if this session didn't work so well, but also taking into consideration that we at all times had to improve our skills. Which was not only to benefit the student, but also to benefit ourselves. If I think of myself now, I actually miss those chatrooms discussions and I even miss those discussion forms, because it made us go into a different mode of thinking where your critical thinking were reflective thinking and I remember when we did the different reflect of module thinking and how it enhanced the way you thought about thinking, because you had to think about it differently and how to make it also an experience, but a positive experience for the student and also for yourself. So, there was a lot of development. I think also for the students at the end of the day it was also very good. Now they can go between online and face to face and it is not a challenge, because I know now that it is still a skills lab session which is face to face and then students go onto a quiz online, but it is part of the new norm. A new way of

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So, it is not a challenge, you can be at home if there is something that you do it will be done online and the group will get together and do it online. So that we have all been through a lot of training without realising it where we were forced to go on to your google calendar and check that, your information, your training up skill which was given on the google training and a lot of information was coming up on shared google and so on. Then it could only mean that there was development lots of personal development of taking place and I must say that the

University also eventually had a lot of input with regard to that, because everybody made themselves available if there was information that needed to be shared it was shared on the google drive.

Interviewer: Thank you so much. Question nr 4. We have covered some of this question, but I just wanted to ask you can you tell me about your ability to increase educational quality for the students, while using remote online clinical learning. What strategies did you use, you have covered most of this question?

Participant: Yes I think that it was a matter of going into all the resources that you have collected over the years. I would not even say over the months, but over the years putting it together and looking at how you could move from one point to another to improve the teaching. So we had to strategize with regard to like I said you looking at various YouTube videos to be able to make the choice with regard to which is the better for the student at the end of the day. Also we were given tasks to those in the team which each one were given a something which they had to research and eventually we would discuss and then come up with the plan on how we are going to presented to the students. So that it is easier for learning purposes. So I think sometimes we don't realise that all your learning and all your teaching over all these years, how



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much information we gather, it was not difficult to be able to go back and pull out that information and how easy it was for you to adapt again to certain things which you may have not done currently, but maybe now you had to come back and do things for second year where you were maybe doing third year, but because of your prior knowledge also because of all your training in all your research. It was not a difficult thing to do, because it then improved your knowledge also and you would then empowered your student, they would do a quiz or they would go back and do a little bit of group work. Where they had to come back and report on the chat rooms, they would have a group leader that would report and that encourage them also to go and get more information. So most of what we did was on YouTube was from the videos that was on the personal development of UWC and also by using your resources and come up with new ideas and it made us aware that was not needed or necessary anymore and where we had to improve, because there were somethings that we could picked up that were outdated and needed improving and we even had to mention that regard to the student. I even remember with the video the baumanometer was one that was still with mercury and then we had to go into that conversation with the students and be able to tell them that we do not use those, because of the risks with regard to the mercury and that it can be toxic and how it was supposed to be done and dispose of, so one conversation would lead to another and that is how you would also then add to the information to develop the students.

Interviewer: Thank you. I would love you to tell me was the module guide able to direct you to be able to interact and try and make some videos and the presentations that you are talking about, the module guide for this level of student was it helpful for you to do so or pass the message across, as you were on YouTube you say, and you tried to really do presentations. You were putting in videos and images. Was the module guide, guiding you much to be able to partake or interact with the students?

Participant: I think that we are very fortunate in that just before the lockdown. I in any case had access to BNUR 2 and BNUR 3, because I was in BNUR 3 and I was in BNUR 2, but we did have module guides which we did make available for the BNUR 1, because there were some sessions where we also had to carry out with those students, but I must say is that we have then learned to work across the year levels which we didn't had to do when we worked face to face, and we could access the module guides on Ikamva and also that there were people like the lecturers who would made the module guide available for us on Ikamva. So that we could use those objectives to be able to prepare you're PowerPoint, because I do not think that you could present a PowerPoint on a level without the outcomes and also without the objectives. It is important that, that outline is first given before you can continue with your PowerPoint, so that you can see whether it has met their objectives whatever you have prepared.

Interviewer: Thank you. You have really worked hard, because you wanted to see that no student shall be left behind. We are now on question nr 5. Because of the involving nature of technology and E-learning. Tell me how would you keep yourself updated regarding remote online clinical learning, because of this involving nature. How did you keep yourself appressed? How would you keep yourself updated?



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Participant: I think it is not only just to do with my work currently that I need to be online, because now most students, it is not only the nursing students at such, but there is a lot of live stream that is taking place on google and the links you could use for whatever you need to learn about and you need to read about it. There is a link and you could be able to go to that link. I think what it has taught me, is that nothing is actually outside of your reach, because of the lockdown we were taught on how to get on to learn and to do problem solving by gathering information and to search and also so that you could connect with not just your country, but other countries and they're way of doing things and what I've also learned was that the connectivity was not always as it was pre-received. You know sometimes you see something as challenge it wasn't that big challenge, because once you get to learn on how to do it. You can see that you can solve your problems even on your own, because you just had to get onto the links, and learn how to use google and you know so for me here we are now. We are doing a google meet after hours, because of the lockdown, because we would not have been doing this if there wasn't the lockdown, but we have learned to find ways of continuing with online and also with improving your social media your skills that you have. So I do not think that there is anything now that is beyond your reach no longer, because what we were forced to do and because of the new norm. So for me yes I can still go onto whatever UWC has as long as they have a link. I can go onto the link and I can be part of conversations or discussions and give input if I have to give input and I also remember with regard to covid in any case. I used to go onto their link and regard to the update that they used to have on a regular basis and that is still continuing. I may not be sitting in front of the laptop right now, but I can do whatever I need to do on my other devise. Which is I can do sitting in my bedroom not necessary have to sit at my desk with my laptop in front of me, I can still be part of a conversation or part of something on social media or what I liked to be part of so that is something that is still continuing. I would not say that it has stopped. I could go onto Ikamva students are going onto Ikamva more easily now like they did before. They would sit in the skills lab session and they could follow the session on Ikamva while they are in the skills labs sessions, because they had learned to multitask, If I can put it like that so they are able to see pictures and a word that I am using in the skills lab face to face now and if they do not understand they would put it on google and they would get the picture and also they will understand what it is. So even for me if there is something that I do not understand and if there is something I would look for easier ways to explain or if I need more information for the students for my session I go and I google that information, so that it is available and I would snapshot somethings and use that. So yes there is actually a wide and big world out there which has actually opened up for us and it is continuous. I do not think that this will stop now, because with covid I think it also minimised our paper based that we will always be using and also time constraints to manage our time better and to find other, a plan B one must always have a plan B if I can put it that way, if there are constraints you can always go online and continue with what you needed to continue with. So it is not going to be like we are in our first two weeks of lockdown where everything just went totally silent and people felt helpless and hopeless us to be able to do problem solving and to have a plan B in place. So I don't think that the online or will ever be something that we can live without. I think it has become second nature to develop ourselves with regard to online and google and so on.



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Interviewer: Thank you so much. I wanted to just ask you one question was there any training that was offered to you as a clinical supervisor during this time?

Participant: I think that what I need to, I did some training myself with regard to my colleagues, I did child health training, when I was in BNUR 3 with the community aspect that the new curriculum students were doing. The BNUR 2 colleagues just had to be upskilled with that, but vice versa we were then also given training of BNUR 2 which we needed to be upskilled as BNUR 3 colleagues so there was a program that was put in place for that. Also there was training with regard to excel training and also on Ikmva and google training and various social media platforms which was needed to be able to give training or to communicate we were given training for that, and also you had to make yourself available. If there was anything that was beyond that was not made available if you still needed additional training. So it was important to the times that we had sessions with the lecturers where they would do a short summary of information with regard to certain things that we had to do online. So, yes there was training maybe not always exactly 100% the way we would have liked it, but we did get training. There was definitely that exposure to training and update.

Interviewer: Thank you so much. What training did you think that you liked to have as a clinical supervisor regarding the involving of technology?

Participant: I was actually just looking at something online today and realised that as a clinical supervisor we are on the road or are in the field or at placement actually most of the time and things that we would be part of the things that we were doing online and when we were working remotely. We could log into training is not so easy to do now, but we still need to upskill. So I know that with regard to a certain training for BNUR2 there are trainings which are available and you are not always in that position to upskill with regard to your IT. I know skills there are various things with regard to that, which I am myself have a bit of a problem with and that is for instance with the Google and so on, but I am teaching myself like I said and also that if there could be more training with regard to that I think it could help, because we are sitting with different programs you have for leave for the Edu cos system which is our things that we need to know and also that if you have to log a call everything is online, because there are still people who are working from home or who are working remote. So people are gradually coming back to face to face, but not everyone is back. So there is still the dependency on us to be upskilled with regard to the literacy, with regard to IT and such social media and so on. So I think the training needs to be ongoing that time needs to be made for us to still upskill. We have learned now with the lockdown that we need to always have a plan B and be in place and not stop now, because we are back to face to face but to continue with upgrading with what we have and improve all the time. So personally I feel I am still open to learning regarding to new things in the IT field still which skills I still need adapt to, because do your own problem solving sometimes when you are working, and if there is not always sometimes someone there who is going to be able to assist you and so on. I hope that answers that one.

Interviewer: That was a mouth full it really answers the question there is training available, but now as I was listening carefully sometimes there is no time, because you are outside there to access this training.



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Participant: Because it is available and you can access it. That to me is disadvantage, but it needs to be put in. So that we can be upskilled at all times.

Interviewer: Thank you mam. We have come now to the last question. And you have really answered most of this question. Can you tell me now, what do you think that you can use remote online clinical learning to increase the educational quality for your students now?

Participant: The question that you for me as a field worker that is not an easy one, because when I am in the field the students are some of them are face to face they are attending lecturers just to face to face, and then when we are at skills lab then students are at placements, but what we have and what I am doing is that I have my resources on my devices I can then use the skills lab session or what we do is that we can give the link or we can open the link on the computers for the students to enhance some of the training which we are doing face to face with them. So if we give them the link they can go into the link to go and get more information with regard to that training. So it is not easy for us at the moment to be doing that dual training, because of the type of the exposure that we are doing which is skills lab and which is at placement and at placement it is not safe for us to be using our devices so that can be a challenge, but we are trying to get them the link and onto their computers and that if we have other devices like I have a small tablet which I then put in information on and I can show them this information in the skills labs. So those are ways that we are trying to enhance and also to share the links with students, and what I am doing is that I am using my personal device to be able to share some information with my students when I am doing placement and I see something like a poster or whether it is some information or a reference or a specific resource. I would take a photo of that and I will sent it to them on our WhatsApp groups, because that is another thing that came into the being with the lockdown now more than ever is that we were forced to have a WhatsApp group for our students and a WhatsApp group helps us so if there is information that we would share the information will only enhance the training we can then just sent it off to the groups to that they can have the information.

Interviewer: Thank you. I can see that you were so passionate to interact online and I can see that you were pushing that no student shall be left behind during this time of this pandemic lockdown. I think we have come to the end of our interview session and I want to thank you so much for giving me such information that was reflecting back to the covid 19 pandemic era and what we are not doing and what is happening into the integration of knowledge and theory between you as a supervisor and the student. I promise that the information that you have shared with me today will be kept confidential under lock and key. The software, the recording it will be kept using a password to uphold and to keep it confidentially on my computer. I think we have come to the end of our interview thank you so much for your time.

Participant: Thank you very much and also the different way of training has really taught us a lot. There has been a lot of training and I am also passionate about my career. So I think that, that was my motivation even though we were in lockdown is that the passion had to continue for our nursing career, so I hope that the students did benefit and I also hope that it would come out strongly in your research. Thank you so much.



UNIVERSITY OF THE WESTERN CAPE

Private Bag X 17, Bellville 7535, South Africa

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E-mail: 4077986@myuwc.ac.za

Interviewer: Thank you for your time.



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Addendum E: Ethics Approval to conduct the study.



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WESTERN CAPE



22 July 2022

Mrs M Jodwana
School of Nursing
Faculty of Community and Health Sciences

HSSREC Reference Number: HS22/5/16

Project Title: The experiences of clinical supervisors interacting with undergraduate nursing students in a remote online clinical learning environment during the Covid-19 pandemic at a University in the Western Cape.

Approval Period: 18 July 2022 – 18 July 2025

I hereby certify that the Humanities and Social Science Research Ethics Committee of the University of the Western Cape approved the methodology, and amendments to the ethics of the above mentioned research project.

Any amendments, extension or other modifications to the protocol must be submitted to the Ethics Committee for approval.

Please remember to submit a progress report by 30 November each year for the duration of the project.

For permission to conduct research using student and/or staff data or to distribute research surveys/questionnaires please apply via:

<https://sites.google.com/uwc.ac.za/permissionresearch/home>

Patricia Josias
The permission letter must then be submitted to HSSREC for record keeping purposes.

The Committee must be informed of any serious adverse events and/or termination of the study.

Ms Patricia Josias
Research Ethics Committee Officer
University of the Western Cape

FROM HOPE TO ACTION THROUGH KNOWLEDGE.

Addendum F: Permission to conduct research.



UNIVERSITY OF THE WESTERN CAPE PERMISSION TO CONDUCT RESEARCH

DEAR **Mankalima Ivy Jodwana**

This serves as acknowledgement that you have obtained and presented the necessary ethical clearance and your institutional permission required to proceed with the project referenced below:

RESEARCH TOPIC

The experiences of clinical supervisors interacting with undergraduate nursing students in a remote online clinical learning environment during the Covid-19 pandemic at a University in the Western Cape.

Name of researcher : Mankalima Ivy Jodwana
Permission valid till : 18 July 2025
Institution : University of The Western Cape
Ethics reference : HS22/5/16
Permission reference : UWCRP559161

You are required to engage this office (researchperm@uwc.ac.za) in advance if there is a need to continue with research outside of the stipulated period. The manner in which you conduct your research must be guided by the conditions set out in the annexed agreement: Conditions to guide research conducted at the University of the Western Cape.

Please be at liberty to contact this office should you require any assistance to conduct your research or require access to either staff or student contact information.

Regards
Dr Ahmed Shaikjee
Deputy Registrar Academic Administration


Approval status: **APPROVED** 23 July 2022

To verify or confirm the authenticity of this document please contact the University at researchperm@uwc.ac.za.



UNIVERSITY OF THE WESTERN CAPE
Robert Sobukwe Road, Bellville, 7535, Republic of South Africa

Addendum G: Agreement to conduct research at UWC.

<p>The University of the Western Cape is a Public Higher Education Institution established and regulated by the Higher Education Act, No. 103 of 1997 (Republic of South Africa), with the language of instruction being English. The university is duly accredited by the Council on Higher Education and its degrees and diplomas are registered on the national Qualifications Framework in terms of the South African Qualifications Authority Act, No. 58 of 1995.</p>	<p>21. Approval to conduct research is governed by the Protection of Personal Information Act, No 4 of 2013, which regulates the entire information life cycle from collection, through use and storage and even the destruction of personal information and it is incumbent on the researcher/investigator to understand the implications of the legislation.</p> <p>22. The researcher/investigator must employ the necessary measures to conduct research that is ethically and legally sound.</p>
<p style="text-align: center;">  CONDUCTING RESEARCH AT THE UNIVERSITY OF THE WESTERN CAPE ANNEXURE AGREEMENT Conditions to guide research conducted at the University of the Western Cape </p>	<p style="text-align: right;">Page 1 of 2</p> <p style="text-align: center;"> UNIVERSITY OF THE WESTERN CAPE - 2021 GUIDE ANNEXURE AGREEMENT Conditions to guide research conducted at the University of the Western Cape </p>
<p>ANNEXURE</p> <p>CONDITIONS TO GUIDE RESEARCH CONDUCTED AT THE UNIVERSITY OF THE WESTERN CAPE</p> <p>The onus rests on the researcher/investigator to observe and comply with the conditions set out below with the aim to conduct responsibly ethical research. Clarity must be sought from the authorising office should the interpretation of the conditions be unclear. University staff and offices may opt not to participate in any study should they feel it infringes on their own work or research.</p>	<p>3. ACQUIRING CONSENT & RIGHTS OF PARTICIPANTS</p> <p>31. It is incumbent on the researcher/investigator to clarify any uncertainties to the participant about the research.</p> <p>32. Written consent must be obtained from participants before their personal information is gathered and documented.</p> <p>33. Participation in the research must be voluntary and participants must not be pressured or coerced.</p> <p>34. Participants have the right to access their personal information, obtain confirmation of what information is in the possession of the UWC/author/investigator and who had access to the information.</p> <p>35. Participants have the right to withdraw from the research and insist that their personal information is not be used.</p>
<p>1. ACCOUNTABILITY</p> <p>11. The University reserves the right to audit the research practices of the researcher/investigator to assess compliance to the conditions of this agreement.</p> <p>12. Data collection processes must not be adapted, changed or altered by the researcher/investigator without written notification issued to the authorising office office.</p> <p>13. The University reserves its right to cease research if any proposed change to the data collection process is found to be unethical or in contravention of this agreement.</p> <p>14. Failure to comply with any one condition in this agreement may result in:</p> <p>14.1. Disciplinary action instituted against a researcher/investigator employed or registered at the University;</p> <p>14.2. The contravention reported to the appropriate employing or registering the external researcher/investigator.</p>	<p>4. DATA AND INFORMATION MANAGEMENT</p> <p>41. Due diligence must be afforded by the researcher/investigator to:</p> <p>41.1. Mitigate any risks that could compromise the privacy of participants before</p> <p>41.2. during and after the research is conducted;</p> <p>41.3. Collect only information that is relevant to the aim of the research research;</p> <p>41.4. Verify all personal information collected about a participant if the information is supplied by a source other than the participants participants;</p> <p>41.5. Refrain from sharing participant information with a third party party;</p> <p>41.6. Apply for an exemption if the identity of participants should be revealed in the interest of the research aims.</p> <p>42. The researcher/investigator must employ appropriate, reasonable and technical measures to protect, prevent loss of and unlawful or unauthorised access of research information.</p>
<p>2. GOVERNANCE</p>	<p>Should you have any questions relating to this agreement please contact:</p> <p style="text-align: center;">ashalkicc@uwc.ac.za, or researchperm@uwc.ac.za</p> <p style="text-align: right;">UNIVERSITY OF THE WESTERN CAPE - 2021 GUIDE Page 2 of 2</p>

ADDENDUM H: Editor's Certificate

Leverne Gething, M.Phil. *cum laude*

PO Box 1155, Milnerton 7435; cell 072 212 5417

e-mail: leverne@eject.co.za

2 February 2023

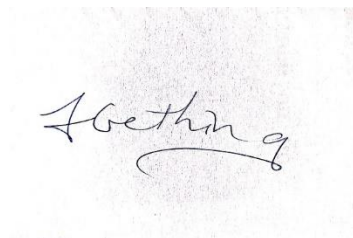
Addendum I: Declaration of editing of a Master's in Nursing thesis:

THE EXPERIENCES OF CLINICAL SUPERVISORS INTERACTING WITH UNDERGRADUATE NURSING STUDENTS IN A REMOTE ONLINE CLINICAL LEARNING ENVIRONMENT DURING THE COVID-19 PANDEMIC

I hereby declare that I carried out language editing of the above thesis on behalf of **Mankalima Ivy Jodwana**.

I am a professional writer and editor with many years of experience (e.g. 5 years on *SA Medical Journal*, 10 years heading the corporate communication division at the SA Medical Research Council), who specialises in Science and Technology editing – but am adept at editing in many different subject areas. I have edited a great deal of work, including academic papers and theses, for various academic journals, universities and publishers.

I am a full member of the South African Freelancers' Association as well as of the Professional Editors' Association.



Yours sincerely

LEVERNE GETHING leverne@eject.co.za