KNOWLEDGE, ATTITUDES AND PERCEPTIONS OF NEWLY QUALIFIED PROFESSIONAL NURSES TOWARDS HEALTH RESEARCH IN UMGUNGUNDLOVU HEALTH DISTRICT, KWAZULU-NATAL, SOUTH AFRICA

by

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submitted in accordance with the requirements for

the degree of

MASTER OF ARTS

in the subject

HEALTH STUDIES

at the

UNIVERSITY OF SOUTH AFRICA

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NOVEMBER 2022

Student Number: 63403811

DECLARATION

I declare that **KNOWLEDGE, ATTITUDES AND PERCEPTIONS OF NEWLY QUALIFIED PROFESSIONAL NURSES TOWARDS HEALTH RESEARCH IN UMGUNGUNDLOVU HEALTH DISTRICT, KWAZULU-NATAL, SOUTH AFRICA** is my work and all the sources used or quoted have been specified and acknowledged by means of complete references.

I affirm that I submitted the dissertation to originality checking software and that it is within the accepted requirements for originality.

I further declare that I have not previously submitted this work, or part of it, for examination at UNISA for another qualification or at any other higher education institution.

21 November 2022

SIGNATURE **DATE**

Krishnavalli Rajbally

KNOWLEDGE, ATTITUDES AND PERCEPTIONS OF NEWLY QUALIFIED PROFESSIONAL NURSES TOWARDS HEALTH RESEARCH IN UMGUNGUNDLOVU HEALTH DISTRICT KWAZULU-NATAL, SOUTH AFRICA

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ABSTRACT

New professional nurses graduate every year and begin their work in the clinical setting. To move from novice to expert professional nurses (Benner 2014:402), health research needs to be incorporated into their clinical setting and decision-making to improve patient care.

The purpose of this study was to explore and describe the knowledge, attitudes and perceptions of newly qualified professional nurses toward health research within uMgungundlovu health district, KwaZulu-Natal, South Africa and recommend methods to augment a culture of research among professional nurses. A qualitative approach using an exploratory, descriptive design was used.

Focus group interviews were conducted and data saturation occurred in focus group 3. Data analysed using Creswell and Creswell's (2018:316-321) five steps of data analysis revealed newly qualified professional nurses had a positive attitude toward health research and perceived research important for patient care, despite their knowledge being introductory. Recommendations include support to enhance the culture of research among nurses.

Key concepts

Attitudes; Benner's Novice to Expert Model; culture of research; health research; knowledge; newly qualified professional nurses; perceptions.

ACKNOWLEDGEMENTS

Thanks be to our Lord and saviour, Jesus Christ, who is able to do exceedingly, abundantly above all that we could ask or imagine according to his power that is at work in us (Eph 3:20).

To you my Lord is all the glory, power and honour forever and ever.

I sincerely thank the following people for their continued support and encouragement throughout my studies:

- Professor GH van Rensburg. Your expertise, encouragement and motivation kept me always striving to give off my best even when it was difficult. Our face time will always be remembered and cherished. May God richly bless you and your family always for your dedication and commitment to me throughout this time. You are my role model.
- My loving, caring and encouraging husband Raj. Thank you for believing in me and for being so understanding through this demanding journey. Whenever I felt so tired, you always motivated me to do a little at a time. You will never know how much I love and value you. You are really my rock.
- To my daughter Roxanne Viola. Thank you, babe, for being a pillar of strength to me and the rest of the family. You never fail to say how proud you are of us. I love you more than words can express and more than you will ever know. Love you forever.
- To my daughter Kelly-Anne Megan. My heartfelt thanks, my darling, for all the help you gave me during my studying. The scrumptious meals will never be forgotten. My love for you knows no bounds and its measure is infinite.
- To my grandchildren, Alexis Skyler and Zaiden Cole. My precious time with you two was shared with my studies. Thank you for the laughter and playtimes we had as you helped ease the stress of my studies. I love you two more than all the stars in the sky.
- My late parents, Mr Valoo and Mrs Angela Moodley. Thank you for the sacrifices you both made for me to succeed. They went to work in the cold, dark mornings so I could have the best in life. I truly wish you could be here to share in my joy. Today I have fulfilled your dreams and my own. A parent’s prayer is the most unselfish prayer made.

- To my loving sister Sharmie. Thank you for all the encouraging messages and visits. You mean so much to me. I love you forever sis.
- Nosipho, my mentor and supervisor. Thank you for all your help, encouragement, and support and for being a special friend. Your kindness is really appreciated. I thank God for bringing you into my life.
- Vani, my friend. Thank you for being my friend and sister. Your friendship means more to me than you will ever know. Thank you for balancing my stressful life. Friends are made in heaven.
- To all my family, friends and colleagues. Thank you for always supporting me in my studies.
- To my co-facilitator, Kelly-Anne. Thank you for making the data collection process pleasant. Your gentle spirit and willingness helped to calm the stressful situation. I greatly valued your input in data analysis.
- To Sandy Chandramohan, my co-coder. Heartfelt thanks and gratitude for all your hard work in finalising the themes and subthemes. Your knowledge and expertise are admirable. I really appreciate you.
- Mr Swart. Thank you for agreeing to edit my work. You were willing from the very first time I contacted you. I really appreciate you.
- Mrs Coetzer. Heartfelt thanks for the technical editing and formatting of my studies. You were so obliging to assist me. Your kindness has really touched my heart. May God richly bless you.

DEDICATION

I dedicate this study to my loving and caring family: Raj, Roxanne, Neil, Kelly-Anne, Lexi and Zaiden, whose support, love and encouragement helped me through my studies.

God has truly blessed me with an amazing, loving family. I will love, cherish and appreciate you always.

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CHAPTER 1

ORIENTATION TO THE STUDY

1.1 INTRODUCTION

New professional nurses graduate from a nursing programme every year and begin their work in the clinical setting. The professional nurse, on graduation, must provide holistic nursing care to the patient. This leads to the new professional nurse and the patient being vulnerable in the healthcare setting and it is here that health research is recognised. For a novice professional nurse to move to an expert (Benner 2014:402), health research needs to be incorporated into their clinical settings and decision-making.

Nursing in the 21st century is commemorated by multifaceted and demanding needs from both society and the profession, as nurses are expected to understand and undertake research in pursuit of scientific knowledge (Sekoto 2020:1). Nursing research is searching out facts so that knowledge could be enhanced by collating and analysing information to improve understanding of phenomena under study according to Okoduwa, Abe, Samuel, Chris, Oladimeji, Idowu and Okoduwa (2018:2). With nurses forming the largest group of healthcare providers worldwide, they are pivotal in ensuring the promotion and delivery of quality healthcare and services (Jordan, Bowers & Morton 2016:53; Mngomezulu 2015:1). This is in keeping with Bhembe (2014:1-2) who states that nursing aims at providing quality care for the patients, families, healthcare providers and healthcare system by ensuring increased exposure to nursing research.

EzzatAbdElnasar and Mohamed (2019:44) express that even though research is readily available, and nurses understand the importance thereof, using research in practice is still slow. This could be attributed to nurses' qualities, beliefs toward research, self-confidence, education, knowledge and skills. Hines, Ramsbotham and Coyer (2022:1) state that a nurse who has a positive attitude toward research can translate researched knowledge into practice and has a higher research engagement. Van Rensburg, Armstrong and Geyer (2017:1) further emphasise that research capacity development is vital in providing patients with quality, cost-effective healthcare. However, this skill is mastered over time while minimising the discomfort of research.

Closely related to the knowledge base of nurses is the attitude toward research, where the researchers assert that a positive correlation exists between knowledge and attitude (Aksoy, Arici, Ucku & Gelal 2018:38). On the contrary, Caldwell, Coltart, Hutchison, McJurry, Morrison, Paterson and Thompson (2017:2) explain that newly qualified nurses experience difficulty in using and conducting research post-graduation thereby causing them to revert to the traditional method of following doctor's orders. The study's findings concur with Mthiyane (2018:3), who states that nursing education does not stimulate critical thinking and research on nurses, resulting in nurses continuing the traditional method of following doctor's orders.

Furthermore, Caldwell et al (2017:2) emphasise the necessity for on-going training in health research uptake and positive research culture. The culture of research in the healthcare domain must be valued to institute an empowering environment for research and researchers (Wilkes 2015:1036), as many nurses believe that research is needed. However, only a few actively engage in it (Okoduwa et al 2018:1). Almaze and Emmamally (2015:91) concur that a nurse's attitude toward research is directly related to the nurse's utilisation of research, thereby indicating that the nurse must be convinced that research-based interventions are superior to interventions based on tradition or habit.

Mngomezulu (2015:4) likewise stresses the importance of research as a function of professional nurses in the clinical setting, as it is here that many problems are identified and resolved using research. A healthy attitude toward research results in a confident and well-skilled health professional who journeys through the constantly changing field of the health profession (Sekoto 2020:5). However, Dagne and Ayalew (2020:2) state that despite the nurse's mindfulness of the importance of research utilisation, majority do not assimilate this evidence into their practice. Resulting in research use being at an infancy level.

Moreover, in a study by Forsman, Rudman, Gustavsson, Ehrenberg and Wallin (2012:1), 50% of nurses in the first, second and third-year post-qualification graded their research use at a low level or a very low level, and the low users decreased over time.

Given the above information, the researcher's interest has been enthused to explore the knowledge, attitudes and perceptions of newly qualified professional nurses toward health research within uMgungundlovu health district, KwaZulu-Natal.

1.2 BACKGROUND TO THE RESEARCH PROBLEM

The last years have seen a remarkable change in the importance of research in nursing as nurse educators have encompassed the integration of evidence-based practice into the nursing curriculum of both undergraduate and postgraduate students (Sin & Bliquez 2017:447). According to Ashktorab, Pashaeypoor, Rassouli and Alavi-Majd (2015:1), undergraduate nurses need to possess research knowledge and skills as it enables the nurse to gather, appraise and implement evidence as well as evaluate the outcomes in clinical practice. The nurse who spends the most time with the patient is the first to recognise any change in the patient's condition. The nurse will therefore be the first link in the causal chain between complications and corrective interventions, making clinical decisions an integral part of patient care (Ashktorab et al 2015:1).

Clinical decision-making in healthcare has changed substantially, with nurses making choices based on available evidence and continually reviewing these choices as new research is done (Monde, Akakandelwa & Kanyengo 2017:1). The current health practices require evidence to validate actions. Knowledge from nursing research has led to improved quality in nursing care and cost-effective interventions, as stated by Mutisya, KagureKarani and Kigondu (2015:95).

According to Degu, Yilma, Beshir and Inthiran (2022:2) practice based on evidence has been acclaimed as the gold standard for providing compassionate and safe care while encouraging excellence in nursing. However, in low- and middle-income nations research is not commonly used as procedures based on research are new and intimidating to the nurses. In South Africa, Ethiopia, Kenya, Nigeria, Egypt, Botswana, Burundi and Malawi research is emphasised, however, the practice is still in its early stages (Degu et al 2022:2).

Breimaier, Halfens and Lohrmann (2011:1744) found that the nurse's requirements relating to knowledge and use of research were, however, merely introductory in nature, resulting in a negative attitude toward research. In contrast, Squires, Estabrooks,

Gustuvsson and Wallin (2011:1) state that a positive relationship exists between research utilisation and beliefs, attitudes and nurses' current roles.

Iradukunda and Mayers (2020:1), in an African context, highlight that although nurses are knowledgeable regarding nursing research, it does not mean they will have a positive attitude toward nursing research. The findings further disclosed that 50% of participants exhibited a positive attitude and 50% had a negative attitude toward nursing research, even though 84%-92% were knowledgeable about research. Similarly, Hadgu, Almaz and Tsehay (2015:73) found a positive attitude toward research existed among 90% of nurses, but only 19% used it in their daily practice. The findings conferred with Vijayalakshmin, Pashupu, Nagarajaiah, Thimmaiah and Math (2015:512), who state that despite positive attitudes, a lack of knowledge and education hampers the practice of research. Sekoto (2020:96), in a quantitative study, agree that nurses in Botswana have limited research knowledge but have a positive attitude toward health research.

Many studies looked at the knowledge and attitudes of nurses toward research. A study in China by Zhou, Hao, Guo and Liu (2016:4-5) indicate that nurses had a positive attitude toward research but were limited in their knowledge due to a lack of time and workload. This corresponds with studies by Rojjanasrirat and Rice (2017:49) and Sin and Bliquez (2017:447) in the United States, and Al-Yateem, Griffiths, McCreadie, Robertson-Malt, Kuzemski, Anthony, Fielding, Khatib, Sojka and Williams (2019:216), and AbuRuz, Hayeah, Al-Dweik and Al-Akash (2017:1) in the Middle East, who confirm nurses lacked knowledge in research, but have a positive attitude.

Furthermore, in the African context, the researcher has found studies in Zambia, Ethiopia and Egypt where nurses also had positive attitudes but lacked knowledge due to a lack of time to read articles, increased workload and lack of authority to change orders (Dagne & Ayalew 2020:7; Abouelfettoh & Al Ateeq 2018:72). This is in keeping with studies in South Africa by Jordan et al (2016:52) and Almaze and Emmamally (2015:91). Jordan et al (2016:53) further emphasise that clinical decisions not based on research can be detrimental to the patient.

In KwaZulu-Natal, a study was conducted by Mthiyane (2018:3) using a qualitative approach that focussed on student nurses and their willingness to adopt evidence-based practice in clinical decision-making. The study's findings revealed that although nurses

have a positive attitude towards research, critical thinking was not stimulated regarding healthcare and research. Thus, students reverted to traditional methods of taking doctor's orders. The researcher further considered the study by Mngomezulu (2015:73) that focussed on the professional nurse's perspectives regarding the utilisation of research using a quantitative approach. This study revealed that professional nurses lacked knowledge of research and the utilisation thereof.

The above studies highlighted a need to explore and describe newly qualified professional nurses' knowledge, attitudes and perceptions in the clinical setting using a qualitative approach as the student nurses qualify and become professional nurses. Furthermore, a qualitative approach was selected as it provided a rich, in-depth understanding of newly qualified professional nurses' knowledge, attitudes and perceptions toward health research. This was established in the above studies and the lived experience of the researcher, where the researcher found a similar gap among the newly qualified registered nurses within the uMgungundlovu health district, KwaZulu-Natal, South Africa.

1.3 STATEMENT OF THE RESEARCH PROBLEM

Research accelerates knowledge creation, encourages decision-making, contributes to skills development and increases cost savings (Halabi 2016:118).

Hines et al (2022:2) affirm that much literature exists in international studies on why nurses do not use evidence in practice highlighting the lack of knowledge and discomfort surrounding research terminology as the main reasons. The authors confirm that although research knowledge is included in undergraduate nursing programmes, it does not translate into practice or a strong understanding following graduation (Hines et al 2022:2). Nurses felt comfortable carrying out doctor's orders and critical thinking was not stimulated, according to Mthiyane (2018:3) and Jordan et al (2016:51). A healthy attitude toward research results in a confident and well-skilled health professional (Sekoto 2020:5). Van Rensburg et al (2017:1) further emphasise that research capacity development in nurses is essential for providing quality, cost-effective healthcare.

The researcher concurs with the above studies as the researcher, a professional nurse by profession, had worked 10 years in the clinical domain post-registration. In all that time, the researcher did not get involved in research and was content carrying out the

doctor’s orders without question. Through work-related interactions, the researcher noticed that other professional nurses did not expose themselves to research in the clinical setting.

During the post-graduate course, the researcher was exposed to different clinical settings in various KwaZulu-Natal public hospitals. Here the researcher also found professional nurses in other public hospitals complacent and content to carry out the doctor’s orders without question. This led to professional nurses using the same outdated methods in nursing care resulting in longer hospitalisation of the patient and added costs. This corresponds with Jordan et al’s (2016:53) findings that clinical decision-making without research can be detrimental to the patient.

Post-speciality, the researcher adopted a passion for research and wanted to understand whether the complacent attitude toward research was due to lack of exposure to research, the attitudes and perceptions toward research, lack of research knowledge or health research training. The researcher was motivated to explore and gain an in-depth understanding of newly qualified professional nurses' knowledge, attitudes and perceptions toward health research.

The researcher, however, could not provide a solution to the problem at the time; therefore, the researcher explored the knowledge and attitudes and described the perceptions of newly qualified professional nurses toward health research. The researcher believed that understanding the above phenomena would assist in developing support systems to enhance continuous development and training in health research, thereby augmenting a culture of research. The researcher also believed the support received would progress the novice professional nurse from novice to expert in the clinical domain (Benner 2014:402).

1.4 PURPOSE AND OBJECTIVES OF THE STUDY

With the aim of addressing the difference in knowledge, attitudes and perceptions of newly qualified professional nurses toward health research, the above phenomena of knowledge, attitudes and perceptions needed to be subject to academic scrutiny and examination.

1.4.1 Purpose of this study

The purpose of this study was to explore and describe the knowledge, attitudes and perceptions of newly qualified professional nurses toward health research within uMgungundlovu health district, KwaZulu-Natal, South Africa.

1.4.2 Study objectives

The objectives of the study were to:

- explore and describe the level of knowledge of newly qualified professional nurses of health research
- explore and describe the attitudes and perceptions of newly qualified professional nurses toward health research
- make recommendations to enhance the culture of health research among professional nurses

1.5 SIGNIFICANCE OF THE STUDY

As newly qualified professional nurses transition from student to professional nurse and novice to expert (Benner 2014:402), they experience fear and anxiety. They now have to make independent decisions on the patient's nursing care. With nursing being dynamic and innovative, nurses are expected to use the latest interventions in caring for the patient, which is cost-effective and safe.

The study provides significant information about the knowledge, attitudes and perceptions of newly qualified professional nurses toward health research in KwaZulu-Natal, South Africa. Furthermore, valuable information can be obtained regarding why newly qualified professional nurses continue to carry out doctor’s orders without question and limit critical thinking in the clinical domain.

This study could further motivate and inspire novice professional nurses to be involved in and collaborate with other health research institutions. Additionally, the information obtained could support and favour the enhancement of a culture of research among newly

qualified professional nurses as the nurse steadily moves from a novice nurse to an expert in the clinical field.

The above could result in professional nurses using research to improve patient care and costs and limiting unnecessary practices, leaving the patient happier (Karakoc-Kumsar, Polat & Afsar-Dogrusöz 2019:269). This is in keeping with Bahadori, Raadabadi, Ravaangard and Mahaki (2016:14), who state that applying research findings in daily practice indicates professional development which leads to efficient, effective and quality nursing care.

Therefore, by exploring and describing newly qualified professional nurses' knowledge, attitudes and perceptions toward health research gaps are identified and recommendations made on how to address the problem. Moreover, the findings will form a base for future researchers who want to explore the knowledge, attitudes and perceptions of newly qualified professional nurses toward health research and the effect of support in enhancing a culture of research among professional nurses.

1.6 DEFINITION OF KEY CONCEPTS

For this study, the following key concepts have been identified and contextualised to the study.

1.6.1 Knowledge

According to the *Merriam-Webster Dictionary* (2022d, sv “knowledge”), knowledge can be defined as knowing something through experience). Bolisani and Bratianu (2018:2) describe knowing as a human process and knowledge as its result, concluding that knowing and knowledge result from human inquiry. For this study, knowledge refers to what is known or the information the professional nurse has about health research.

1.6.2 Attitude

According to Altmann (2008:146), an attitude is how we feel about or behave toward a particular thing or person. Cherry (2021:1) explains that an attitude often results from our experience or upbringing.

In the current study attitude refers to professional nurses' emotions, beliefs and behaviour toward health research.

1.6.3 Perceptions

The *Oxford Advanced Learner's Dictionary* (2010, sv "perceptions") explains the meaning of perceptions as how one notices things using the senses, that is, how we see, hear or become aware of something. Perceptions include awareness and understanding of a particular setting (*Collins English Dictionary* 2021b, sv "perceptions").

In this study, perceptions refer to the professional nurses' interpretation, understanding and views of health research.

1.6.4 Newly qualified professional nurses

A professional nurse, who was previously known as a registered nurse, can be defined as a person registered in terms of Section 31(1) (a) of the Nursing Act (Act 33 of 2005) following the completion of an approved nursing programme at an accredited nursing institution. In terms of Section 43(1), Regulation R.173, in terms of the Nursing Act (Act 33 of 2005), a person may apply for the designation of a "registered professional nurse" (South Africa 2005; South African Nursing Council 2005).

In this study, the registered professional nurse will be referred to as a professional nurse who is currently licenced with the South African Nursing Council and employed at Greys Hospital and Harry Gwala Regional Hospital in uMgungundlovu District in KwaZulu-Natal Province.

1.6.5 Health research

According to Polit and Beck (2021:2), research is a systematic inquiry that uses disciplined steps to answer questions or solve problems. The term 'health research' is a method of systematically gathering, describing and understanding data to generate knowledge to promote health (Alkhaldi, Abed, Pfeiffer, Haj-Yahia, Alkaiyat & Tanner 2018:2). Health research signifies clinical and nursing research in this study.

1.6.6 Culture of health research

Culture can be defined as customary beliefs, attitudes, or social forms that are shared by common people in an organisation or institution (*Merriam-Webster Dictionary* 2022c, sv "culture"; Cole 2019:1). Coetzee (2019:2) states that research culture is the specific culture of an academic to the task of research and Caldwell et al (2017:2) emphasise the demand for on-going training in health research uptake and positive research culture. In this study, research culture refers to how we evaluate, support and reward research.

1.6.7 Benner's Novice to Expert Model

Benner's Novice to Expert Model is a model that provides the basis for clinical knowledge, performance and career progression. This model illustrates the movement of the nurses from novice nurses with no professional experience to expert nurses with an intuitive grasp of the situation. The model consists of five stages (Benner 2014:402).

In this study, Benner's model will be utilised to illustrate the movement of the newly qualified professional nurse as research is used in patient care.

1.7 THEORETICAL FRAMEWORK

The theoretical framework is a blueprint or a guide that is often 'borrowed' for a research inquiry by the researcher and on which the research is built (Adom, Hussein & Agyem 2018:438). According to Bradbury-Jones, Taylor and Herber (2014:135), there is a long tradition of theory central to qualitative research. However, it has always been complex and contentious. Kivunja (2018:46) asserts that the theoretical framework summarises concepts and theories from previously tested and published knowledge which the researcher then uses to give meaning to their study and data.

Reeves, Albert, Kuper and Hodges (2008:1) bring to our attention that theories provide multifaceted and all-inclusive conceptual insights into phenomena that cannot be pinned down to any single occurrence. Theories afford researchers different 'lenses' through which to look at complicated situations and social issues. Reeves et al (2008:1) further

state that theories help the researcher focus on different aspects of the data, providing the researcher with a framework for analysis.

Agreeing with the above study, Collins and Stockton (2018:4) add that all research has a theoretical framework which can either be implicit or explicit amidst an inductive approach which she referred to as scaffolding or frame.

In this study the researcher employed Benner's Novice to Expert Model, as the focus is on newly qualified professional nurses (Benner 2014:402). Benner's Novice to Expert Model was derived from the Dreyfus Model of Skill Acquisition and adapted to provide a more objective way of evaluating nursing skills progress.

The model provides a basis for clinical knowledge, performance and career progression as the nurses advance through the stages of novice, advanced beginner, competent, proficient and expert (Benner 2014:402). Progression through each stage is reflected by two aspects of skilled performance: the use of past, concrete experience and change in perception and understanding (Benner 2014:402). As a novice nurse who has no clinical expertise and faces difficulty making decisions, the model is applicable to skill, knowledge and perception uptake. Furthermore, as health research is emphasised, the nurse will move through the levels to competent, proficient and expert, as depicted in Figures 1.1 and 1.2 below.

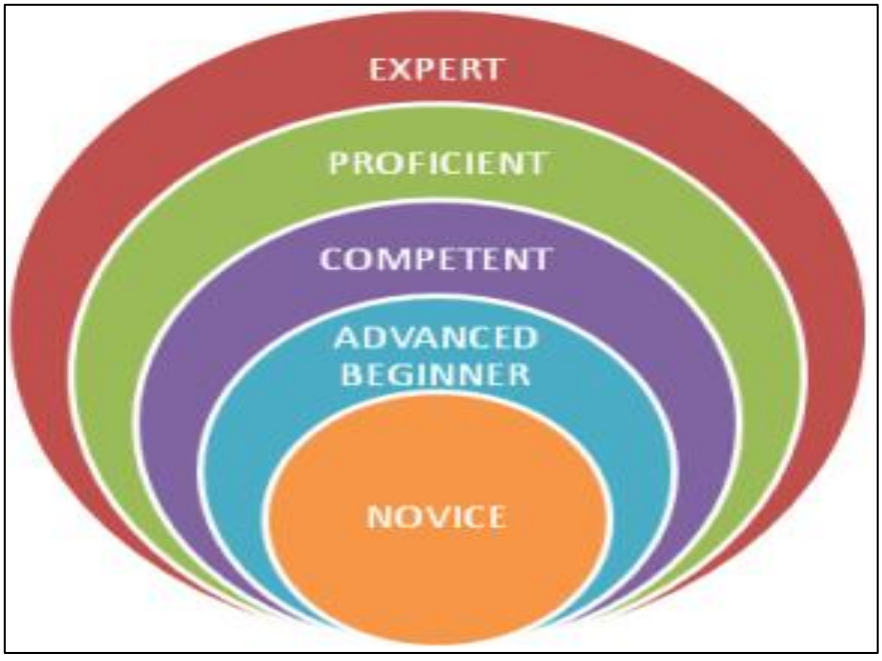


Figure 1.1 Benner's Novice to Expert Model

(Benner 2014:402)

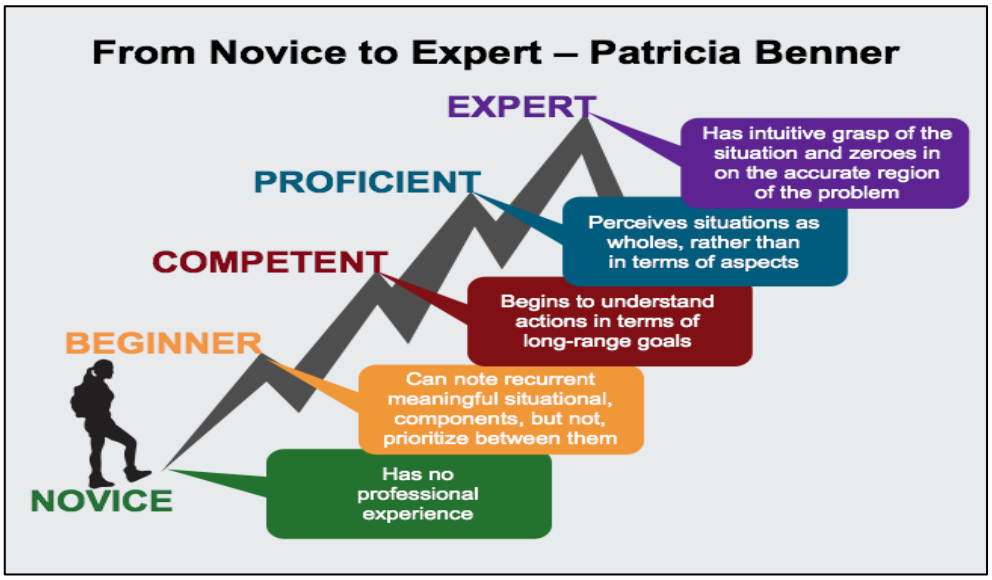


Figure 1.2 Benner's Novice to Expert stages of progression

(Benner 2014:402)

1.8 OVERVIEW OF THE RESEARCH DESIGN AND METHODOLOGY

In this section, an overview of the research methodology is provided. The detailed discussion will be in Chapter 2.

1.8.1 Research design

This study employed a qualitative approach using an exploratory, descriptive design as the researcher explored the attitudes and perceptions and described the knowledge of the newly qualified professional nurses toward health research. The researcher was actively involved in the research process, taking an emic stance, as described by Polit and Beck (2021:471), Bradshaw, Atkinson and Doody (2017:2), and Gray, Grove and Sutherland (2017:70). Polit and Beck (2021:51) add that the research design is an inclusive plan for answering the research question.

The study further used a naturalistic approach and aimed to understand the phenomena through each participant's perspective in their natural setting (Polit & Beck 2021:472; Bradshaw et al 2017:2; Gray et al 2017:70), which was the clinical setting in each hospital. This is in keeping with Aspers and Corte (2019:142), who state that different individuals experience social or physical reality differently.

1.8.2 Research setting

The uMgungundlovu Health District of KwaZulu-Natal Province in South Africa was the study setting. The two hospitals selected for the study were Greys Hospital, a tertiary hospital, and Harry Gwala Regional Hospital, a regional hospital. Greys hospital offers tertiary services to five health districts, and Harry Gwala Regional Hospital is the fourth largest hospital in the country with regard to available beds. The two hospitals were selected primarily for conducting and utilising research for medical investigation.

1.8.3 Study population

The target population consisted of newly qualified professional nurses employed for less than two years at the two hospitals in the uMgungundlovu Health District of KwaZulu-Natal Province, South Africa. The total number of newly qualified professional nurses at both hospitals was 100, of which a total of 20 were taken for the focus group. The accessible population included those professional nurses intending to take part and who met the inclusion criteria.

1.8.4 Sampling

Sampling is the procedure of selecting individuals from a larger population for a study (Bhardwaj 2019:157). This is in keeping with Polit and Beck (2021:261) and Brink, Van der Walt and Van Rensburg (2018:115). In this study, non-probability sampling was chosen as specific individuals were selected from all professional nurses.

1.8.5 Sampling technique

The technique the researcher implemented was quota sampling first, then purposive sampling. A quota sample is whereby the researcher identifies the population strata and determines the quantity from each stratum (Polit & Beck 2021:263; Brink et al 2018:125; Gray et al 2017:344).

In this study, the two hospitals were Greys Hospital and Harry Gwala Regional Hospital in the uMgungundlovu Health District of KwaZulu-Natal Province, South Africa. The number of participants depended on their willingness to offer data to address the purpose

of the study. The researcher included male and female professional nurses from the two hospitals who met the inclusion criteria.

The researcher then intentionally selected participants who provided rich information on the purpose of the study grounded on the researcher's own judgement. The researcher adhered to the inclusion and exclusion criteria throughout the process.

1.8.6 Data collection

The data collection method the researcher employed were focus group interviews using semi-structured interviews. Focus group interviews are most often used as a qualitative approach to gain an in-depth understanding of a social issue and to obtain data from purposely selected individuals (Nyumba, Wilson, Derrick & Mukherjee 2017:20). Semi-structured interviews are used to gather information from significant people who have personal experiences, attitudes, perceptions and beliefs related to the topic of interest (Polit & Beck 2021:514; DeJonckheere & Vaughn 2019:2).

This method was most suited as it allowed for open-ended data collection, enabled probing into areas that needed clarity and were cost-effective in terms of time spent away from the clinical area. The researcher commenced with an introduction to health research followed by a semi-structured interview. In order to prompt additional discussion and meet the study's purpose, the researcher used probing questions. The conversations that followed were audio recorded and the co-facilitator captured the non-verbal cues from the participants in writing.

Due to COVID-19 pandemic regulations and specifically with regard to social distancing, the size of the focus group was a maximum of six participants, as this was manageable in maintaining a 1.5 metre social distancing. All COVID-19 protocols were adhered to (COVID-19 compliance) (Annexure Q).

The focus groups were held in a neutral setting accessible to all participants and took place on the agreed-upon date and time.

1.8.7 Data analysis

According to Brink et al (2018:165), qualitative data analysis comprises categorising, ordering, manipulating, summarising and describing data in meaningful terminologies as the researcher becomes engrossed in the information. According to Polit and Beck (2021:783), the analysis of data is methodically organising and synthesising the data. De Jonckheere and Vaughn (2019:7) further elaborate that data analysis involves reviewing the data in the form of transcripts, audio recordings or detailed notes and applying descriptive codes to them. This is followed by condensing and categorising codes to look for patterns.

Data were analysed according to the five steps of Creswell and Creswell (2018:316-318): step 1: organise and prepare data for analysis; step 2: read and look at all the data; step 3: start coding the data; step 4: generate a description and themes, and step 5: represent the description and themes. Creswell and Creswell's five data analysis steps will be discussed in full in Chapter 2.

1.9 ETHICAL CONSIDERATIONS

Ethics are the moral principles that govern a person's behaviour and research ethics may be referred to as doing what is morally and legally right in research (Huma & Nayeem 2017:3). The three broad principles of ethical conduct, namely, beneficence, respect for human dignity and justice, according to the Belmont Report (Polit & Beck 2021:569; Brink et al 2018:29; Creswell & Creswell 2018:174-175), was applied to the research study. The researcher respected the above principles by ensuring the participants and the two institutions were not harmed in any way. Information and orientation to collection, analysis and dissemination of data was provided prior to consenting to participate.

The researcher obtained approval to conduct the study from the College of Human Sciences, University of South Africa (Annexure A). Permission was requested and obtained from the Health Research and Knowledge Management at the Department of Health, uMgungundlovu Health District of KwaZulu-Natal, to conduct the study at the two institutions (Annexures B and C). Permission was also requested and obtained from the hospital managers of the two hospitals requesting access to the participants (Annexures

D, E, F and G). A comprehensive account of the ethical principles will be discussed in Chapter 2.

1.10 TRUSTWORTHINESS

Trustworthiness in qualitative research necessitates the assessment of the validity and reliability of the study. Therefore, trustworthiness is about the rigour of the study. Brink et al (2018:157) explain trustworthiness as the establishment of the participants' answers while withholding the researcher's biases. Cypress (2017:211) further defines the rigour of a study as the excellence or the state of being very thorough. Included in the definition are the concept of accuracy and the researcher being thorough.

Credibility, dependability, transferability, confirmability and authenticity were adhered to throughout the study. In Chapter 2, the above concepts of trustworthiness are described in detail.

1.11 OUTLINE OF THE DISSERTATION

The dissertation consists of five chapters, each having a clear focal point.

Chapter 1: Orientation to the study

Chapter 1 focuses on the introduction and background to the study, where the problem is brought to the forefront. The research purpose, objectives and significance of the study are then discussed. Chapter 1 continued with clarifying key concepts, an outline of the methodology, a description of the research design and the ethical principles.

Chapter 2: Research methodology

The research design and the methodology are detailed in Chapter 2. Furthermore, the population, sampling, data collection and how the data was analysed are highlighted. Finally, the trustworthiness of the study and ethical considerations are expounded in Chapter 2.

Chapter 3: Presentation of the findings

Chapter 3 is dedicated to the analysis if the data and the related findings or conclusions from the four focus group interviews.

Chapter 4: Integrated discussion of the findings and literature

In this chapter, a discussion is on the analysis and description of the findings. This chapter includes the integration of existing and current literature on knowledge, attitude and perceptions of newly qualified professional nurses toward health research. This integration provided a clearer understanding and insight into the phenomenon.

Chapter 5: Conclusions, limitations and recommendations

Chapter 5 focuses on the conclusions of the findings, the limitations to the study and the recommendations made.

1.12 SUMMARY

Health research is important for providing quality, cost-effective care for the patient and professional nurses acquiring adequate knowledge, a positive attitude and perception of health research can achieve the goal. Identifying these goals, motivates the nurses to seek out opportunities for health research education and training, moving them to action.

Chapter 1 describes the introduction and background of the study. The research problem, purpose, objectives and significance were explained. This chapter also provided a short summary of the theoretical framework, ethical considerations and dissertation layout.

CHAPTER 2

RESEARCH METHODOLOGY

2.1 INTRODUCTION

Chapter 1 presented an overview of the study and Chapter 2 portrays the method followed in this study. Chapter 2 describes the various stages of the research, including the selection of participants, data collection and data analysis process, trustworthiness and ethical considerations.

The current chapter focusses on the study's methodological approach and is guided by the study's objectives and purpose. This chapter provides information concerning the method used in undertaking this research as well as a justification for the use of this method.

According to Kassu (2019:1) and Zulu (2017:12), research methodology is the active search for knowledge encompassing an academic and scientific activity. It is a systematic search for important information on a specific topic and a path through which the researcher formulates the problem and objectives. Polit and Beck (2021:8), Brink et al (2018:187) and Gray et al (2017:194) further explain that research methodology is a theory of how an inquiry should proceed, including the analysis of the assumptions, principles and procedures and enable another researcher to replicate the investigation.

2.2 RESEARCH PURPOSE

The research purpose expresses distinctly and succinctly why the study was performed or the reason thereof, according to Polit and Beck (2021:65), Brink et al (2018:43) and Gray et al (2017:78). The study aimed to explore and describe the knowledge, attitudes and perceptions of newly qualified professional nurses toward health research within uMgungundlovu health district, KwaZulu-Natal, South Africa.

2.3 RESEARCH OBJECTIVES

The study aimed to gain an in-depth understanding of the above phenomena. The ensuing objectives were set to comprehend the purpose of the study and to (1) determine the knowledge of newly qualified professional nurses toward health research, (2) explore and describe the attitudes and perceptions of newly qualified professional nurses toward health research, and (3) make recommendations to enhance a culture of health research among professional nurses.

2.4 RESEARCH DESIGN

A research design is a general plan for selecting and implementing the appropriate approach the study would undertake. The research design best suited to a study is likely to reflect the outcomes and thereby enhance the trustworthiness of the study (Polit & Beck 2021:472; Bostley 2019:79; Brink et al 2018:112). Polit and Beck (2021:51) and Bostley (2019:87) further indicate that the problem statement, research questions and a clear research purpose directs the decision of the research design. Kassu (2019:2) states that the research design is intended to provide an appropriate framework for a study.

In keeping with the above studies, Kuada (2012:57) states that the research design is the blueprint which provides a logical progression of activities and a connection between the steps in the research process. The above assists researchers in making logical and acceptable choices on collection of data and the analysis thereof. A research design is, therefore, the researcher's safest way to resolve the research question consider the subject group, timing and researcher intervention, if any (Polit & Beck 2021:51; Gray et al 2017:192).

This study employed a qualitative approach using an exploratory, descriptive design as the study emerged and induction took shape as the study progressed (Polit & Beck 2021:471; Brink et al 2018:104). A qualitative design is flexible and can adjust as new information is collected. The researcher became actively involved in the study as a qualitative study tends to be holistic. Qualitative descriptive designs are relevant where information is obtained directly from those experiencing the phenomena and where time and resources are limited (Polit & Beck 2021:471; Brink et al 2018:104; Bradshaw et al

2017:1). The next paragraph outlines a detailed justification for selecting the specific approach and method.

2.4.1 Qualitative approach

The philosophical underpinning of the qualitative approach is described as an inductive process, which is subjective as each person has their own perspective, according to Bradshaw et al (2017:2) and Gray et al (2017:251).

An exploratory, descriptive approach is designed to develop an understanding and describe phenomena with active involvement of the researcher in the research process. Polit and Beck (2021:472), Bradshaw et al (2017:2) and Gray et al (2017:256) explain that the research ensues in the actual surrounding of the participants who experience the phenomena.

Qualitative research designs are flexible, capable of adjusting to new information and holistic to understand the whole (Polit & Beck 2021:471; Brink et al 2018:104; Gray et al 2017:251). Brink et al (2018:3) state that a qualitative researcher accentuates aspects of meaning, experience and understanding. The researcher found this design most appropriate to gain a rich, in-depth understanding of newly qualified professional nurses' knowledge, attitudes and perceptions toward health research.

2.4.2 Exploratory design

According to Boru (2018:3), where insufficient information is recognised on a phenomenon, exploratory research is used to develop or add to the body of knowledge. Exploratory research is appropriate for investigating the phenomenon in its entirety, instead of basic observation and description (Polit & Beck 2021:786).

A semi-structured interview guide (Annexure I) was utilised to collect data from the four focus groups. This allowed the researcher flexibility to use open-ended and probing questions. Participants were encouraged to talk freely about their feelings and understanding of the phenomena.

2.4.3 Descriptive design

Qualitative descriptive studies offer a comprehensive summary of an event. Such studies seek descriptive validity where most people (including researchers and participants) observing the same event would agree is accurate. Researchers conducting qualitative descriptive studies stay closer to their data and the surface of words and events to collect knowledge of a currently incomplete phenomenon (Gray et al 2017:28, 39). A qualitative descriptive design is most effective where information is required directly from those experiencing the phenomenon under investigation, where time and resources are restricted, and the special focus is on the ‘who’, ‘what’, ‘when’, and ‘why’ (Bradshaw et al 2017:1).

An exploratory, descriptive design was most suitable as the purpose of the study was to explore the knowledge and attitudes and describe the perceptions of newly qualified professional nurses toward health research in their workplace. This design called for close interaction with the professional nurse in the clinical setting, keeping with Bradshaw et al (2017:6).

The focus group interviews, disclosed how the participants felt about research, their knowledge of it and their perceptions of health research. The participants also verbalised the challenges that they experienced, which formed a barrier to research. This was unexpected, but in keeping with Creswell and Creswell (2018:318), who highlight that unexpected themes can arise during data collection. During this interaction, the researcher gained insight into the nurse’s daily routine while examining if the objectives were achievable.

The researcher explored and described the current state of newly qualified nurses’ knowledge, attitudes and perception toward health research as provided without any interference to improve or refute the data obtained. The final report was a descriptive, contextual account. The researcher used direct quotations as transcribed from the participants, including field notes, in the report.

2.5 RESEARCH METHODOLOGY

Research methods, according to Polit and Beck (2021:793), Brink et al (2018:7) and Gray et al (2017:76), are techniques or procedures the researcher uses to structure a study, collect data and systematically analyse the data. This section of the study describes the sampling, study population, data collection method, data analysis and ethical issues associated with data collection.

2.5.1 Population

Population is defined as all-inclusive persons or items with shared physiognomies, sometimes also called the 'universe' (Polit & Beck 2021:260; Brink et al 2018:116). Gray et al (2017:687) similarly explain that a specific collection of elements (individuals, objects, events or substances) which the study focusses on, is the population.

In this study the target population was newly qualified professional nurses employed at Greys Hospital and Harry Gwala Regional Hospital, two public health facilities in KwaZulu-Natal, South Africa. The total population of professional nurses at Greys Hospital were 520, and at Harry Gwala Regional Hospital, 553. When submitting the proposal, the total number of newly qualified professional nurses at Greys hospital was approximately 75, and at Harry Gwala Regional hospital, approximately 25.

The accessible population were the newly qualified professional nurses available at the time of data collection and who met the *inclusion criteria* of being employed for two years or less. Males and females were included. Professional nurses who had completed the Degree in Nursing, Diploma in Nursing, and Bridging from enrolled nurse to professional nurse in nursing were eligible to participate in the study. *Exclusion criteria* were those professional nurses who have worked for more than two years after completion of their studies.

2.5.2 Sample

A sample is defined as a sub-set, fraction, or part of the population that is selected for a study (Polit & Beck 2021:261; Brink et al 2018:117; Gray et al 2017:329). The sample

was selected from the population of all professional nurses employed at the two hospitals who met the inclusion criteria.

2.5.3 Sample size

Qualitative samples tend to be small as the emphasis is on intensive contact. According to Polit and Beck (2021:497); Brink et al (2018:116) and Bradshaw (et al 2017:4), the sample size is fewer than 50 people with an emergent selection and informational needs criteria.

The guiding principle in the sample size is data saturation; that is the point at which no new information is obtained and redundancy is achieved, according to Polit and Beck (2021:502), Hamilton and Finley (2020:3), Brink et al (2018:129), Bradshaw et al (2017:4) and Gray et al (2017:352).

The country has been affected by COVID-19 since 2020 and the protocols of social distancing was prioritised throughout the study. At this time, social gatherings were limited to number and distancing (Annexure Q).

The researcher, therefore, chose focus groups with six participants in focus group 1, five participants in focus group 2, five participants in focus group 3, and four participants in focus group 4, as this number was able to maintain a social distance of 1,5 metres. Four focus groups were held, with a total of 20 participants. The number of participants in the focus group was based on the pilot study with regard to how many participants could be accommodated, maintaining a social distance of 1.5 metres.

Data saturation occurred in focus group 3, where no new information emerged. The participant's descriptions of knowledge, attitudes and perceptions toward health research kept repeating what was previously said in the other focus group interviews. However, a fourth focus group interview was conducted to validate the data collected and authenticate data saturation.

2.5.4 Sampling

Sampling is the process of selecting individuals that represent a population so that conjectures can be made (Brink et al 2018:115, Gray et al 2017:329; Polit & Beck 2021:261). Bradshaw et al (2017:3) emphasise that it is vital that the sampling technique within the study reflect the research design and the research question. Most qualitative studies aim to discover meaning and uncover multiple realities, according to Polit and Beck (2021:497).

The qualitative researcher starts with the following questions: Who would be an information-rich data source for the study? And whom should I talk to or observe to maximise my understanding of the phenomenon?

2.5.5 Sampling methods

Sampling methods are classified as probability sampling (random selection of elements) or non-probability sampling (elements are selected by non-random methods) according to Polit and Beck (2021:262); Brink et al (2018:119-124); Gray et al (2017:337).

For this study, the researcher chose a non-probability sampling method using a quota and purposive approach. This method was chosen as it intentionally selected participants who were knowledgeable about the phenomena being studied. The researcher first identified the population strata (Greys Hospital and Harry Gwala Regional Hospital) and then determined how many participants were needed from each stratum.

2.5.5.1 Quota sampling

This technique is considered the equivalent of stratified sampling as the purpose is to draw a sample with the same or similar characteristics or proportions of the entire population (Polit & Beck 2021:263, Brink et al 2018:125). The strata included participants from the two institutions/research sites. During quota sampling, all available participants who met the conditions of inclusion from the two institutions were chosen and contacted. This process was followed to ensure that the participants came from both institutions, apart from meeting the above eligibility criteria (see section 2.5.1).

2.5.5.2 Purposive sampling

Purposive sampling (also known as judgemental or selective sampling) is the type of non-probability sampling the researcher chose. The technique fits the criteria as the participants were selected based on them being especially knowledgeable about the phenomenon of interest (Polit & Beck 2021:265; Brink et al 2018:126; Gray et al 2017:345).

Purposive sampling supported the researcher's idea to conduct a focus group with individuals who were able to provide data on the knowledge, attitudes and perceptions toward health research. Qualitative researchers commonly use this type of sampling as it is difficult to identify beforehand the required number of participants. Furthermore, the sample size is only revealed once data saturation is reached (Polit & Beck 2021:502; Brink et al 2018:129; Gray et al 2017:352).

The participants were selected using the non-random, purposive sampling technique as this was a more flexible technique. The technique aided the researcher in purposefully selecting participants who would meet the objectives and purpose of the study as their experiences were shared.

A gatekeeper is an individual with formal or informal authority to approve access to research sites, groups, or participants (Polit & Beck 2021:160). The hospital and unit managers of both institutions were used as gatekeepers. The hospital managers and unit managers provided easy access to the participants.

The hospital manager of the institutions had a comprehensive list of all the professional nurses employed and the wards they were working in. The hospital manager then contacted the professional nurses who met the inclusion criteria of being employed for two years or less and enlisted them for the study.

Recruitment was based on the willingness of the participants to participate in the study and included both homogeneity and heterogeneity. Groups 1 and 4 were homogenous (females only) and groups two and three were heterogenous. Group 2 was multi-racial as it included Indian, Coloured and African participants as the researcher was interested in gaining a diverse perspective on health research.

In the context of this study, the participants refer to newly qualified professional nurses. The researcher also adhered to the inclusion criteria and those who did not meet the criteria were excluded from the sample.

2.5.5.3 Ethical issues related to sampling

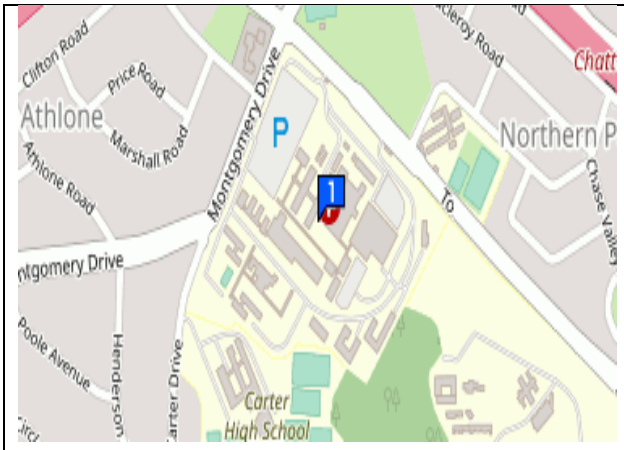
The study observed all the ethical issues related to sampling in accordance with the inclusion and exclusion criteria stated above. All professional nurses working in Greys Hospital and Harry Gwala Regional Hospital for two years or less qualified to be part of the study. This period was adequate for clinical competence and met the criteria of a novice professional nurse.

2.6 RESEARCH SETTING

The setting for the research is where the information is collected, or it refers to a specific region (Polit & Beck 2021:518; Brink et al 2018:47; Gray et al 2017:353). The study was conducted at two public hospitals, namely: Greys Hospital and Harry Gwala Regional Hospital, where research is highly prioritised. The above hospitals fall in the uMgungundlovu Health district, Msunduzi local municipality, KwaZulu-Natal, South Africa. KwaZulu-Natal is one of eleven provinces in South Africa.

UMgungundlovu Health District is the seat of the Office of the Premier for KwaZulu-Natal, as well as the provincial capital, Pietermaritzburg. UMgungundlovu Health District covers an area of 9 189 square kilometres and is the second most populous district in KwaZulu-Natal Province, with a total population of approximately 1.4 million. It comprises seven municipalities and nine hospitals in the uMgungundlovu district (Department of Health, KwaZulu-Natal [s.a.]).

Greys Hospital, a tertiary hospital, offers tertiary services to the Western half of KwaZulu-Natal, including five health districts with a population of 4.5 million. Harry Gwala Regional Hospital is a regional hospital with 897 beds currently and is the fourth largest hospital in the country regarding available beds. The two hospitals were selected primarily based on conducting and utilising research for medical investigation.



Greys Hospital	Harry Gwala Regional hospital

Figure 2.1 Map: Greys and Harry Gwala Hospitals, KwaZulu-Natal, South Africa, showing the study setting

(Map of Greys Hospital, KwaZulu-Natal [s.a.])

(Map of Harry Gwala Hospital, KwaZulu-Natal [s.a.])

2.7 DATA COLLECTION

It is the detailed, organised collection or bringing together of evidence directly related to the study's research question, purpose and objectives (Polit & Beck 2021:783; Brink et al 2018:133). In a qualitative study, data collection is more fluid or flexible, and decisions on what to collect, develop or evolve in the field (Polit & Beck 2021:510). The researcher is not limited to a single type of data collection during a study, according to Gray et al (2017:256). The researcher was completely immersed in the study while perceiving, reacting, interacting, reflecting, attaching meaning and recording (Gray et al 2017:256).

2.7.1 Data collection approach

This study employed a qualitative approach using an exploratory, descriptive design as the researcher described the knowledge and the attitudes and explored the perceptions of newly qualified professional nurses toward health research.

A qualitative description approach permits the researcher to gather rich descriptions of the phenomena from the viewpoint of the participants who have experienced and were knowledgeable of the phenomenon (Bradshaw et al 2017:3).

The researcher used a naturalistic approach and aimed to understand the phenomena through each participant's perspective. The selected participants had first-hand experience in health research. Qualitative methods are designed to take an emic stance (Bradshaw et al 2017:2) as the researcher was actively involved in the research process. The researcher aimed to gain a full understanding through direct contact and numerous hours with the participants (Neuman 2014:103, 105), considering that different individuals experience social or physical reality differently.

In qualitative studies interviewing the participants and observation is the primary method of data collection (Polit & Beck 2021:510; Brink et al 2018:136; Gray et al 2017:256). The researcher conducted four focus groups, also known as group interviews, as it is most associated with qualitative studies. Focus group interviews allows the researcher to question numerous individuals systematically and simultaneously (Brink et al 2018:144; Gray et al 2017:263; Polit & Beck 2021:515). However, interviews often fall between structured and unstructured interviews.

For the researcher to gain in-depth, rich information from the participants, the researcher used focus group interviews as the researcher believed in the company of others, the participants would be stimulated to speak spontaneously (Gundumogula 2020:300).

This study, employed a semi-structured interview as the data collection technique, which enabled the researcher to explore and describe the lived experiences of newly qualified professional nurses in health research. Semi-structured interviews encompassed the researcher asking a specified number of questions, including closed and open-ended questions and field notes. The questions were specifically developed and categorised to assess the cognitive and affective domains of the participants.

The researcher asked three open-ended questions and posed additional questions when the need arose (Adedoyin 2020:2; Brink et al 2018:145; Gray et al 2017:259; Polit & Beck 2021:514). The main function of the focus group interviews was to encourage active participation regarding health research.

2.7.2 Focus group interviews

Focus group interviews have gained much popularity in health studies and is characterised by a group of people assembled for a discussion where the interviewer (or moderator) directs the discussion consistent with a set of questions or topics. The focus group interviews were designed to obtain the participants' perceptions regarding a topic and express and clarify their views in a non-threatening and permissive manner (Polit & Beck 2021:515; Brink et al 2018:144; Gray et al 2017:263; Nyumba et al 2017:21).

Akyildiz and Ahmed (2021:2) state that a focus group is a rich source for discovering people's inner feelings and attitudes and gaining information on sensitive issues and insider experiences. Here the individuals influence each other and are influenced by others as they participate in the interview (Akyildiz & Ahmed 2021:6).

An overall number of 20 participants from four focus groups were obtained. The number of participants varied due to the availability of participants on the day of data collection and social distancing of 1.5 metres. According to Gray et al (2017:263), each focus group should consist of four to 12 members or six to 12 members, according to Polit and Beck (2021:515). The outcome of the focus group interviews can be affected by how many participants are recruited. A focus group with fewer members leads to inadequate information, while too many participants, on the other hand, may be too difficult to manage. The number in each focus group was not too few and not too many, thus allowing each participant an opportunity to respond.

Due to COVID-19, the focus group comprised a maximum of 6 participants as this was adequate to maintain a social distance of 1.5 metre (COVID-19 protocol) and adhere to social distancing among participants (Annexure Q).

This study used the semi-structured interview guide, digital voice recorder and cellular phone recording as data collection instruments (Annexure I). Directing the interview was the semi-structured interview guide which, comprised a welcome, an introduction to the topic, the questions and the closing. Before the recording, an ice-breaker was conducted, which comprised of asking the participants what they would do if they had one extra hour in the day? Each participant had an opportunity to share. The responses were amusing

and helped the participants relax and feel comfortable, setting a therapeutic atmosphere for the focus group interviews.

2.7.3 Piloting of focus group interviews

Polit and Beck (2021:797) and suggested by Loots (2016:18), describe piloting focus groups by using participants who had similar characteristics to the main group to assess the effectiveness of the questions, suitability of the venue, the working of the voice recorder and the facilitator and co-facilitators skills.

The researcher piloted the focus group using newly qualified professional nurses employed at a public hospital in KwaZulu-Natal, South Africa. The focus group consisted of six participants. Before the pilot interview, informed consent was obtained and the demographic form filled out, which was collected by the co-facilitator trained in data collection. An ice-breaker was used to help the participants relax and feel comfortable in the focus group. The pilot interview was 45 minutes duration and the participants used in the pilot interview were excluded from the main study.

From the pilot interview, the researcher collected data that was then analysed. From the analysis, three themes emerged: the professional nurse’s knowledge of health research, nurses' attitudes toward health research and nurses' perception toward utilising research in patient care. The results indicated the questions were adequate to meet the study objectives, but the skill of asking the questions needed attention.

After the pilot interview, the researcher consulted with the supervisor and expressed their experience and concern regarding the piloting. The supervisor reassured the researcher as the researcher was a novice researcher and further assisted the researcher in asking the same questions in an open-ended manner so that dense information could be obtained.

The co-facilitator who has completed her Bachelors of Arts degree in Psychology and the research module, also attended to the pilot interview to ensure objectivity and to determine if the researcher missed anything during the interview. The co-facilitator made field notes which were descriptive notes that included nonverbal cues, gestures,

distractions and conversations. The co-facilitator assisted in collecting the forms and recording the focus group interviews.

The semi-structured interview guide comprised three questions which were posed for clarity, understandability and suitability. The researcher's skills in group facilitation and the suitability of the venue were monitored. On completion of the pilot interview, the researcher and co-facilitator discussed what was gleaned from the sessions.

The researcher learnt the following from the piloting of the focus group:

- All members of the group should be seated facing each other (circle), to ensure all see each other and to facilitate interaction and conversation.
- Consent forms and demographic data forms are to be collected before commencement and put away to avoid distractions.
- Adhere to the allocated time as there was no need to go beyond the time plan.
- Ensure the digital recorder is working before commencement, as the researcher encountered technical issues with the recorder.
- Have a backup recording device, for example, a cellular phone, if the digital recorder does not work.

2.7.4 Data collection process

Data collection is described as the accurate, step-by-step collection of evidence applicable to the research purpose, specific objectives and the questions of a study (Polit & Beck 2021:515; Brink et al 2018:144; Gray et al 2017:329). The researcher used semi-structured interviews and field transcripts made through direct reflections by the co-facilitator for data collection. Dejonckheere and Vaughn (2019:1) explain this process as attempting to unfold the meaning of people's experiences or uncover their lived world before attaching a scientific explanation.

2.7.4.1 Planning

In the planning phase of data collection, the following questions take precedence. What data will be collected? How and who will collect the data, as well as where and when the data will be collected.

The planning phase began with the researcher discussing the focus group interviews with the supervisor and the co-facilitator. The senior, seasoned research expert supervisor was valuable in the planning. The co-facilitator, who had already completed a university-level research module, was well acquainted with the procedure and her role.

In the planning, the researcher searched for a suitable venue to hold the focus group. Focus groups was held at each of the two public hospitals. The lecture theatre at Harry Gwala Regional Hospital and the board room at Greys Hospital was the ideal venue for the focus group, which was booked in advance to secure availability. The researcher specified on the invitation to the participants the approximate time frame for the focus group interviews (30-45 minutes). Approximately 10 minutes were used prior to commencing the focus group interviews for collection of the signed individual consent and demographic forms, thereby honouring the time allocated (Annexures H and K).

2.7.4.2 Procedure

The procedure in focus group interviews entails establishing rules before the commencement (Akyildiz & Ahmed 2021:7; Polit & Beck 2021:515). The researcher established that rules were to be respected and adhered to during the focus group interviews (Polit & Beck 2021:515). The venue was accessed, comfortable chairs were arranged in a circle to facilitate conversation among the participants and a 1,5-metre distance was adhered to according to COVID-19 protocols. All COVID-19 protocols regarding wearing face masks, hand sanitising and temperature screening were adhered to (Annexure Q). The facilitator and co-facilitator sat in a position where all participants could be seen. The digital recorder was checked again and switched on for recording.

The participants were welcomed and seated as per preference. Introductions were carried out and the purpose of conducting the focus group explained. The rule of ensuring confidentiality was addressed where no member would discuss the conversation in the focus group interviews outside the group. The rule of no disruptions during the focus group interviews was emphasised by asking all mobile phones, tablets and electronic devices to be disabled.

The researcher asked the participants to grant everyone an opportunity to participate in the focus group interviews and reinforced that there was no right or wrong answer. The researcher also established that participants should speak one at a time and be respectful to each other, emphasising that they may not always agree but must respect each other.

The researcher reinforced that members of the group were allowed to leave at any time if they felt uncomfortable and no penalties would be enforced. Remuneration and rewards were highlighted and none will be given. The venue was cleaned before and after the focus group according to the COVID-19 protocols (Annexure Q).

2.7.4.3 Interaction

The process of interaction can be described as participants sharing their point of view in the group, generating new mind-sets and considering a variety of responses or views before answering (Brink et al 2018:144). Polit and Beck (2021:515) further explain that participants react to what is said and provide deeper opinions.

The researcher first commenced with an ice-breaker. Each member was asked to introduce themselves and share on the following: *"What would you do if you had one extra hour a day?"*

This activity stimulated member involvement and allowed them to relax as they heard how their colleagues spent the hour. Some answers were humorous. For example, one responded: *"I would eat."*

2.7.4.4 Content

The content in a focus group interview refers to what is spoken of and what is done while conducting the focus group (Dejonckheere & Vaughn 2019:2; Brink et al 2018:144). The digital recorder and the cellular phone were turned on, and the researcher began the focus group interviews. The researcher began with an introduction to health research to promote conversation. *"Due to the expectation of high-quality nursing care, clinical nurses are now expected to use research to provide nursing care for the patient. Providing care based on experience and textbook knowledge is no longer acceptable. We are here today to discuss what you know and how you feel about health research."*

Each member was allowed to answer and participate in the discussions. Authentic interest and eagerness to participate was evident in the group. The three questions in the semi-structured interview were asked, and the researcher facilitated the discussion by also asking probing questions so all participants could participate.

Some participants dominated the discussion during the focus group interviews as they were outspoken and bold. They would be the first to answer when asked a question would go into extensive discussions of their encounters. The researcher knew that this disadvantage of focus group interviews could take place and in order for all members to participate, facilitation was carried out (Polit & Beck 2021:515; Brink et al 2018:144). The researcher subtly redirected the participant to the topic of interest to avoid offending the participant.

The researcher also considered the quieter participant and ‘group think’. The researcher avoided the dominance or exclusion of a member by facilitating discussions and making eye contact with those who wanted to contribute. This non-verbal queue indicated that the researcher was interested and invited the participant to participate in the discussion.

The participants were reassured that confidentiality and anonymity were maintained as the data collected was stored in a password-protected computer. The field notes and notes were locked away in a secure cupboard to which the researcher only had the key. Participants were reassured that all members involved in the study, namely, the facilitator, co-coder, co-facilitator and editor, signed a confidentiality binding form to ensure ethical principles were adhered to (Annexure M, L, P and R).

2.7.4.5 Recording

The detailed proceedings of the focus group interviews were written down by the facilitator on a note pad and recorded on a digital voice recorder and cellular phone. Field notes were obtained by the co-facilitator using observations. The voice recordings and field notes enhanced the researcher’s understanding of the phenomena.

The recordings were sent to a professional transcriber (top transcribers) who transcribed the data verbatim, including filler words or sounds, ensuring authenticity of the data

collected. The recorded data was password protected and stored on a dedicated Universal Serial Bus (USB) and a hard drive locked away for safekeeping.

2.8 DATA ANALYSIS

Polit and Beck (2021:534) describe data analysis as organising, provide structure and elicit meaning from the collected data. Brink et al (2018:165) add that data analysis gives the researcher an idea of the patterns, outliers and missing data.

Focus group discussion usually yields both qualitative and observational data where analyses can be demanding (Nyumba et al 2017:23). According to DeJonkeere and Vaughn (2019:7) the researcher should develop a data analysis strategy during the planning phase as data collection and analysis occurs concurrently.

The researcher took notes, modified the data collection procedures and wrote reflective memos throughout the data collection process (DeJonckheere & Vaughn 2019:7). Brink et al (2018:180) identified the following steps in data analysis, namely; immersion in the data, coding, category formation and checking. The researcher followed Creswell and Creswell's (2018:316) five steps in data analysis, which comprised the following and added interpretation at the end.

(1) Organise and prepare data for analysis
(2) Read or look at all data and field notes
(3) Start coding all of the data
(4) Generate a description and themes
(5) Represent the description and themes

The researcher initially became acquainted with the data by reading and studying the written notes and transcripts while heeding to the recordings. The researcher also listened and re-listened a few more times to the digital recording to verify the transcripts were verbatim and to understand the data. Similar words and sentences were highlighted and clustered using different colours. Data that had the same colour were grouped to provide meaning units.

The interview guide consisted of three questions; as a result, the researcher grouped the responses into three groups and had a group for unexpected responses (Annexure I).

Sub-categories emerged from these meaning units. After that, the researcher identified similarities and differences, which gave rise to categories. The researcher then grouped similar categories to form themes which reverberated the meaning. Contradictions to the themes were identified and interpreted. During this process, the researcher continually considered her objectivity and remained unbiased (bracketing) (Creswell & Creswell 2018:316).

Table 2.1 Creswell and Creswell's steps in data analysis

Step	Analyst action
Step 1: Organise and prepare data for analysis	• The raw data collected through the voice recorder was categorised according to the questions asked. • The recorded data were transcribed and organised and categorised. • The field notes were recorded and organised.
Step 2: Read or look at all data and field notes	The researcher read, re-read, listened and re-listened to the data. The researcher subsequently gained a general idea of the following: • The participant's knowledge of health research. • The tone and expressions of their attitudes and perceptions toward health research. • Similarities and differences among the participants and the credibility of the information obtained.
Step 3: Start coding all of the data	A detailed data analysis was obtained through the following: • Digital recordings were transcribed by an external transcriber so that objectivity was maintained. • The co-facilitator took field notes in written form. This included gestures, facial expressions, eye contact and phrases.
Step 4: Generate a description and themes	• The demographic data obtained was gender, race, age, work experience and qualification. • Data was organised into categories and themes as the researcher engrossed herself in the data. • Filed notes were included to obtain patterns. • Inductive reasoning was used to code the data into sub-themes and themes.
Step 5: Represent the description and themes.	• Co-coder was contacted and asked to check and verify the themes and subthemes. • Subthemes discussed in detail. • Themes were discussed in detail.

(Creswell & Creswell 2018:316)

2.8.1 Step 1: Organise and prepare the data for analysis

The organising and preparing of the data for analysis was an ongoing procedure all through the process of data collection. The audio recording from the digital voice recorder was downloaded and transferred to the researcher's personal laptop. The focus group number, institution and the year (e.g. focus group 1 Greys Hospital 2022) were used in

referencing the recordings. The digital recordings were uploaded to a password-protected file on the researcher's laptop, Google Drive and OneDrive.

The original copies of each interview, containing the signed consent, demographic data, the co-coders confidentiality binding form, the researcher's hand-written records and field notes of the co-facilitator, co-facilitators signed confidentiality binding forms and the editor confidentiality binding form were correctly labelled including year and number of the group. (Annexures H, K, L, O, P and R). This was filed in a folder and stored safely away in a protected cabinet which was accessible to the researcher only.

The researcher used an external transcriber to transcribe the data from the focus group interviews. The transcriber encountered difficulty as she was not a nurse but reassured the researcher she had worked on medical transcripts before. Four folders were established for each focus group.

The researcher remained unbiased by listening to the recordings first before reading the transcriptions so that the researcher would not be influenced in any way. This was also done to ensure the spoken word was correctly transcribed.

The researcher then proceeded to data cleaning, where notes were written on the hard copies of the transcribed data. During the cleaning process the incorrect terms transcribed were corrected. The transcriber used abbreviations, leading the researcher to re-listen to the recording to identify the abbreviations. The abbreviations were corrected accordingly.

Some recordings were soft and difficult to hear, which delayed the analysis process. The researcher who was present and heard what was said at the time of data collection could understand the context and reduce the gap in analysis.

2.8.2 Step 2: Read or view the data in its entirety

According to Creswell and Creswell (2018:316), step 2 necessitates gaining an overall understanding of the information, highlighting what the participants are saying.

In this step of data analysis, the researcher was immersed in the collected data and to contemplated if any associations existed. Familiarisation of the data occurred by reading and re-reading the transcriptions while listening to the digital recordings. The filed notes from the co-facilitator were likewise read while the digital recording was played to ensure uniformity between the written and spoken words collected. The written and spoken words were consistent. This was done repeatedly until the researcher gained an overall comprehension of the interview.

2.8.3 Step 3: Begin coding all the data

The process includes categorising the data by bracketing chunks or texts and writing a word representing a category in the margin (Creswell & Creswell 2018:316). Creswell and Creswell (2018:316) further emphasise the labelling of the categories in the authentic dialect used by the participants (in vivo term).

The researcher identified words and phrases that had a similar implication and attached a number to it. This helped the researcher to group together the data. The researcher then proceeded to do a manual analysis where units with the same number were grouped on a large sheet and from the similar units, subcategories developed. The researcher surveyed the subcategories closely to encapsulate the subtler meanings from the grouped data. The reason for the survey was to ensure an exhaustive account was given of the data analysis as well as the categories and sub-categories.

Patterns resulted from the coding; these were called sub-categories the researcher grouped. From the sub-category, groups were made and called categories. Patterns that emerged from the category were combined and this collective name for the patterns was themes.

Analysis of the field notes was done and amalgamated with the collected data from the focus group interviews. The field notes predominantly comprised the feelings experienced by the participants. The researcher also gleaned additional data of the participants real encounters in the clinical setting.

A co-coder was consulted to look at the data to ensure the trustworthiness and dependability was endorsed (Annexure L). Together the researcher and co-coder

proceeded to check the data to ensure the themes and subthemes were a true reflection of the collected data. The results from the co-coder and the researcher were forwarded to the supervisor, discussions were held and final themes and subthemes were established. The interpretation of the results followed the inter-coder reliability check and finally, the discussions of the findings were described.

2.8.4 Step 4: Generate a description and themes

A description encompasses a detailed account of information about people, places, or events in a setting. From descriptions, codes can be generated and using these codes, themes emerge (Creswell & Creswell 2018:317).

The researcher implemented the process of 'winnowing the data' according to Creswell and Creswell (2018:315). From the data, the researcher found patterns which occurred most often were kept and the data that seldom appeared was rejected. Categories were clustered that that brought forth a thicker connotation of the data collected. This was then called themes.

2.8.5 Step 5: Present the description and themes

According to Creswell and Creswell (2018:318), the authors state that the most popular method is using a narrative to display the findings. The researcher wrote down the data assessment narrative and described the themes, sub-categories and categories fully.in full detail. The researcher ensured the descriptions were validated with actual quotations from several participants. Chapter 3 will encompass a detailed account of the findings.

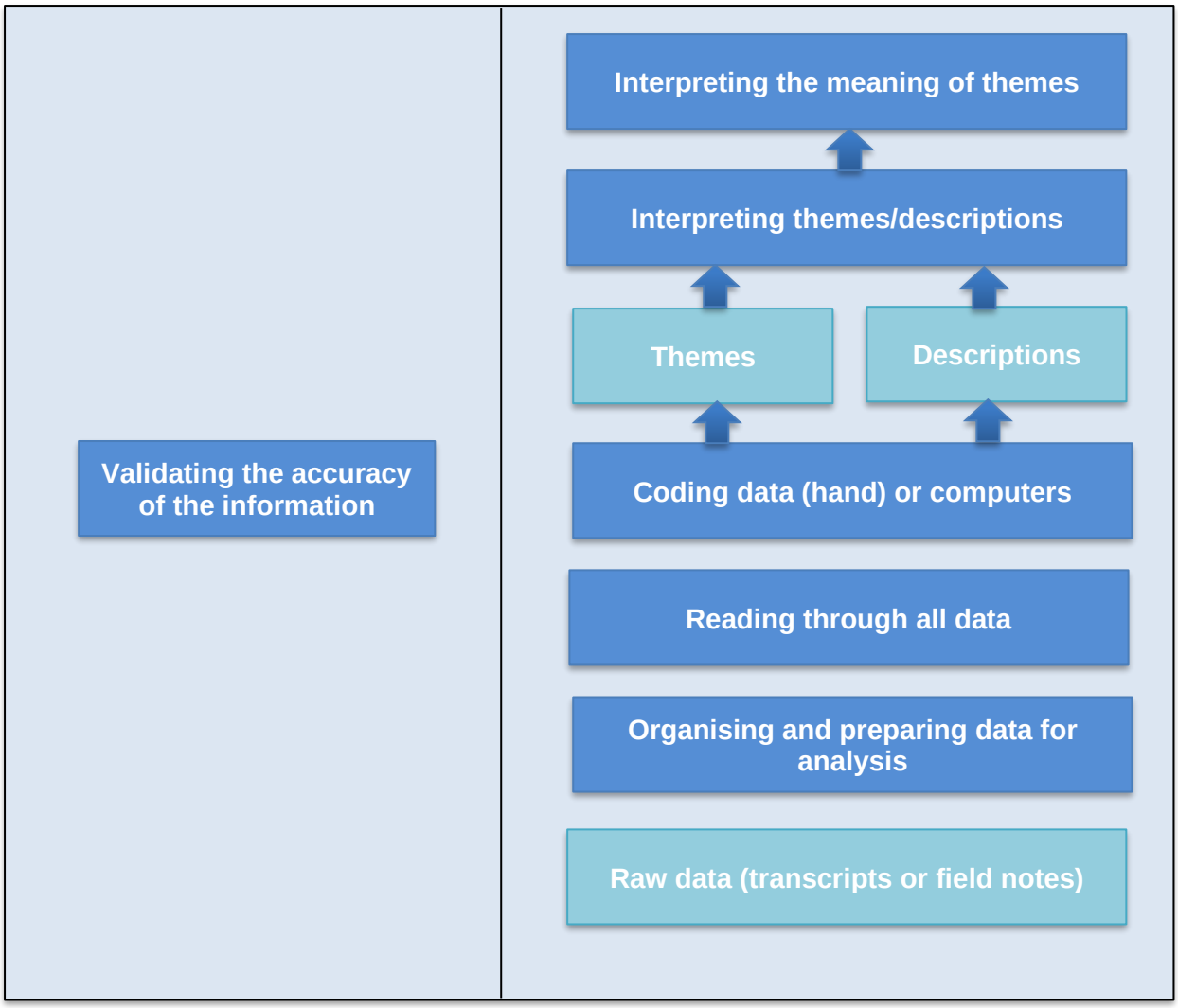


Figure 2.2 Creswell and Creswell's cycle of data analysis

(Creswell & Creswell 2018:317)

2.9 TRUSTWORTHINESS

In qualitative studies, the aim of trustworthiness is supported by augmenting that the study's outcomes are worth paying attention to (Elo, Kääriäinen, Kanste, Pölkki, Utriainen & Kyngäs 2014:2). Polit and Beck (2021:806) and Brink et al (2018:157) explain trustworthiness as the degree of trust, accuracy or confidence that can be given to the research procedure and conclusions. Trustworthiness of the study was evaluated using the following concepts: credibility, dependability, transferability, confirmability and authenticity (Lincoln & Guba 1985).

2.9.1 Credibility

Polit and Beck (2021:569) explained credibility as confidence in the truth and interpretation of the data. The researcher aimed to present data that was trusted and its interpretation complied with internal validity. Brink et al (2018:110-111) outlined the following techniques to achieve credibility; remaining in the field for a long period of time, triangulation, negative case analysis and member checking.

The researcher ensured the data collected, interpreted and analysed were believable by utilising the following: Spending countless hours with the supervisor, who is a renowned researcher, in the study's planning phase.

The researcher then embraced the principle of *remaining in the field for a long period of time*. The researcher had worked in the clinical domain for a period of 10 years as a professional nurse. In all that time was not involved in research and was content carrying out the doctor's orders. Furthermore, the researcher did not encounter other professional nurses conducting or participating in health research.

This experience specifically required the researcher to bracket (set aside any identified preconceptions and beliefs) her own experience (Polit & Beck 2021:478; Brink et al 2018:105). The researcher ensured bracketing was accomplished in this study by having numerous and lengthy consultations with the study supervisor concerning the topic and the researcher's experiences with health research. The outcome of the discussions allowed the researcher to proceed with data collection and data analysis without any prejudice, preconception or manipulation.

The researcher found that the time spent in the focus group interviews gave the researcher a comprehensive perception of the phenomena, whereby thick descriptions and rich information were gathered. This allowed the researcher to transfer this data into the study.

During the data collection process, *member checking* was carried out as this is another form to enhance credibility. Member checking means taking the data back to the participants to confirm the interpretations are accurate (Polit & Beck 2021:573; Brink et al 2018:159). A WhatsApp group was created, which included all the participants, and the

findings were presented to the participants to verify it is a true reflection of their descriptions during the focus group interviews. An initial draft of the themes and categories was made available to them for checking. The participants responded that they agreed and had no additions or deletions to the findings. This is in keeping with Hayashi, Abib and Hoppen (2019:100), who state that the researcher does not embellish or distort the information and facts are reported as those that are seen and heard.

The researcher and co-facilitator were solely accountable for data collection and reflected only on the data gathered from the focus group interviews. Selective inclusion and exclusion of data for analysis was avoided and all results were recounted authentically. The credibility of the study was enhanced by the authenticity of the data collected. No data was made- up or inaccurately declared.

Investigator triangulation was used to ensure the credibility of the data by using a co-coder and the researcher to analyse the data. Data was analysed independently first and then together to compare and contrast findings, in keeping with Korstjens and Moser (2018:122). The researcher and co-coder spent adequate time during the data analysis process, ensuring an accurate reflection of the data.

2.9.2 Dependability

Dependability is the data's stability over time and conditions. This implies the trustworthiness of the evidence if it were to be repeated with the same (or similar) participants in the same (or similar) context (Polit & Beck 2021:569; Lemon & Hayes 2020:605; Brink et al 2018:159). Lincoln and Guba (1985) state that dependability of data is enhanced by recording the codes, describing densely and triangulation of data. An inquiry audit was used to establish the dependability of this study.

An audit trail signifies a detailed explanation kept of the entire study's process. According to Forero, Nahidi, DeCosta, Mohsin, Fitzgerald, Gibson, McCarthy and Aboagye-Sarfo (2018:6), audit trails document the course of development of the completed analysis. Audit trails account for all research decisions and activities throughout the study. Carcary (2020:168) supports the above by stating the audit trail details the analytical steps taken from raw data to final interpretations, following a logical path. Carcary (2020:168) highlights concepts, themes and theory emerge directly from the data.

To ensure the concept of dependability, the researcher kept a record of all the steps in the research process, ensuring that the research was conducted in a trustworthy manner. Copies of the recordings, transcripts, consent forms, demographic data, letters requesting permission to carry out the research at the institutions and approval letters were all kept safe in a password-protected file. The hard copies were securely locked away if needed at a later stage for verification.

The researcher collected, documented and transcribed the data collected including field notes in an accurate manner. Also, by listening intently and reading carefully through the transcriptions, the researcher was able to ensure the transcribed data was an accurate reproduction of the spoken word. The researcher continually examined and studied the information to increase understanding. The co-coder, a skilled and knowledgeable researcher, analysed and established codes. Afterwards, the supervisor, an experienced and renowned researcher, verified the themes.

2.9.3 Transferability

Transferability refers to the extent to which results can be employed in other groups and larger populations. The researcher has the responsibility to provide thick descriptions to justify the findings (Polit & Beck 2021:570; Brink et al 2018:159). This is further reinforced by Korstjens and Moser (2018:122), who state that transferability is a dense narrative of the participants and research process. This concept also determines if other researchers can be assured that the results can be transmitted to their own settings.

The focus group interviews were explained in full and the sampling method best suited for the study was described. The researcher used purposive quota sampling to ensure the participants were particularly knowledgeable about the phenomena and also augmented the amount of data collected. A pre-test was done before the main study to identify and improve the areas of concern encountered as the researcher was a novice researcher. A co-coder was also used and a literature check was conducted to test the results of this study against what is currently known.

2.9.4 Confirmability

Confirmability can be best described as similar findings by other researchers in a similar context following a similar process (Polit & Beck 2021:570; Brink et al 2018:159). Korstjens and Moser (2018:122) state that confirmability is being neutral. The two central themes in confirmability are triangulation and an audit trail (Korstjens & Moser 2018:122).

Triangulation is a method used to ensure the transferability of data by using multiple methods or sources to test the outcome (Brink et al 2018:159). Creswell and Creswell (2018:323) further explicate triangulation as incorporating different data bases and utilising them to justify the themes. The converging of perspectives from participants adds to the validity of the study. This necessitates the interpretation of the data being grounded in the data itself and not on the researcher's preferences and viewpoints. The researcher pursued triangulation of data by making use of the four focus group interviews together with field notes in a single investigation.

The researcher ensured confirmability by discussing the methodology with the supervisor and justified why this method was used. Confirmability was also authenticated by using an audit trail depicting the complete evidence in this study over time, including a complete set of notes on decisions made during the process, sampling and the justification for the study's findings. All actions taken during the study and all records were kept in a safe place to guarantee availability to confirm the findings.

Throughout the data analysis, the researcher checked with the participants concerning the central aspects arising from the focus group interviews. This member checking was done by stating, 'from what I understand, is this what you mean?'. The digital recordings were transcribed using an external transcriber, which enhanced the confirmability of the data collected.

2.9.5 Authenticity

Authenticity is defined as the degree to which the researcher can establish the actualities and capabilities of the study participants in a fair and true manner (Polit & Beck 2021:570; Brink et al 2018:160). Amin, Nørgaard, Cavaco, Witry, Hillman, Cernasev and Desselle (2020:8) describe authenticity as considering the influence of context. Specific initial

considerations are prerequisites: fairness, ontological authenticity, educative authenticity, catalytic authenticity and tactical authenticity.

The researcher ensured authenticity by providing direct quotations from the participants in the study. Various verbatim quotes were considered to contextualise multiple realities and to answer the study objectives and purpose. Focus group interviews enabled the researcher to gain different realities of the participant's viewpoints with regard to health research. This assisted the researcher in gaining an in-depth understanding of their experience as they experience it in the clinical setting.

The researcher made sure the conclusions revealed the emotions and experiences of the participants as they were revealed.

2.10 ETHICAL CONSIDERATIONS

Research ethics emphasises the humane and sensitive treatment of research participants. In other words, researchers have a right to search out information but not at the expense of the rights of other individuals. Brink et al (2018:27) clearly state that the benefit of the research must be greater than the risks. In this section on ethical considerations the researcher discusses the institutional permission and ethical principles.

2.10.1 Ethical clearance process

Ethical clearance was obtained to conduct the study after developing the research proposal and submitting it to the Research Ethics Committee: College of Human Sciences, University of South Africa (Annexure A). Participant information leaflet containing the topic, purpose, reason why they were chosen and duration was presented to the participants, and signed consent forms were collected (Annexures J and H). Confidentiality binding forms were signed by the co-coder, researcher, co-facilitator and editor to maintain confidentiality and anonymity (Annexures L, M, P and R).

Researchers are responsible for ethical conduct in their research and must ensure that it is not violated throughout the process. The researcher's first and most important responsibility is to take care of the participants' safety, dignity, rights and well-being

(Parveen & Showkat 2017:3-4). Polit and Beck (2021:151) explain that ethical conduct protects not only the rights of humans but also efforts to maintain a high degree of integrity and avoid research misconduct. Polit and Beck (2021:131) and Brink et al (2018:28) make mention of the Nuremberg Code, which sets guidelines to protect the rights of research participants.

2.10.2 Institutional permission

Research Ethics Boards, or Institutional Review Boards, protect the safety and welfare of human research participants and are responsible for providing an independent evaluation of proposed research studies. The board ensures that the research does not proceed unless standards and regulations are met (Polit & Beck 2021:144; Brink et al 2018:37; Gray et al 2017:181; Page & Nyeboer 2017:1). Ethical clearance was attained from the Research Ethics Committee: College of Human Sciences, University of South Africa to continue the study (Annexure A).

After that, the researcher submitted the study proposal to the Institutional Ethics Review Board of the public hospital group where the study was to be carried out. Permission was requested to conduct the study from the Department of Health, KwaZulu-Natal (Annexure B). The Institutional Ethics Review Board, Department of Health, KwaZulu-Natal gave authorisation for the study to be conducted in a specific public hospital group (Annexure C).

Letters for permission to conduct the study were mailed to the hospital managers where the newly qualified professional nurses were working requesting their participation in the study (Annexures D and F). Institutional permission was obtained from Greys Hospital and Harry Gwala Regional Hospital, where the focus groups were conducted (Annexures E and G).

2.10.3 Ethical principles

DeJonckheere and Vaughn (2019:4) assert that research ethics helps prevent research abuse and emphasises the need for benevolent and caring conduct of research participants. The three main ethical principles guiding researchers are beneficence, respect for human dignity and justice, according to the Belmont Principles (Polit & Beck

2021:133-135; Brink et al 2018:29-30; Gray et al 2017:161). The researcher interacted with newly qualified professional nurses in the focus groups and therefore considered it vital to adhere to the ethical principles and not to violate their rights.

2.10.3.1 Respect for persons

Respect for human dignity includes the right to self-determination, where the participants are free to choose to participate in the study or not. Enclosed in this principle is the right to full disclosure (Polit & Beck 2021:134-135; Brink et al 2018:29; Gray et al 2017:161).

The study obtained informed consent to acknowledge autonomy and full disclosure. Informed consent requires that all participants be fully aware of the nature of the research and the potential risks and/or discomfort that may arise during the study, as well as the benefits associated therewith (Polit & Beck 2021:137, Brink et al 2018:35). Participants' safety, is the prime concern and they should not be exposed to risks greater than they encounter in their normal lifestyle.

Bitter, Ngabirano, Simon and Taylor (2020:2) assert that included in this principle, the participants freely participate in research after informed consent. The authors further state that the participants must be counselled on the known risks and any compensation or benefit they may receive.

The researcher met with the participants and explained the research activities as well as the purpose of the study. An information leaflet was given to the participants before the study, ensuring the principle of autonomy was respected and adhered to. The long-term effect of the study regarding health research was further emphasised. The participants were notified who the population were and why they were chosen as the sample to participate. Here, the focus group was explained as a data collection method.

Participants were assured that their non-disclosure (privacy and confidentiality) would always be valued and respected, even though confidentiality and privacy cannot be guaranteed. Also, data would be processed so that association to any particular person is avoided. The participants were also informed that a co-facilitator would join us in the focus group to take field notes, a co-coder would assist the researcher in data analysis, and the editor would proofread and edit the completed study. The participants were

reassured that all information would be kept confidential by signing a confidentiality binding form (Annexures P, L and R).

The participants were advised of the researcher's intent to publish the finding without mention of names. The researcher then asked the participants to take time and think about the study and to ask questions if they were unsure before consenting. The participants were informed that they could either refuse to participate or withdraw from the study at any time without penalty, as participation was voluntary. This adhered to the principle of self-determination.

The group instructions were highlighted at the beginning of every focus group interview and the participants agreed to the confidentiality of all information shared. This was recorded on the digital recorder as evidence that the confidentiality between the members was addressed. Informed consent was then obtained from the participants to participate in the study (Annexure H), further ensuring that the principle of respect for persons was adhered to.

2.10.3.2 Beneficence

The principle of beneficence signifies safeguarding the study participants from discomfort and harm (Polit & Beck 2021:133; Brink et al 2018:29; Gray et al 2017:161). According to Varkey (2021:18), beneficence can be described as the obligation of the researcher to act for the benefit of the participants, promote their welfare, prevent harm and remove conditions that will cause harm. In comparison to not doing harm (non-maleficence), this principle is one of the positive requirements.

Harm or discomfort was not foreseen in the study. The only foreseeable risk is minor discomfort as the participants may be uncomfortable providing information about their knowledge, attitudes and perceptions toward health research, as they are newly qualified professional nurses. However, the discomfort should not cause any direct harm to the participants. Should they feel uncomfortable continuing with the interview, they may retract without penalty.

The foreseeable risk of emotional or psychological discomfort was mitigated through explaining the study's purpose and the focus group interview process. The researcher

allayed the anxiety the participant felt by reinforcing that the data obtained during the focus group interviews would be held in confidence. The researcher further reinforced that anonymity will be maintained and no information will be traced back to them. If the participant wishes to discuss the discomfort further, the researcher will refer the participant to the staff wellness clinic of the institution.

The researcher ensured the focus group interviews were conducted in a manner that the participants were respected for their contributions and not exploited in any way. Throughout the focus group interviews, the objectives of the study remained the focus. The participants were keen to express their views on health research with regard to their knowledge, attitudes and perceptions toward health research. The challenges the participants encountered were similar among all participants.

The participants were confident that the results from this study would make recommendations to enhance a culture of research among professional nurses while considering the challenges. The participants also believed that the findings would assist in moving the novice nurse to an expert without difficulty. Considering the gaps in studies within KwaZulu-Natal, South Africa, the study is justified.

2.10.3.3 Justice

The principle of justice affirms all people being treated equally and not discriminated against (Polit & Beck 2021:135; Brink et al 2018:30). Incorporated into this principle is the participants' right to privacy. According to Kemparaj and Kadalur (2018:826), the principle of justice suggests that every individual (participant), regardless of caste, creed and social status, should be treated equally.

In all stages of the study, justice was adhered to, from the planning, focus group interviews and analysis. Before and after the focus group interviews, the researcher met with the participants and answered all questions honestly and without bias. Concerns were also addressed.

The participants were treated justly by honouring the start and finish times of the focus group. All information gained during the focus group interviews was collected in a non-prejudicial manner. The researcher conducted the focus group interviews in an exclusive

room with a secure door ensuring all information was kept confidential and the participants could talk without restrictions. No names (institution or participants) were written on the transcripts, which were locked away to ensure confidentiality. The researcher ensured the participants' anonymity was maintained in the report or the findings. This increased the safety of the participant's identity as no relation could be made between the data and the participant.

Member checking was done to verify the spoken word was transcribed. The exact quotations were used, which augmented the dependability and reliability. The researcher also ensured bracketing was done whereby the researcher held in abeyance all previous experience and did not let it affect the data collected. The above adhered to the ethical principle of justice.

2.11 SUMMARY

Chapter 2 delineated the methodology used in this study. Focus group interviews were applied as this was a qualitative study. The key focus was to gain an in-depth understanding of newly qualified professional nurses' knowledge, attitudes and perceptions toward health research and to identify gaps.

Furthermore, support systems can be developed to enhance a culture of research as the novice professional nurse moves from novice to expert in the clinical domain.

The objectives, design and population of the study were described in full. The researcher further discussed the sampling process, data collection method and data analysis. Towards the end of Chapter 2 the ethical considerations pertaining to trustworthiness was addressed in detail.

Chapter 3 will examine in detail the findings from the data collected.

CHAPTER 3

PRESENTATIONS OF THE FINDINGS

3.1 INTRODUCTION

Chapter 2 described in detail the methodology of the study. Chapter 3 postulates a discussion of the findings by examining the text rather than the numbers. The findings are established on the information attained from the focus groups interviews including field notes. The researcher analysed the data in an organised and structured form to give meaning to the data. The demographic data were first analysed, followed by the transcribed data analysis. Creswell and Creswell's (2018:316) five-step method of data analysis was used to direct the analysis.

The researcher began the analysis by immersing herself in the data and reading and re-reading the transcribed data while listening to the recordings to ensure it was verbatim. Together with the co-facilitator, similar meanings and words in the data were colour-coded and grouped to form themes.

A co-coder was consulted to look at the transcripts privately and to code the data. The researcher then met with the co-coder and together themes were identified, subthemes extracted and contradictions were eliminated. The researcher remained objective throughout the process.

3.2 FINDINGS

The findings from the data collected included the data from the four focus group interviews and field notes totalling 20 participants. The demographic data were analysed according to themes and sub-themes and direct quotes were written.

3.2.1 Demographic/biographic Information

Demographic data analysis of the 20 participants comprised gender, age, highest work qualification, work experience and race. The data represented three race groups, male

and female, with ages ranging from 22 to 60 years and work experience from one month to two years. The demographic data further included the professional nurse's qualification: Degree in Nursing, Diploma in Nursing and Diploma as a general nurse.

The demographic data gave the researcher an understanding of the knowledge, attitudes and perceptions of the different races as well as different age groups and experiences toward health research. The researcher gained valuable data from the different participants who completed different training programmes and how they viewed health research.

The focus group interviews were conducted in English, as all participants understood English well.

Below is a synopsis of the demographic information of each focus group participant.

Table 3.1 Demographic information summary

Focus group	Focus group 1	Focus group 2	Focus group 3	Focus group 4	Total/ Percentage
Number of participants	6	5	5	4	20
Gender	Male=0 Female=6	Male=1 Female=4	Male=4 Female=1	Male=0 Female=4	Male=25% Female=75%
Age range in years	22-60	25-36	27-39	27-47	22-35=10 (50%) 36-45=8 (40%) 46-65=2 (10%)
Highest qualification	Degree=2 Diploma=1 Bridging=3	Diploma=5	Diploma=5	Diploma=2 Bridging=2	Degree=10% Diploma=60% Bridging=30%
Work experience	2=1&2 months 1=12 months 2=24 months 1=23 months	3=17 months 2=23 months	2=I7 months 3=23 months	1=1 year 3=23 months	100%=less than 2 years
Race	African=6	Indian=1 Coloured=1 African=3	African=5	African=4	African=90% Indian=5 % Coloured=5%

According to the data collected, 100% of the participants had work experience of 2 years or less, which is in line with the purpose of the study of newly qualified nurses. The data also reveals that 12 (60%) had completed the Diploma in Nursing (R.425) and two (10%)

had completed a Degree in Nursing, while the nurses who bridged from enrolled nurses leading to registration as a general nurse (R.683) was six (30%).

The above information gave the researcher insight into how different training affects the nurse's knowledge, attitudes and perceptions. The degree-trained nurses had good knowledge of research and a positive attitude, while the nurses who bridged from enrolled nurse to general nurse did not like research as they could not understand it well and were fearful to undertake research. Most of the sample were diploma in nursing participants with a foundational knowledge of research, a positive attitude and enthusiastic about research.

The data analysis further indicated that data was collected from the sample who were knowledgeable about health research as it covered the three spectrums of training. As indicated during sampling, where the researcher explained that non-probability purposive sampling was beneficial in selecting participants most knowledgeable about the phenomena (Polit & Beck 2021:265; Brink et al 2018:126; Gray et al 2017:345).

The data further revealed that 75% were female participants and 25% were male. The percentages correspond with nursing being a female-dominated profession, as suggested by Bleich, MacWilliams and Schmidt (2015:90).

The data additionally disclosed that 90% were African and 5% were coloured and Indian participants. The strata of age 22-35 years were 50% and 36-45 years were 40% and above 45 years was 10%. The analysis, therefore, indicates data collected from three different race groups, ages and gender, reinforced quota sampling (Polit & Beck 2021:263; Brink et al 2018:125).

Moreover, the demographic data revealed the general public entered the nursing profession at a later stage instead of immediately after completing school as proposed. Furthermore, the bridging from Enrolled nurse to Professional nurse takes place later in their professional career.

3.2.2 Data management

Data collected was stored in a dedicated file on a password-protected computer that only the researcher can access. The collected data was also saved on Google Drive and OneDrive.

The data from the four focus group interviews provided themes and subthemes. The subthemes provided a more in-depth and detailed understanding of the theme. The data described the newly qualified professional nurse's knowledge and attitudes and explored the perceptions toward health research.

Hines et al (2022:2) state that a nurse who is knowledgeable about research can translate researched knowledge into practice by using critical thinking or engage in research practice. In contrast, Mthiyane (2018:3) states that nursing education does not stimulate critical thinking and research in nurses. The current study revealed that professional nurses had a basic knowledge of health research from their training. Knowledge was also added as they worked with older, more experienced staff in the ward.

The attitude of the professional nurse toward health research was positive as they believed research was necessary for the patient's care. However, as the professional nurse encountered hospital protocols and the attitude of the staff, the nurse became discouraged.

The data showed that the professional nurse had fear and anxiety when it came to conducting or using health research. The above was evident as the professional nurse still depended on the doctor's orders and felt unable to change the order in the patient's nursing care. This is in keeping with Benner's Novice to Expert Model, as the novice nurse has no professional experience (Benner 2014:402).

The data, furthermore, uncovered an unexpected theme which comprised of the challenges that the nurse encountered in the ward with regard to health research. The participants verbalised that the wards were too busy, there was not enough staff and no time was available to conduct research or search out information.

Table 3.2 describes the themes and subthemes extracted from the four focus group interviews and are discussed in more detail.

Table 3.2 Themes and sub-themes

Theme 1: Professional nurse's knowledge relating to health research
Subtheme: 1.1 Foundational health research knowledge 1.2 Health research knowledge is necessary for patient care 1.3 The positive values of health research knowledge in enhancing biopsychosocial well-being
Theme 2: Attitudes of professional nurses toward health research
Subtheme: 2.1 Positive attitude toward health research 2.2 Bureaucracy and lack of support of the multi-disciplinary team 2.3 Hospital protocols and management as a barrier to health research 2.4 Participants had mixed views regarding the scope of practice
Theme 3: Nurse's perceptions of utilising health research in patient care
Subtheme: 3.1 Fear and anxiety in undertaking health research 3.2 Difficulty in initiating health research 3.3 Dependency on doctors for therapeutic management
Theme 4: Creating a culture of research
Subtheme: 4.1 Time to be allocated for research
Theme 5: Challenges experienced by nurses with regard to health research
Subtheme: 5.1 Lack of time to conduct research 5.2 Staff shortage as a challenge to research

3.3 DISCUSSION OF THEMES AND SUBTHEMES

From the study, five themes and 13 subthemes emerged. Direct quotations will be used and recorded when discussing these themes and subthemes. The group will appear first, then the number of participants (1:3), indicating the direct quote was taken from the participant in group 1, speaker 3. Some groups are referenced as 3:1a, which indicates the participant is from group 3 number one (a). This was done to facilitate cross-referencing and ensure the authenticity of the data.

3.3.1 Theme 1: Professional nurse's knowledge relating to health research

According to Ashktorab et al (2015:1), undergraduate nurses must possess research knowledge and skills. Nursing research is searching out facts so that knowledge can be

enhanced by collating and analysing information to improve and increase the perception of the phenomena under study, according to Okoduwa et al (2018:2).

Theme one centred around the knowledge of professional nurses toward health research. The participants described their knowledge of health research as introductory in nature and were mostly gained through their formal education and training. The participants viewed research as a module which was compulsory in their training, and from the field notes, some smiled and others frowned.

The participants verbalised the following with regard to health research knowledge:

> "I think my knowledge of research is- so when I was in college, we done research. So, I have a basic understanding of what is required in research." (2:3).

> "… We gained our year research, our nurse from the college because it is the college that taught us like that taught me about research and everything." (3:1a)

Participants added that research knowledge was gained from exposure to the more knowledgeable, older, trained staff in the ward. The participant verbalised the following in response to knowledge gained from older staff:

> "Uhm, uhm so what's happening that's, in most cases we link the old knowledge and the new knowledge from the experienced professional nurses especially in the ward, the nurses who have been in the health system for more than thirty years and they are still practicing uh in the ward." (3:1a)

Subthemes under theme 1 are foundational health research knowledge, health research knowledge is necessary for patient care, and the positive values of health research knowledge in enhancing biopsychosocial well-being are discussed in detail.

3.3.1.1 Subtheme 1.1: Foundational health research knowledge

Foundational knowledge is the original knowledge upon which other or new knowledge is built (Makhene 2022:1). Foundational knowledge is acquired through education and practice and sets the foundation for critical thinking (Makhene 2022:1).

The participants expressed they had completed their nurse training which included a research module that had to be passed to progress from one level to the next. The participants who completed the Diploma in Nursing and bridging course from Enrolled Nurse to General Nurse had completed health research in their third year of training. The Degree Nurse completed a year of research module.

The participants verbalised that they had all completed the health research module, which comprised their foundational knowledge. Of the 20 participants, no one had conducted a research study independent of their basic nurse training (i.e. honours degree, master's degree or doctoral degree).

The participants verbalised the following statements in response to their foundational knowledge of health research:

> "Ja, it's for us before, our first hand like information that we firt received it was through training that you receive as, from, from the college." (3:1c)

> "So, my understanding about research, because when we're in college we did do research. So, when we're introduced to research." (2:3)

Another participant added the following comment indicating that she had completed the research module in her bachelor's degree.

> "I think for me since I also did it [laugh], it is hard and it is very broad when you do research you really need to think not only out of the box but think broad like because I also, our research was also on, it was financial literacy about knowledge." (1:1)

Breimaier et al (2011:1744) found that the nurse's requirements for knowledge and use of research were merely introductory. This concurs with the participant's response from the data collected that health research was introductory.

3.3.1.2 Subtheme 1.2: Health research knowledge is necessary for patient care

Bhembe (2014:1-2) affirms that nursing aims to provide evidence-based care for the patients, families, healthcare providers and healthcare system by ensuring increased exposure to nursing research. Jordan et al (2016:53) further emphasise that clinical decisions not based on research can be detrimental to the patient.

Health research is necessary for patient care as the nurse provides updated and scientific care for the patient, which aids in recovery. The participants agreed that research was necessary as it reduced illness and dying of patients in their care. According to some participants, health research allowed for innovative ways of treating the patient and believed it was beneficial in the 'long run'.

Bahadori et al (2016:1) state that applying research findings is one of the most important indicators of professional development, leading to efficient, effective and quality nursing care.

The participants verbalised the following with regard to research knowledge being necessary for patient care:

> "So, with things being researched and … it creates kind of a platform where we're losing less lives due to sickness and illness and all of those diseases." (2:2)

> "it's necessary just to improve the healthcare that we're providing, to improve maybe on medication. This research can be done to improve medication. A lot of things can be improved through doing research. So, it is very necessary." (2:4)

Another participant verbalised that health research knowledge allowed for innovative ways of nursing practice and said the following:

> "Maybe you found new ways to do it that is quick and as innovative. Just like, yes." (2:2)

> "Yes health research, ja one, it helps a lot because if we keep on doing uhm health research you come up with the new schemes on how to tackle the new diseases that

are coming and you come with the schemes on how to innovate for certain ways on how to improve." (3:2b)

"Yes when we do research we discover new things because we only train once and then we work for ever and we not aware of what has changed and what has not changed. So the research helps us in that way." (3:2b)

The participant's response is in line with Kaseka and Mbakaya (2022:2), who affirm that the gold standard for providing safe and compassionate healthcare is a practice based on evidence.

3.3.1.3 Subtheme 1.3: The positive values of health research knowledge in enhancing biopsychosocial well-being

The biopsychosocial well-being was encapsulated in participants stating that health research positively impacts the patients with regard to their physical, psychological and social well-being.

According to Eiroa-Orosa (2020:2), psychosocial well-being is described as a superordinate concept that includes the emotional, social and collective well-being of the person. The author parallels the above to the 'quality of life' of the individual. Karakoc-Kumsar et al (2019:269) assert that practice based on research improves patient care, patient costs and hospital stay is reduced, unnecessary practices are eliminated and the patient is happier.

Most participants agreed with the above statement that health research is a cost-saving method for both the patient and the hospital. The participants further stated that hospital-acquired infections were eliminated and the patient had a better quality of life.

The participants expressed the following in response to enhancing the biopsychosocial well-being of the patient.

"I think research is important because sometimes the patient that be in the hospital and we don't know what is the diagnosis of the patient, then by doing the research we getting to know the diagnosis of the patient and how to treat the patient." (1:3)

> “Uh, I think the research is to … is to check what causes the problem and the how about to solve the problem.” (4:3)

> “Uhm, I think there is a need of a research in the units, uhm in case just to avoid the hospital what? (1:2)

> “Acquired infections? (1:1)

> “Yes, to avoid those things, I think research is very good in the ward.” (1:2).

Concerning social well-being and cost-effective healthcare, the participants verbalised that research saved the patient the cost of hospitalisation and being away from their families. They also stated that the patients were able to return to work sooner.

> “It will be beneficial to the patient and also to the hospital because [cross-talk 09:19] the patient stays less days in the hospital.” (1:2)

> “So if you’re getting new information and, and use that information just to try and help the patient at that time … you try and find ultimate ways which will become effective and which is not too time consuming for the patient.” (2:1)

> “It can help our patients to speed up their recovery, I think.” (4:3)

3.3.2 Theme 2: Attitudes of professional nurses toward health research

Theme 2 focussed on the attitude of newly qualified professional nurses toward health research. According to Aksoy et al (2018:38), a nurse's attitude toward research is closely related to their knowledge of research, indicating a positive correlation between the two. According to Karakoc-Kumsar et al (2019:271), the positive attitude of nurses contributes to the increase in quality care as they transfer research into practice.

The nurse's attitude toward health research can be either positive or negative. Most participants agreed that research was needed to improve the patient’s healthcare, indicating a positive attitude. The participants also said that even though they had a positive attitude toward health research, the many challenges they faced daily in the ward

affected their attitude and discouraged them. The positive attitudes of the nurses were verbalised by the following:

> "So, I have a basic understanding what is required in research. And with regards to my attitude, its positive." (2:3)

A participant verbalised that research was needed to prevent hospital acquired infections. Her response with reference to the above context was:

> "Uhm, I think there is a need of a research in the units, uhm in case just to avoid the hospital what? ... Yes to avoid those things, I think the research is very good in the ward." (1:2)

Most participants agreed that health research improved the way they worked and the standard of nursing care. One participant expressed the following:

> "It, it helps to keep us, uh, updated and also improve, uh, the way we work and the standard of work. Uh, we develop new ways of working through the research." (4:1)

Under theme two are the subthemes of a positive attitude toward health research, bureaucracy and lack of support from the multi-disciplinary team, hospital protocols and management as a barrier, and participants had mixed views regarding their scope of practice.

3.3.2.1 Subtheme 2.1: Positive attitude toward health research

The majority of the participants had a positive attitude toward health research. The participants verbalise how research can be used to impact the patient, hospital and community positively. The positive attitude is in line with their knowledge of research, even though it was introductory.

Many studies have shown that even though the nurse lacked knowledge of research, a positive attitude toward research was noted. According to Zhou et al (2016:4-5), Sin and Bliquez (2017:447), Rojjanasrirat and Rice (2017:49) and Al-Yateem et al (2019:216), although nurses lacked knowledge in research, they still had a positive attitude toward

research. Rekisso, Mengistu and Wurjine (2022:2) further assert that nurses with a positive attitude toward research are expected to provide a selfless, compassionate service and be proud of their profession. This was evident from the data collected and the verbalisation of the participants. The following was said:

> "It will be beneficial to the patient … if you get discharged then we doing the stats every day. Like I think that is where research can help." (1:2)

> "Also, in dealing with human lives you know we don't like any form of collateral damage. (chuckles) So, with things being researched and, and trials being done, it, it, it creates kind of like a platform where we're losing less lives due to sickness and illness and all of those diseases. So, that's why I think it is necessary." (2:2)

The following participants verbalised the need for research in providing good quality healthcare. This need for health research presents as a positive attitude toward health research. The following was verbalised:

> "And also uhm to, to keep up with the, the disease profiles, uhm for example we are getting new diseases every day, even the, the old diseases that we have there is a, a, the new way to treat the diseases. The diagnostics uhm, the treatment uhm and for example like now we having COVID 19 which started in 2019, just discovered in 2019. So we have to keep up to know the, the signs and symptoms, uhm the medication to be used, the preventive measures things like that. So actually we want to keep up with the, since we are in the health system, yes, ja." (3:1a)

The same participant (3:1a) further verbalised how the research was necessary and how he strongly felt he could do a study, highlighting a positive attitude. The participant said the following in response:

> "Basically it's for myself to be specific, we gained our year research, our nurse from the college because it is the college that taught us like that taught me about research and everything. I used to hear there was research and something like that but at college I did a research, I knew what was the research and uhm what's the important of the research. So that gave me an awareness, so as a newly qualified nurse, when I am in theatre I am able to identify the need for the research, like the need for research if there is anything that I have to research about with the knowledge and the skills that

I have about researching. So I can do a research and maybe do a course and do a research." (3:1a)

3.3.2.2 Subtheme 2.2: Bureaucracy and lack of support of the multi-disciplinary team

Bureaucracy or red tape can be defined as excessive regulation or rigid conformity to formal rules considered redundant or bureaucratic. This hinders or prevents action or action-making (Rockman 2022, sv "bureaucracy"). According to *Merriam-Webster Dictionary* (2022b, sv "bureaucracy"); bureaucracy has a negative connotation and often refers to a problematic system often filled with 'red tape'.

Bureaucracy or 'red tape' was a common phenomenon that many participants brought to the forefront regarding their attitude. The participants mentioned that even if they attempted a research study, there were too many protocols to follow before the study was recognised. This resulted in the participants becoming demotivated with regard to health research.

Many of the participants expressed the limitations of a bureaucratic organisation on health research. The following was articulated:

"As if the hierarchy of that structure they get to the wards and obviously in the wards that is where there are those protocols where you have to follow them." (1:1)

"For us, personally in the ward it would be your sister in charge, your OM, who would then maybe take it up, up the organogram, you know. With it finally getting to the top to CEO who may pass it on to district and so on and so forth finally, and then it will be approved … Maybe there are some things that get approved at provincial level, there's some things that need a higher authority that approve on national level." (2:2)

"So, Ma'am, for, for me, the job that I'm doing now, you find a lot of stuff that's you know, making us go and do research. So, in order for me to implement something that I know will improve the efficiency or whatever, I can't just um implement it by myself. I have to speak to my manager; you have to get the relevant approvals from the CEO and stuff like that. If there's finances involved you know, we have to talk about all of

those things there and see if it is feasible for us implement. If it's not feasible and it's not making any change to benefit our patients, we won't [do it? 24:04], so." (2:3)

All the participants verbalised support from the multidisciplinary was lacking. The field notes revealed nodding, heads shaking and participants agreeing that they get no support from the multidisciplinary team in the wards. The participants voiced their unhappiness and demotivation in the following manner:

"It comes - For me like I had maybe a research that I did and then I want to implement it, the thing is it comes with the attitude of the team as well. Like you get there, you are newly qualified, there are people who are older than you who are very resistant to change as well. So, you come up and you're so excited okay I've got this. I have this idea like (giggles) They're like no, we have been doing things like this. It has always been like this." (2:1)

"Yes. It's going to be like this there's no need of us doing that. So, it becomes very difficult even if you come up with something that's very effective (door squeaking) for that matter. It's those attitudes that makes you like, ah maybe they won't agree to that. Maybe you had maybe an incident where you try to say something, and they were like against that." (2:1)

"Yes. And you're like ah, since they didn't agree to my first one even if you find out new information you become very sceptical of sharing that information as well. But then if you see that your team is not so accepting. Yes, very resistant, you end up having so much of information for yourself and you don't even implement it. You're like ah, okay let's do it however they want to do it." (2:1)

"Cos it's different when you have to do it, because you are in college you have guidance from the lecturers. But, then in the workplace it's different. There's no one to support. Uh, they'll say we are busy." (4:1) and "We are busy. We've got no time for that." (4:2)

3.3.2.3 Subtheme 2.3: Hospital protocols and management as a barrier to health research

The participants believed that hospital protocols were needed for the smooth running of the organisation. However, concerning research, it presented a barrier. According to Ebben, Siqeca, Madsen, Vloet and Van Achterberg (2018:1), clinical practice guidelines and protocols are in place to improve the quality of care, limit variations in practice and ensure evidence is used appropriately.

When probed into the participant's feelings about the hospital protocols and management, the participants said they loved to do research, but the protocols and management were inhibiting them. The following was articulated:

> "That is where we have to start. Because obviously there is a hospital and obviously there is the management. That do protocols for the hospital." (1:1)

> "There are policies in hospitals. A lot of policies that are implemented, especially in management and medical policies on how to manage patients, I can say is sanctioned by the hospital." (2:3)

> "As if the hierarchy of that structure they get to the wards and obviously in the wards that is where there are those protocols where you have to follow them and obviously then the difference comes when there is critical care unit which is I.C.U. where you said something I want to say critical thinking is used in the wards it is like no I have to follow orders because of one and two and three." (1:1)

3.3.2.4 Subtheme 2.4: Participants had mixed views regarding the scope of practice

According to the South African Nursing Council's (1984) regulations relating to the scope of practice of persons who are registered or enrolled (R.2598 of 30 November 1984), in terms of the Nursing Act, 1978 (Act no. 50, 1978, as amended), the professional nurse is to implement research.

Many participants said they understood their scope of practice had a research component and needed to conduct research. However, they could not find the time to do it due to their busy schedule.

The following participants verbalised the following with regard to their scope of practice:

> "You always think somebody else should be doing that. But meanwhile, the fact of the matter is we do have that component in our scope to research. So, should we feel passionate enough about an idea we should see it through. It's just that we haven't had any good ideas (chuckles)" (2:2)

> "I would, I would, I think that is why there is research, because research is always, that is why there is a research commission, that is why there is research aim or hypothesis." (1:1)

> "I think we know what to do or we know what should be done, it's just that the time to do it [cross talk] all of that becomes difficult." (2:1)

> "In our, you know in the wards now we just, when I started in 2020 we were sticking on the scope of practice we just told what is wrong to do and what is doing we are doing, what the form is doing [laughter]." (1:3)

3.3.3 Theme 3: Nurse's perceptions of utilising health research in patient care

The perception of something is how you think about it, the impression, or how you see the world (*Collins English Dictionary* 2021b, sv "perception"). The novice professional nurse's perceptions included their emotions and feelings toward health research.

Some of the verbalisations were fear, anxiety and stress toward conducting research. The majority of the participants stated that they felt they had no authority to change the order and still carried out the doctor's orders concerning patient care. The participants said the following:

> "I think what I can say is, um for starters, it seems time-consuming when we think research because it is not something that you're just going to um find out in a day. So, you need to prepare all of those things. So, it is kind of time-consuming and you, in as

much as you find out what you want to find out, it's, it's not inclusive of everyone. We have different opinions and different views of things. So, by the time that your research actually has an impact, it, it might be a bit too late, maybe after some time. And then if it was something that you're going research about, find the results and use it now, maybe you will be more impactful. So, that's how I think about the research thing according to me." (2:1)

"So, there is a lot of work that you have to do before you even start your research. And it's not an easy process." (2:3)

This is in keeping with the study by Dereje, Hailu and Beharu (2019:48), who state that nurses are unwilling to try new ideas or change old ideas and feel they do not have enough authority to change patient care procedures. The participants verbalised the following:

"So, my understanding about research, because when we're in college we did do research. So, when we're introduced to research, so, it was a heavy process to go through. So, there is a lot of work that you have to do before you even start your research. For example, you are doing you are doing your Master's now, and you have to do research; so, this is taking you away from your normal duties and activities of your day. So, for example, just to, just to get us here was a mission, you know. And then you have to get your questionnaires in place, you have to get approval from various authorities just to conduct your research. And it's not an easy process. (sneezing) It's a lot of work here to put into research to get your result at the end." (2:3)

3.3.3.1 Subtheme 3.1: Fear and anxiety in undertaking health research

Fear and anxiety are innate in all humans and associated with the unknown. Fritscher (2022:1) describes fear as a natural and powerful human emotion which is primitive in nature that alerts the individual to the presence of danger or the threat of physical or psychological harm.

Participants verbalised that conducting research is a daunting task and it requires a lot of support, indicating the participants felt extreme fear of conducting research. The participants revisited their training experience and recalled that it was difficult to

understand the terminology and to complete the research module. The above feelings further added to their fearful state.

This is in keeping with EzzatAbdElnasar and Mohamed (2019:44), who express that even though research findings are readily available and nurses understand the importance thereof, using research in practice is still slow. The authors continue to state this could be attributed to nurses' qualities, beliefs toward research, self-confidence, education, knowledge and skills (EzzatAbdElnaser & Mohamed 2019:44).

The following excerpts reinforce the nurses' fear and anxiety as they recalled their experiences with research. The participants also expressed that research entailed dealing with human lives and made them fearful. Some said the following:

> "Yes I did it but eish, [laughter] it was tough, I do not even want to talk about, I do not know how I managed two months ago there yes, it was tough." (1:2)

> "Yes we do have freedom but freedom but it is not that easy. Yes we can do it because first thing that will, will strike us is that uhm what if my study is not successful, what if I fail? You have, you have that fear, yes we do have freedom but the, fear that we have it is because as the, the professional nurses sorry, we are dealing with people, human beings, no, not cars you see." (3:1a)

Other participants verbalised that they did not understand the research methodology in their training, which added to their fear and anxiety about conducting and using research.

> "Okay, let me take it this way. When I was doing my training I couldn't grab the research, the methodology, even now I, I, you know, maybe I, it was a person who was, uh, training us. I don't know. I have that fear of … research." (4:4)

> "I, I think if you are older it is more fearful. I think the young ones are, are, are more, you know-(enthusiastic)." (4:4)

> "I, i-, i-, i-, it takes a person to be brave and do the research." (4:4)

3.3.3.2 Subtheme 3.2: Difficulty in initiating health research

A large amount of the participants responded that initiating research was difficult. Some did not know where to start and some found it difficult to come up with a topic. It was also costly. The following responses highlight the difficulties the nurses experience in initiating research.

> "I think for me since I also did it[laugh], it is hard and it is very broad when you do research you really need to think not only out of the box but think broad … I know with research it is really hard to come up with the topic, yes that is one thing I have noticed with research." (1:1)

> "I think for me, just taking into consideration that we're dealing with human lives, so we can't, like I can't really do a trial-and-error method based on what maybe I haven't proved at that time. So, I think it will then need to go, like I read there somewhere and I think if we go about it this way maybe go to my OMS as one of the speakers were saying and then maybe have some sort of trial research being done for a, trial run being done. And then if I see that it's, if they find out that it's safer to do it then maybe now, I can implement it because I don't want to … Like it needs to be ethical in a way" (2:4) "Because at the end of the day you're accountable." (2:1)

The participants verbalised that the difficulty they experienced was the required process and time. For most of them, it was a long, time-consuming process. They voiced the following:

> "[Cross-Talk 0:10:37] I think in the long run, we are saving, but then during the whole process of, of, of research because it's not like a one-time thing, it's an ongoing thing. Sort of like the pandemic because it's the talk, the talk of the town. With the pandemic there's so much of research and from different uh departments, if I can put it like that. So, someone else is going to come with their own research which required a lot of money and trying to implement those things will like financially will be like your, costly. So, it's like that but when you're doing it, it will require a lot but then the changes maybe that will come with it, makes it in the long run to be at least, um less costly. So, you will save in the long run rather than when you're doing it now." (2:1)

> "No. It's just that, uh, conducting the research requires that you have, like, more time. And then you have to present it well, also. You'll also … You're working hard. You'll

have to obtain consents. And also your … you need to be more learnt … learned on the … on the topic, yourself, ja … I-, I-, It's because, uh, with the research i-, i-, it's not there. We have to gather the information, you know. There's a lot, uh, to do. And you need to be knowledgeable. And there are steps …" (4:4)

3.3.3.3 Subtheme 3.3: Dependency on doctors for therapeutic management

Many participants articulated that they carried out the doctor's order in the ward and felt they were supposed to do it. The participants felt they were not allowed to make decisions and change orders. This is in keeping with Benner's Novice to Expert Model, where the novice has no clinical experience (Benner 2014:402).

Mthiyane (2018:3) states that nursing education is still dominated by the nurse implementing the doctor's orders instead of critical thinking. Almaze and Emmamally (2015:91) state that a positive correlation exists between the nurse's attitude toward research and the utilisation of research. Thereby indicating that the nurse must be convinced that research-based interventions are superior to interventions based on tradition or habit.

The participants verbalised that the government hospitals had many interns in the ward, and from the time the participants were employed, the routine was to carry out the doctor's orders. The following is in response to dependency on doctor's orders:

"the problem with the tertiary hospital maybe it is because they have got a lot of interns so they want the interns to do the job, us just to take orders from them." (1:4)

"That is why, maybe the doctors we say maybe the doctors we listen what the doctors is saying to us and then we doing that, we just taking the orders and doing the orders … Yes, so they are talking about how you have to keep in with the orders of the doctor." (1:1)

Some participants articulated that even when the order is incorrect, they have to bring it to the doctor's attention and wait for them to change the order before carrying it out. The following was said:

> "[Laughter] And usually we act when something went wrong, if for example let us say that there has been antibiotics prescribed to a certain patient we just give … after reporting it is up to the doctor. So that is where in we stick to our [laughter]." (1:3)

> "Because yes for example where I come from I was working in labour ward wherein if you can see that really this woman needs to go to theatre you as a professional nurse you prepare the patient and do everything, the other one will be acknowledging the doctor. When the doctor comes he just sign and then you discuss a bit then the patient will go to theatre but here you are not, if they say no you do not put in…Drips you…You put, you know those things they limit us." (1:2)

3.3.4 Theme 4: Creating a culture of research

Caldwell et al (2017:2) emphasise the demand for on-going training in health research uptake and positive research culture. The culture of research in the healthcare domain must be valued to institute an empowering environment for research and researchers (Wilkes 2015:1036), as many nurses believe that research is needed, but only a few actively engage in it (Okoduwa et al 2018:1).

Numerous participants in all focus groups expressed that the institutions did not foster a culture of research. The participants further stated that if an institutional committee existed, it would promote research among nurses as they were interested but could not do it by themselves. The following was verbalised:

> "Uh, me, I would love, uh, to have someone in our institution for research. Yes, uh, to research, um, on everything, the shortage of staff, the equipment, and the time. I don't know whether, uh, uh, uh, there must be a, a, a, a, a committee." (4:3)

> "I think that will be better because now the people that are simply there placed to go about this research. It's going to be their job, you know. Definitely. I will be part of a team." (2:2)

3.3.4.1 Subtheme 4.1: Staff in the institution to be allocated for research

Research culture is the specific culture of an academic to the task of research (Coetzee 2019:2). Some participants felt that if the staff were allocated to conduct research, it would

make it easier for them to conduct research. Being newly qualified, they felt they had no support in research. The following was said:

> "I think that it will be better because now the people who that are simply there placed to go about this research. It's going to be their job, you know." (2:2)

> "So, it's, it has to be supported, you have to be supported on order for you to go on with the, you have to make sure that you have got enough support in order for us to, to pursue the, the research, health research." (3:1a)

> "You always think somebody else should be doing it … I think that will be better because now the people that are simply there placed to go about this research. It's going to be their job, you know. Maybe they'll be going around the whole time if anybody has any ideas and maybe they can take from there, you know. They are the ones that are going to take it through the teething problems and raise it." (2:2)

The participants further stated that they could come up with the problem as they were at the 'ground level' or with the patient, but they felt someone else should do the research. They said the following in response:

> "That's why maybe, the, the, the ones on ground level, or grassroots level, the nurses there out in the field who are the ones that are actually in the frontline are the ones that usually come up with the best ideas of doing things. So, if there was say a team that was doing research to change healthcare, it would have to sit down with those people constantly, find out from them what can we change, what can be redone, what can be, you know. Because then that would feel what the researchers would research." (2:2)

> "Uh, me, I would love, uh, to have someone in our institution for research. Yes, uh, to research, um, on everything, the shortage of staff, the equipment, and the time." (4:3)

3.3.5 Theme 5: Challenges experienced by nurses with regard to health research

Theme 5 revealed unexpected themes that emerged during data collection. This is in keeping with Creswell and Creswell (2018:320). The conversations in the groups produced thick descriptions of the challenges they experienced. The challenges were a

lack of time to conduct research and staff shortage. This had a direct bearing on the nurse's attitudes toward health research.

Fashafsheh, Ayed, Mohammed and Alotaibi (2020:2) indicate that the nurse's lack to transfer research into practice is due to staff shortage, insufficient time to implement research findings and inadequate time to read the research. Table 3.3 describes the themes and subthemes that were unexpectedly extracted from the four focus group interviews and is discussed in more detail.

Table 3.3 Themes and sub-themes

Theme 5: Challenges experienced by nurses with regard to health research
Subtheme: 5.1 Lack of time to conduct research 5.2 Staff shortage as a challenge to research

The following was articulated in response to challenges experienced:

> "You can't expect the staff to have a positive attitude towards not only the employer but just like life in general when they're under so much pressure …: But with that said, I really think it's because it's just too much pressure. You can't have a positive attitude towards something that's always like on, you know. You want to take your last bit of energy (clearing throat) but the last to consider the staff, you know. Like um, there should be like things in place to support staff, you know." (2:2)

> "There's no time now. There's not time. If you're studying and like for example you if we go and do our degree and stuff, I think research is part of it. So, I think that's the only time I think I'll do research to comply." (2:3)

> "I feel the involvement will also come from um the time that you have as well … You're like, okay when do I actually get time to get involved in those things." (2:1)

3.3.5.1 Subtheme 5.1: Lack of time to conduct research

Most participants said they did not have time to conduct research as they were inundated with ward work or routine. The participants felt that even though they were passionate about research, they did not have the time in the day to be involved in it.

A study in China by Zhou et al (2016:4-5) indicated that nurses had a positive attitude toward research but were limited in their knowledge due to a lack of time and workload. Fashafsheh et al (2020:2) further assert that the primary barrier to using research was insufficient time in the clinical setting to implement research findings and not enough time to read the research. The participants articulated the challenge of time in the following way:

> "I think we know what to do or we know what should be done, it's just that the time to do it and [cross talk] all of that becomes difficult … I think what I can say is, um for starters, it seems time-consuming when we think research because it is not something that you're just going to um find out in a day." (2:1)

> "My day is always busy, I just go and put my bag away, I do not even sign in and I tend to the first person because there is no time. So the whole time I am just busy, busy, busy." (3:2b)

The participants verbalised that their daily routine was so busy, and even though they loved research, they found no time to do it. They had the following to say:

> "Ja uhm so uhm I am also working in the, the ward, it's very busy, very busy yes. Sometimes you eat after 15:00 during the day, you getting [inaudible 15:12] sometimes you do not get the time to pray, uhm if there is uhm, like sometimes there is, the team briefing will be done [inaudible 0:15:17] yes because like there is no time even to, together you see so ja it's kind of busy." (3:1a)

> "No. It's just that, uh, conducting the research requires that you have, like, more time. And then you have to present it well, also. You'll also … You're working hard. You'll have to obtain consents. And also your … you need to be more learnt … learned on the … on the topic, yourself, ja." (4:1)

Other participants in the group responded by saying that they see a need for research, but the workload is too heavy to even think about it. A participant verbalised the following with strong emotions in her voice:

> "Sometimes you can see the need of, of research, you like ah yes but then where do I even start. Because I know on my day off, I'm probably going to be tired, [Cross-Talk

0:36:05] so I only want to rest. And you're thinking about, okay I should start research now. I have to go through all of these processes for me to even get approval for the type of research that I want. And then when you actually get that approval, already you are drowning there in the woods. So, you don't really get the time to do it. So, you end up maybe leaving it to people who do research for a living. But for you on your own, you just get that information that you get maybe on Google or somewhere else. So, you end up relying on that information or the information that you get on the books and previous knowledge as, as we were talking about. But you don't really get time to actually want to do research because you like so tired all the time." (2:1)

"It is very daunting because it takes up quite a lot of time to collect all that information and refine it." (2:2)

The responses that the participants provided, was evident that they do not have time to research as their day was very busy.

3.3.5.2 Subtheme 5.2: Staff shortage as a challenge to research

In keeping with subtheme 1, the participants fervently expressed that the challenge that they encounter daily is staff shortage. This challenge or barrier prevents them from conducting research in the wards. The participants verbalised that even though they love to conduct research, the immediate situation is challenging.

The participants articulated the following with regard to staff shortage:

"As much as I would love to conduct a study, I wouldn't have time because I started working with teams, I was on, doing the shift work but with shortage of staff they put me on straight shift. I am just all over … I cover for the shortage." (3:2b)

"The thing is people got a lot a lot of problems, staff got a lot of problems and with the current challenges that healthcare is facing with regards to no staff, lack of staff … and the staff are frustrated." (2:3)

Other participants agreed that their day was full of nursing and non-nursing duties, leaving no time for anything else. One participant verbalised the following highlighting her day:

> “Three of four per day, we are going in and out, you going to x-ray, maybe five times, sometimes the other one you going to lunch only one sister left in the ward and the other one go out. In Greys it depending the students, no student now … Eish I think for now our challenge is the short staff.” (1:3)

> “We are also short staffed so.” (1:4) “Short staffed. Yes, we are short staffed yes. We need enough staff.” (1:1)

The following was articulated in response to staff shortage in the wards. The participants felt they were experiencing burnout and expressed it as ‘drained to the max”.

> “I think that the first research that must be done is how to prevent nurses from getting burnt out. Because I think the most important thing is this, us as professional nurses we are drained to the max. So, we can't even do any research. So, I think the best thing, they should start with just research how to prevent burnouts. (giggles) After that I think we will be able to do research.” (2:4)

> “You, you research why they are… why is it taking long? Why are they dying? Is it because of the shortage of the staff?” (4:3)

3.4 SUMMARY

This chapter exhibited and discussed the study's central findings, which were obtained from the four focus group interviews data analysis. The findings that were discussed revolved around five themes: professional nurses’ knowledge relating to health research, attitudes of the professional nurses toward health research, nurses’ perceptions on the utilisation of research in patient care, and creating a culture of research which is in keeping with the study’s objectives.

Furthermore, unexpected challenges regarding health research also surfaced and were discussed. The discussions were supported with direct quotations from the transcribed data of the focus group interviews. Chapter 3 laid the platform for interpreting and evaluating the findings, which will be integrated with relevant and recent literature in Chapter 4.

CHAPTER 4

INTEGRATED DISCUSSION OF THE FINDINGS AND LITERATURE

4.1 INTRODUCTION

Chapter 4 entails a discourse of the study's findings and integration of current and relevant literature on knowledge, attitudes and perceptions of newly qualified professional nurses toward health research in uMgungundlovu health district, KwaZulu-Natal, South Africa. Integrating the relevant literature aimed to contextualise this study's findings within the existing body of knowledge. This process assisted the researcher in gaining insight and understanding of what is known about knowledge, attitudes and perceptions of newly qualified professional nurses toward health research, as well as identifying gaps in both the study's findings and existing literature.

The purpose was to explain any new understanding or insight that emerged as a result of the study and to determine where future studies in knowledge, attitudes and perceptions of newly qualified nurses toward health research might be required. The pursuit of current literature generated an expanse of relevant and recent literature that addressed the study's problem and objectives.

The researcher conducted a literature exploration by accessing the following search engines: Google Scholar, SAGE Journals online, Research Gate, UNISA Repository and ProQuest. The literature search was directed by the topic, objectives, conceptual framework and the emergent themes from the study. The keywords used for the search were knowledge, attitudes, perceptions, health research, professional nurses, Benner's Model of Novice to expert and challenges nurses experienced with research.

Citation tracking was also used to identify the most recent articles that were cited in the articles used. Benner's Model of Novice to expert guided the study as it focussed on the journey of the newly qualified nurse from a novice nurse with no professional experience to an expert who has an intuitive grasp of the situation (Benner 2014:402). However, as newly qualified professional nurses, they fell in between the novice and competent, with

most emphasis on beginners (can note recurrent meaningful situations but not prioritise between them).

The discussion applies Benner's Novice to Expert Model (Benner 2014:402) to the nurse's knowledge, attitudes and perceptions toward health research. Application of this model yielded rich information and thick descriptions of the phenomena of interest. The participants revealed what they knew about health research, how they viewed it as well as how they felt about health research. The researcher designed a diagram to illustrate the inter-relatedness of knowledge, attitudes and perceptions.

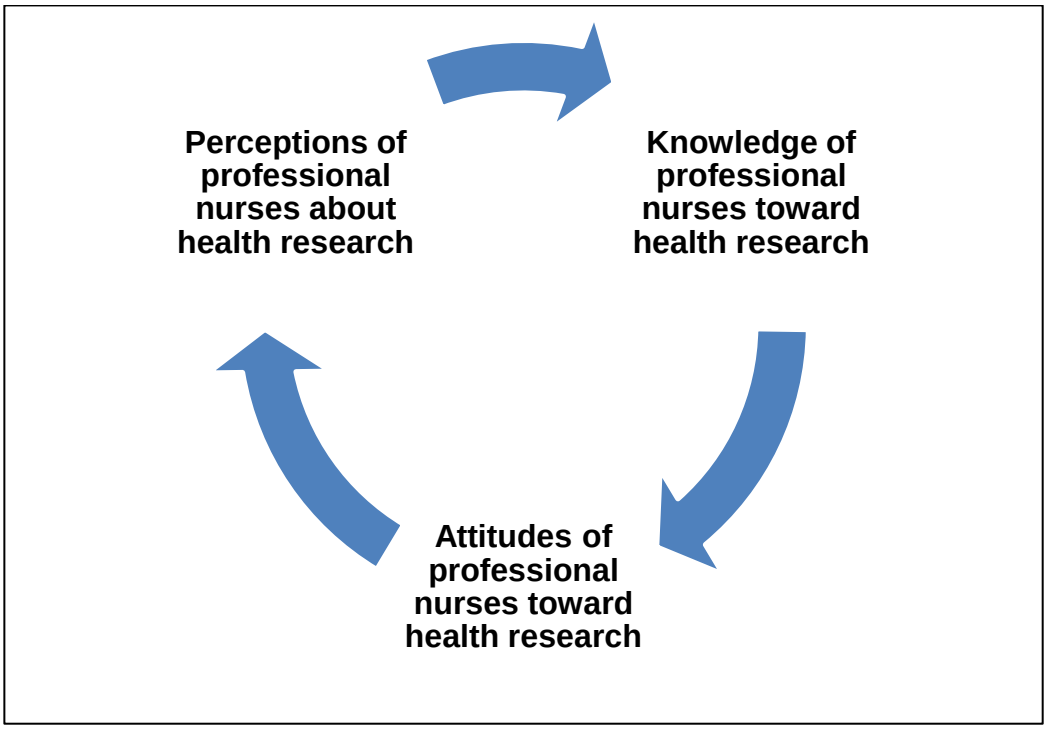


Figure 4.1 Inter-relatedness of knowledge, attitudes and perceptions.

4.2 PROFESSIONAL NURSE'S KNOWLEDGE RELATING TO HEALTH RESEARCH

In an Era known for an explosion of knowledge from scientific studies, there has never been a more urgent need for clinicians to translate research evidence into best practices (Paulose, Carvalho, Mathew, Mani, D'Souza, Chanu & D'Silva 2016:2). According to Crable (2020:25), researched studies provide new information in times when knowledge is limited or unavailable thus allowing nurses to adapt existing evidence into practice.

The newly qualified professional nurse's knowledge of health research was discussed in various ways. The data collected showed that the professional nurses had knowledge of research from their basic nurse training. Participants identified that knowledge was also gained from the older staff in the clinical setting and books.

Monde et al (2017:1) assert that research is one of the core competencies of all healthcare professionals to meet the healthcare needs of the 21st century. This is in keeping with Bahadori et al (2016:1), who state that applying research findings is one of the most important indicators of professional development, leading to efficient, effective and quality nursing care.

This concurs with Sekoto (2020:1), who affirms that health research is essential in preventing, treating and diagnosing diseases. Furthermore, clinical decision-making should be based on the most recent research information as it offers solutions to new clinical problems as they arise in the clinical setting as well as a framework for decision-making (Zammar 2022:104). According to Hines et al (2022:2) and Ibrahim (2021:1), the World Health Organization identifies nurse graduate attributes that include the ability to demonstrate the use of evidence in practice.

However, the findings suggest that the nurses only had foundational knowledge of research. As a novice in the profession, the professional nurse did not use research in clinical practice affirming that the novice nurse should be supported in research in the clinical area. The support given to the nurses will assist them in moving from novice to expert, keeping with Benner (2014:402).

4.2.1 Foundational health research knowledge

According to Makhene (2022:1), the original knowledge upon which new knowledge is constructed is referred to as foundational knowledge. It includes knowledge acquired through learning and practice in a particular field. Nurses must identify, explain and apply foundational concepts, terms and nursing-related theories to practice. Nurses are required to possess introductory knowledge as a criterion for other courses as they advance from one level to another (Benner 2014:402).

Reading and using research is integral to evidence-based practice and, therefore, to nursing, as stated by Hines et al (2022:1). According to Zammar (2022:103), nurses must accept and convey research in their clinical practice. The nurse who does not frequently use research depends on tradition or intuitive processes taught via formal education and practical experience, which concurs with Mthiyane (2018:3). Nurses are expected to provide quality healthcare to the patient in the clinical setting based on the best knowledge available. Alkhatib, Ibrahim, Ameenuddin and Ibrahim (2021:2) assert that nurses who practise based on scientific evidence have been able to make better decisions in service delivery.

The data obtained from the study revealed that the participants had a foundational knowledge of health research which was attained during their training. The findings revealed that the participants completed their nurse training, where a research module was compulsory to complete. The findings also reveal that no one had conducted a study post-registration as a professional nurse, which concludes that the knowledge is from their basic training or foundational. The findings further disclose that informal knowledge was obtained from the more experienced staff in the ward.

Furthermore, even though the participants loved research and believed it was necessary for patient care, they only had foundational knowledge of research as a reference. The findings from Dagne and Ayalew (2020:2), who state that the knowledge and utilisation of research in the clinical setting is still at the infancy level, are confirmed by the findings of this study.

4.2.2 Health research knowledge is necessary for patient care

According to Ashktorab et al (2015:1), undergraduate nurses must possess research knowledge and skills as it enables the nurse to gather, appraise and implement evidence and evaluate the outcomes in clinical practice. The nurse who spends the most time with the patient is the first to recognise any change in the condition. The nurse will therefore be the first link in the causal chain between complications and corrective interventions, making clinical decisions an integral part of patient care (Ashktorab et al 2015:1).

Practice based on evidence and the use of research in the clinical setting is acknowledged as a critical component of improving the quality of care the patient receives

as well as improved nursing care services (Zammar 2022:104; Alkhatib et al 2021:2; Dagne & Ayalew 2020:1; Al-Busaidi, Al-Suleimani, Dupo, Al-Suleimani & Nair 2019:521, Dereje et al 2019:47). EzzatAbdElnasar and Mohamed (2019:44) and Bahadori et al (2016:1) complement the above by stating that nurses are responsible for providing the safest and the most efficient care for the patients as well as holding the nurse accountable for their actions.

The findings further revealed that the nurses fully understood that research enhances safe patient care and improves the care rendered. They stated that research helped the patients recover quicker and explained why certain treatments were used. This is in line with Abu-Baker, AbuAlrub, Obeidat and Assmairan (2021:1), who assert that practice based on evidence helps nurses build their knowledge, improve clinical patient outcomes and quality of care and decrease healthcare costs. Zammar (2022:104) augments the study by stating that evidence-based practice is critical in improving healthcare, nursing care services and patient excellence.

According to Jahan, Maqbali, Siddiqui and Al Zadjali (2016:2) health research is critical in improving patients' healthcare outcomes. The participants understood their role in the provision of nursing care to the patient and acknowledged that research makes care more efficient and safer. They further explained that research was cost-saving to both the patient and the hospital as the patient stay was shortened, which saved the hospital money and decreased the patient’s stay away from work. This is confirmed by Zammar (2022:103), who states that clinical decision-making should be informed by the most recent research information available.

Nkrumah, Atuhaire, Priebe and Cumber (2018:2) affirm that nursing research promotes credibility, accountability and cost-effectiveness. Furthermore, Hines et al (2022:2) elaborate that a nurse who is knowledgeable about research can translate researched knowledge into practice by using critical thinking concurring with Makhene (2022:1).

The findings from this study confirm that the knowledge of research helps in the patient's healthcare, however, the participants only had foundational knowledge, which was the limitation to their translation of research knowledge into practice and critical thinking.

4.2.3 The positive values of health research knowledge in enhancing biopsychosocial well-being

The biopsychosocial well-being of a patient can be defined as the biological, psychological and social aspects in contrast to strictly biomedical aspects of the disease (*Merriam-Webster Dictionary* 2022a, sv “biopsychosocial”). Taukeni (2020:1) explains biopsychosocial according to its founder Engel (1977:129), who asserts that the development of illness is through the interaction of biological factors: genetic, biochemical and psychological factors: mood, personality, behaviour; and social factors: cultural, familial, socioeconomic, medical. Jordan et al (2016:53) emphasise that clinical decisions not based on research can be detrimental to the patient.

The findings disclosed that health research enhanced the patient's biological, psychological and social well-being. The participants stated that research decreased the death rates of patients and improved the recovery rate, consequently alleviating any social stress attached to hospitalisation. Many participants associated the biopsychosocial element of the disease with COVID-19 infections and hospitalisation of the patients and agreed that research positively affected the patient’s recovery.

According to Nkrumah et al (2018:2), as stated by the American Association of Colleges of Nursing, nursing research focuses on acute to chronic care experiences throughout the life span of the individual, health promotive and preventive care to the end-of-life, and care for individuals, families, communities in diverse settings. The findings revealed that health research positively affected the patient, the family, and the community by decreasing the hospital stay and the cost for the patient, the organisation, and the community, which was confirmed by Nkrumah et al (2018:2).

Al-Busaidi et al (2019:521) assert that practice based on evidence is recognised as an essential competency that all nurses should master as it facilitates efficient, safe care to the patient. Furthermore, Dereje et al (2019:47) affirm that evidence-based practice applies the best scientific evidence (research) in clinical decision-making as it integrates the nurses' clinical experience with the patient’s values and preferences. This is in line with Crable (2020:25), who expresses that practice based on research integrates evidence, judgement and patient/family values and preferences to customise care. This

allows the nurse to adapt the care to the unique characteristics of the patient and facility, thereby incorporating biopsychosocial well-being.

Bhembe (2014:1-2) further states that nursing aims to provide evidence-based care to client, their family members, the multi-disciplinary team and the health care system by increasing exposure to nursing research.

The study's findings align with the above studies as the participants stated that research enhanced the patient's biological, psychological and social well-being and that care was individualised or customised to the patient.

4.3 ATTITUDES OF PROFESSIONAL NURSES TOWARD HEALTH RESEARCH

According to Qureshi, Firdos, Hussain, Afzal and Gilani (2018:31), research is a step by step by step inquiry into and study of materials and resources to verify facts and reach new conclusions. This requires nurses to be knowledgeable, skilful and have a positive attitude toward research.

Kovačević, Prlić and Matijašević (2017:72) explain attitude as an acquired, relatively resilient and sturdy organisation of positive or negative emotions, evaluations and responses to an object. As uncovered in the study's findings, attitudes can change under the influence of new experiences where the participants had a positive attitude at the beginning of the focus group interviews. As the interview progressed, some attitudes changed from positive to discouragement.

According to Aksoy et al (2018:38), the attitude toward research is closely related to the knowledge base of nurses, where the researchers assert that a positive correlation exists between knowledge and attitude. The above statement suggests that if a nurse has good knowledge of research, they will have a positive attitude toward research; if the nurses have poor or limited knowledge of research, their attitude will be negative.

4.3.1 Positive attitude toward health research

The findings from the study indicate that the participants had a positive attitude toward research even though their knowledge was merely introductory in nature. The participants

believed research improved patient care and decreased mortality and morbidity. It was here that the many challenges that plagued the clinical setting came to the forefront, namely, no time, staff shortage, dependency on doctor's orders and overloaded with work in the ward.

The findings revealed that nurses were too tired from the increased workload and short staff and felt they had no time for research despite their positive attitude. This is confirmed by Kaseka and Mbakaya (2022:2), whose findings reveal that nurses have a positive attitude toward research amidst the various challenges experienced, such as insufficient time, the right to change practice and lack thereof of administrative support, organisational cultures rewarding routine task-based practice.

The finding from this study also revealed that some participants loved research and were willing to conduct a study but lacked knowledge of the process. The participants believed that conducting research on COVID-19 would assist future nurses in treating and caring for the patients. This concurs with Karakoc-Kumsar et al (2019:271), who state that the nurse's positive attitude toward health research contributes to the increase in the quality of nursing care. A nurse with a positive attitude can transfer the research results into practice.

Hines et al (2022:1-2) assert that a positive attitude to research directly correlates with increased research use in practice. Hines et al (2022:2) further state that this positive attitude may indicate that past experiences and feelings about research are more important than the literature. This is confirmed in the findings that the participants have a positive attitude toward research based on their past experience of research during their mandatory training and the belief that research is needed in patient care.

A study in China by Zhou et al (2016:4-5) indicated that nurses had a positive attitude toward research but were limited in their knowledge due to a lack of time and workload. In the African context, the researcher has found studies in Zambia, Ethiopia and Egypt where nurses also had positive attitudes but lacked knowledge due to a lack of time to read articles, increased workload and lack of authority to change orders (Alqahtani, Carsula, Alharbi, Alyousef, Baker & Tumala 2022:313; Ibrahim 2021:2; Abouelfettoh & Al Ateeq 2018:75).

This study's findings confirm that most participants have a positive attitude toward health research amidst the numerous challenges experienced.

4.3.2 Bureaucracy and lack of support of the multi-disciplinary team

According to the *Merriam-Webster Diction*ary (2022b, sv “bureaucracy”), bureaucracy has a negative connotation and often refers to a problematic system often filled with ‘red tape’. Alqahtani et al (2022:313-314) concur by stating that literature indicates that nurses’ values and practice based on evidence are inconsistent due to factors such as paucity of facilities, time, resources and lack of organisational communication.

The findings from the data disclosed that the organisation was a bureaucratic organisation with a lot of ‘red tape’. The participants revealed a rigid hierarchy with too many protocols cascading to the wards, leaving them demotivated and unwilling to conduct or participate in research. The participants suggested that if the organisation had less ‘red tape’, it would be easier to conduct or participate in a study. The following articles confirm this.

Alqahtani et al (2022:314) and Dereje et al (2019:48) assert that nurses have a positive attitude toward research. However, organisational barriers such as a workplace culture resistant to change, disseminated information and bureaucratic rigidity deterred the nurse (Chizolum 2021:22; Konwar & Kalita 2018:221-222).

Halabi (2016:118-119) explains that nursing organisations that support research equip nurses with a strong foundation of research in evaluating research, judging findings and their applicability in the clinical setting and participating in research studies. EzzatAbdElnasar and Mohamed (2019:44) concur by stating that the worldwide barrier in organisational factors; is bureaucracy.

The participants further disclosed that they experienced a lack of support from the multi-disciplinary team. The multi-disciplinary team consisted of doctors, nurses, operational managers and organisational managers in the institution where they were employed.

The data findings revealed that the ward's older staff did not support the participants and preferred the traditional method of doing things. The participants disclosed that it made them feel unhappy, demotivated them, and resulted in them being ‘hands off’ with regard

to research. Other participants articulated that there was little or no support from the management, and nurse research was viewed differently from other disciplines, leading to them being disinterested in research. They felt that if the staff supported them, it would be easy to undertake a research study and help improve patient care as they had a positive attitude toward research.

The findings also revealed that the older staff was resistant to change and had no time to listen to them and this demotivated the novice nurse. This is in line with Ramón, Nievas-Soriano, García-González, Alarcón-Rodríguez, Requena-Mullor and Lozano-Paniagua (2022:7), Chizolum (2021:22), and Konwar and Kalita (2018:221-222).

Gilbert and Womack (2012:101) state the ability of the staff to mentor, support and direct the new staff will lead to successful nurses in the end. Consistent with the above statement Benner (2005:192) states that for a nurse to be an excellent practitioner, they need to be absorbed by the more experienced staff to learn and better their practice. This highlights that newly qualified nurses require the staff's motivation to progress in their careers and research.

Furthermore, a suggestion by Cunze (2016:83) emphasises the importance of professional support in relation to student learning, which gives the staff a feeling of belonging and acceptance. The author elaborates that without support from the staff, the students experience role confusion and limited development.

The above suggestion is confirmed by the participants who need support from older staff to develop their professional identity and confidence, which was revealed in the findings. Therefore, the findings conclude that if the staff in the ward supported the nurses, they would pursue research as they had a positive attitude toward research.

4.3.3 Hospital protocols and management as a barrier to health research

The hospital management system is a system that allows for efficient and advanced administration, control, strict cost control and patient care of a high standard (Sarab 2019:7). The organisation usually draws up procedures, practices and guidelines to help the staff to accomplish their work, make decisions and ensure consistency. Hospital

protocols and management is also established to ensure the smooth running of the hospital and provide a frame of reference (Ebben et al 2018:1).

Since the hospital is a vital healthcare organisation that deal with human life and health, the management and functions of the hospital can be vital in improving the quality of hospital care, enhancing an organisation culture and empowering the staff (Bastani, Mohammadpour, Bahmaei, Ravangard & Mehralian 2021:1-2). The authors further elaborate that problems in hospitals are the lack of strong and capable managers, which leads to delays in timely treatment, progression of the disease, increases in patient death, increased costs and wasted human and financial resources.

From the findings, the participants acknowledged the availability of protocols and procedures, which helped guide their work. However, they believed it was so strict and rigid that it hampered their freedom in research. The findings revealed that the participants were bound by the protocols and had no authority to change them.

The newly qualified participants were orientated to the hospital protocol and procedures during induction and continued to adhere to them. The participants also stated that the protocols were helpful in the running of the hospital and assisted them in the ward. However, in relation to research, the participants stated it was a barrier as there were too many protocols to follow when conducting a study, which demotivated them. This finding is not in keeping with the related literature available as the participants were not using researched evidence in patient care.

4.3.4 Participants had mixed views regarding the scope of practice

According to the South African Nursing Council's (1984) regulations relating to the scope of practice of persons who are registered or enrolled (R.2598 of 30 November 1984), in terms of the Nursing Act, 1978 (Act no. 50, 1978, as amended), the professional nurse is to implement research. The professional nurse is to incorporate appropriate and current research findings to ensure an evidence-based nursing practice (Degu et al 2022:2).

The scope of practice guides the behaviour and duties of professional nurses in the clinical area concerning what the nurse is allowed to do and not to do. The scope also allows the nurse to incorporate research into daily practice. Feringa, De Swardt and

Havenga (2020:1) assert that the scope of practice outlines the limits or boundaries that allow the nurse to practice and most often, the limit is beyond or below the boundary.

Furthermore, Singh and Mathuray (2018:126-127) highlight that the scope of practice differs among healthcare professionals as it indicates their competencies and others' legal basis for practice. Feringa et al (2020:2) further state that professional nurses generally have a positive attitude toward their scope of practice.

The positive attitude toward the scope of practice is confirmed by the findings from the study that indicate the participants understood their scope of practice concerning health research. However, they verbalised they could not find the time to do it. The findings also revealed mixed feelings as the professional nurses knew of their scope and research but could not come up with any good ideas. Other findings disclosed that the nurses did what they were told by their managers and adhered to their scope of practice with regard to nursing care. They did not at this time verbalise health research.

From the findings, it is evident that the newly qualified nurses had mixed views on their scope of practice, which negatively affected their concept of health research. However, Al-Dalbhi, Alodhayani, Alghamdi, Alrasheed, Alshehri and Alotaibi (2019:1878) assert that even though the many stages of research can be time-consuming and tedious, nurses need to continue as it is an academic requirement.

4.4 NURSES' PERCEPTIONS OF UTILISING HEALTH RESEARCH IN PATIENT CARE

According to Wangdi and Dorji (2019:16673), perception can be described as the belief, views and understanding nurses have toward nursing. Maphumulo and Bhengu (2020:3) expound by stating that it is the act of noticing or being aware of something. It is the comprehension or understanding by the use of sensory receptors.

For research to be used in the clinical area, professional nurses must perceive health research as vital in-patient care. A person's perception indicates their emotional context and how they feel about something. In the study's findings it is health research.

However, Godsey, Houghton and Hayes (2020:808) indicate that nurses as autonomous health care providers have been overlooked and only seen as caring and trusted individuals. This is in keeping with the findings as the participants verbalised more about their workload, duties, and nursing care but had limited contributions regarding health research (conducting or utilising).

The findings disclosed that the nurses felt inundated by the amount of work research takes and were fearful that they would fail or not be able to complete the research. The participants said they did not know where to start, even if they wanted to conduct a study.

4.4.1 Fear and anxiety in undertaking health research

Fear and anxiety are overwhelming emotions experienced by the professional nurse on arrival to the ward. There is the fear of being able to function now as a professional, carrying out the correct order, caring for the patient and ward administration. The researcher can attest to the fear one feels as she was also a newly qualified professional nurse some time ago, and research was overlooked as it was an overwhelming task.

According to Gullone (2000:429), normal fear can be defined as a natural response to a real or perceived threat. Fear is considered an integral, adaptive process for promoting survival. Taschereau-Dumouchel, Michel, Lau, Hoffmann and LeDoux (2021:1324) affirm that fear is subjective, behavioural and physiological, which originates in the brain. Therefore, fear includes fight or flight, thoughts of immediate danger and escape behaviours. Taschereau-Dumouchel et al (2021:1324) state that fear has received more scientific attention than any other emotion.

With regard to anxiety, Yli-Länttä (2020:1022) defines fear as an emotional response, while anxiety is more cognitive. The author continues to elaborate that fear and anxiety exist on a continuum from normal to pathological, considering both environmental and individual factors. Coelho, Suttiwan, Arato and Zsido (2020:1) concur with the above concerning fear and anxiety. In this study, the participants used the term fear and anxiety interchangeably as they described the emotion they felt toward research concurring with Taschereau-Dumouchel et al (2021:1324).

The findings from the focus group interviews revealed that professional nurses experienced fear when they were employed in the wards as they were still novice nurses. This confirms the findings from the above studies. The participants stated that research was difficult in their training, and they feared now they were dealing with 'human lives and not cars'. Others revealed that they could not understand the methodology in their training, which gave them the fear of doing research. The participants further revealed that age was against them and that the younger nurses should take on the task of research instead of those who are older.

The findings further disclosed professional nurses feared the unknown as they could not even think of a topic. The fear is validated by the study by Coelho et al (2020:3), who states that fear of the unknown appears to be the primary fear and the core of anxiety. The study's conclusions are applicable to this study as the participants feared the unknown, and anxiety was the core as revealed by field notes of facial expressions and shaking of their heads.

The above literature confirms the findings in the current study. The participants verbalised that if they had support from the organisation or staff dedicated to research, they would find it easier and less fearful to conduct research.

4.4.2 Difficulty in initiating health research

Participants had difficulty initiating research, as was verbalised by *"it is really hard to come up with a topic."* The *Collins English Dictionary* (2021a, sv "initiate") defines initiate as something you start or cause to happen.

In this study, the participants articulated that even though they understood the importance of research, they found it difficult to initiate a study. They verbalised the many challenges associated with initiating research which were mostly no time, too much workload and no support. Some participants also revealed that the fear of failure became a barrier to initiating research.

According to Al-Dalbhi et al (2019:1878), researchers must take cognisance when researching as they may encounter unexpected problems that can lead to academic failure in research, but the nurse is to persevere. The above study correlates with the

findings from the present study that newly qualified professional nurses find difficulty initiating health research and require assistance in the form of staff support or management support, as verbalised by the participants. The participants felt that if the management or staff supported them, it would be easier to start a research study as they would guide them along the process. The fear and anxiety attached to failing to complete a research study or the study accepted by the staff and management have contributed to the difficulty in initiating a study.

The study's findings also emphasised that professional nurses only had a foundational knowledge of research, which could contribute to their fear of initiating a study. The suggestion was evident in the undertones of the participant's responses. Wilkes (2015:1036) and Okoduwa et al (2018:1) assert that the culture of research in the healthcare domain must be valued to institute an empowering environment for research and researchers, as many nurses believe that research is needed, but only a few actively engage in it. The literature confirms that the participants valued research, but fear prevented them from actively engaging.

4.4.3 Dependency on doctors for therapeutic management

The nursing profession has progressed from a level of dependence on doctor's orders to a much greater professional autonomy, from being the doctor's 'handmaiden' to a profession of its own. Incorporated in the fundamentals of nursing is the dependent, interdependent, independent function of the nurse. Nurses have a dependent function to the law and the regulatory body (South African Nursing Council), an interdependent function with the multi-disciplinary team (all members of the medical team, including doctors), and an independent function, which includes patient care activities (Oldland, Botti, Hutchinson & Redley 2020:151).

When the independent and interdependent function is overlooked, the nurse feels disrespected. This occurs when the doctors ignore their opinions giving the impression that the nurse's level of education is lower. In a study in Tanzania, the nurses complained of a lack of respect from the doctors, which resulted in the absence of decision-making power in patient care even though the nurse spends more time with the patient (Mboineki, Chen, Gerald & Boateng 2019:1354). Furthermore, the study reveals that doctors feel

nurses are there to carry out their orders and not be involved in patient treatment decisions (Mboineki et al 2019:1355).

This is in line with (Ashktorab et al 2015:1), who affirms that the nurse who spends the most time with the patient is the first to recognise any change in the condition. The nurse will therefore be the first link in the causal chain between complications and corrective interventions, making clinical decisions an integral part of patient care.

As newly qualified professional nurses, the participants verbalised that they are inundated with work and carrying out doctor's orders. They further stated that if they notice any discrepancies in orders, they have to wait for the doctor to come and change the order and then carry it out. In this study, the participants did not reveal any collaborative decision-making as a member of the team.

The findings revealed that from the time the nurses started working in the wards, they carried out the doctor's orders. Mthiyane (2018:3) confirms that nursing education is still dominated by the nurse implementing the doctor's orders instead of critical thinking.

Almaze and Emmamally (2015:91) further state that a nurse's attitude toward research is directly related to the nurse's research utilisation, thereby indicating that the nurse must be convinced that research-based interventions are superior to interventions based on tradition or habit, i.e. carrying out the doctor's orders.

From the findings, it can be suggested that on orientation to the ward as a novice nurses, they are told to carry out the doctor's orders. The current study's findings indicate that nurses still depend on doctors' orders and research uptake postgraduation is lacking. This is corroborated by Caldwell et al (2017:2), who explains that newly qualified nurses experience difficulty using and conducting research post-graduation, thereby causing them to revert to the traditional method of following doctor's orders.

4.5 CREATING A CULTURE OF RESEARCH

Casci and Adams (2020:1) describe research culture as a 'hazy' concept that includes research evaluation, support and quality. A positive research culture includes colleagues' contributions to research valued, support to succeed and production of scientific rigour.

Culture is better known as a way of life for an entire society (nursing is often referred to as a society). The culture of the group (in this case, nurses) can be described as the adaptation and integration of new knowledge or information so that members can find correct ways of thinking, perceiving and relating to problems.

An organisational culture, according to Akpa, Asikhia and Nneji (2021:361), is an essential component of an organisation that establishes the organisation's performance and sustainability. The culture deeply impacts employee performance and the variety of the organisational process.

The researcher can relate the organisational culture to research as an organisational process as Akpa et al (2021:362) further add that employee performance and research management depend on the organisation's culture.

A study by Fredua-Kwarteng (2021:2-3) states that research culture is defined as shared values, assumptions, beliefs and behaviour whose central focus is acceptance and recognition of research. Adding to the above study, Chigozie and Chijioke (2015:31) state that research helps people acquire skills vital to performing their duties well.

The findings from this study revealed that the participants desired an organisation that valued research and encouraged them to conduct/use research in their daily duties. The findings also disclosed that if the organisation valued research, the staff and the multi-disciplinary team would support them in research. The participants were unsure if a research committee existed in the institution and verbalised the organisation had not orientated them on the importance of research, its use and conducting research in nursing care. The outcome was that they did not know of a research culture or any staff dedicated to promoting research in the institution and therefore concentrated on nursing duties.

Caldwell et al (2017:2) emphasise the urgency for on-going training in health research uptake and positive research culture. The culture of research in the healthcare domain must be valued to institute an empowering environment for research and researchers (Okoduwa et al 2018:1; Wilkes 2015:1036).

The above literature concurs with the study's findings as the participants were very interested in conducting research but did not receive any support in the clinical area and lacked time and participation in research. The findings suggest a lack of a research culture in the institution.

The findings from this study also disclosed the need for staff in the institution to be allocated for research. Moreover, the participants verbalised they have not seen any staff allocated to research, which made them feel they have no support regarding research. The participants felt that certain staff should only research while they did the nursing care. This is indicative and suggestive of the institution's lack of research culture. In relation to a culture of research, Coetzee (2019:2) asserts that it is the specific culture of an academic to the task of research.

According to Olvido (2021:16) research culture refers to the value and significance of research practice and outputs. By improving the research culture of an institution, the output will be a more successful environment and improved nursing care (Casci & Adams 2020:1). The study by Casci and Adams (2020:1) and the findings from this study correspond as the participants believed research improves nursing care. Additionally, the research culture will support researchers' success at all stages.

Incorporated in the concept of culture is the suggestion of a mentor (although not clearly stated). The following studies expound on the concept of mentoring concerning research in the clinical area. Manzi, Hirschhorn, Sherr, Chirwa, Baynes and Awoonor-Williams (2017:6) declare that mentoring is the transfer of expertise from an individual with broad skills and more experience to a less experienced mentee so performance and growth can be fostered and improved. This is in line with Benner's Novice to Expert Model, which requires mentoring and guidance to progress to the next level.

However, on the other hand, a lack of encouragement and guidance from mentors about research is considered a potential barrier (Khan, Afzal, Hamid & Hanif 2019:13-17). This is confirmed by the findings from this study, where participants expressed they were not supported and there was limited, or no guidance from the older staff (mentors) concerning research as the older staff preferred the way things were (traditional).

The findings also revealed that the participants preferred another person to do the research; since they loved it and believed it was necessary, they could come up with the topic. Furthermore, the participants articulated that their workload was so great and they were both tired and lacked the time that it would be advisable that another staff member be allocated to research instead of them. This is in line with Jordan et al (2016:52), who state that a mentor or champion is needed to aid in the effective implementation of research. The findings in this study confirm this.

4.6 CHALLENGES EXPERIENCED BY NURSES WITH REGARD TO HEALTH RESEARCH

The findings from the study revealed that the participants experienced numerous challenges in the clinical area after graduation. The challenges included a lack of time to conduct research, a heavy workload and being physically drained after their shift, being used to doing non-nursing duties, lack of support from the staff and carrying out doctor's orders and a lack of resources.

The researcher sifted through the challenges and only reported on the challenges that frequently appeared. The challenges appeared overwhelming to the participants, which was confirmed by the field notes. The participants revealed that they are at the stage of 'let someone else do research because I am so tired and anyway no one listens to my suggestions'. This finding revealed the participants' demotivation and discouragement toward health research; therefore, it justifies why they are currently not using or involved in health research.

According to Khan et al (2019:13), nurses are very motivated to do research but encounter many challenges in the workplace, namely, lack of appropriate facilities, lack of knowledge of research methodology, lack of experience and lack of research culture. Further challenges to research were emphasised by Razu, Yasmin, Arif, Islam, Islam, Gesesew and Ward (2021:5), which included lack of adequate skilled support from the staff, lack of dedicated time for research and lack of or non-involvement in research.

4.6.1 Lack of time to conduct research

The most common finding in the challenges experienced by nurses to health research was lack of time and the participants strongly vocalised these findings. The participants revealed that their workload was exhausting due to the short staffing that was experienced in the hospital. Furthermore, the non-nursing duties the participants had to perform added to their workload, frustrations and tiredness. Time dedicated to research is needed if research is to be conducted, valued and supported in an institution.

Given the situation in the government hospitals, it is understandable why the nurses are unable to partake in health research. The participants revealed insufficient staff to nurse the patient, a lack of resources, time and no support.

The following studies support the findings in this study. According to Alqahtani et al (2022:314), Ramón et al (2022:1) and EzzatAbdElnasar and Mohamed (2019:44) state that the most recorded barriers included lack of time to implement new ideas and limited knowledge of research. This concurs with Qureshi et al (2018:32), who further emphasise the following recommendation: Teaching hospitals should change nurses training to provide proper resources and time to read and implement new ideas.

Studies in Zambia, Ethiopia and Egypt revealed that nurses also had positive attitudes but lacked knowledge due to a lack of time to read articles, increased workload and lack of authority to change orders (Dagne & Ayalew 2020:1; Abouelfettoh & Al Ateeq 2018:72; Monde et al 2017:2). In a study by Fashafsheh et al (2020:2), the primary barrier to research uptake is the insufficient time at work to implement research findings and inadequate time to read the research. This is in line with Al-Yateem et al (2019:217), who state that the top three nurse-perceived barriers are: lack of authority to change patient care procedures, insufficient time to read the research, and insufficient time to implement new ideas.

Moreover, the authors state that the highest-ranking barrier in the United Arab Emirates is the lack of time and competing demands for time. Lack of time to research was also reported in the studies by Kaseka and Mbakaya (2022:5), Bahadori et al (2016**:**3), Dagne and Ayalew (2020:1), and Iradukunda and Mayers (2020:4). From existing literature, it

can be implied that the challenge of lack of time as indicated by this study's findings, is a long-standing concern among nurses.

According to Jabonete and Roxas (2022:5), there is an existing gap between theoretical knowledge gained and practice. Their study reveals that the top barrier to the implementation of research in low and middle-income countries were insufficient time.

In a Columbian study by Correa, Lugo-Agudelo, Aguirre-Acevedo, Contreras, Borrero, Patino-Lugo and Valencia (2020:9), the findings revealed that the most mentioned barrier to research was a short amount of time to care for the patient as well as to implement research and then to re-evaluate the patient. This is in line with Nkrumah et al (2018:4), whose findings from a study in Ghana stated that the nurse's low level of participation in research was due to insufficient time to read articles and the misconception that research was not a nursing role.

The sentiment runs throughout this study, where the participants cannot find the time to do both nursing care and research and are confirmed by the literature. A South African study by Dizon, Grimmer, Louw, Machingaidze, Parker and Pillen (2017:2) state that the transition to research-based care can be problematic for health systems, especially in low and middle-income countries experiencing demographic and epidemiologic transitions. The authors state that lack of time was commonly reported together with a lack of ready access, understanding and unwillingness to change practices confirming the findings once more.

4.6.2 Staff shortage as a challenge to research

The second unexpected challenge that the participants experienced was a staff shortage. This finding was experienced by all the participants in all four focus groups and the participants felt very strongly about it, as they verbalised that staff shortage was the reason for work overload and frustration in the clinical area.

International, national and local studies reveal staff shortage as a barrier to research, as indicated by the following findings. The shortage of nurses throughout the world is a problem, and in South Africa as nurses emigrate to other developed countries for better salaries and job opportunities the effect escalates according to Mokoena (2017:2).

In a study conducted by Haddad, Annamaraju and Toney-Butler (2022:2), nurses graduate and start nursing soon after, only to find that the profession is not for them as they experience burnout and leave. In hospitals with high patient-to-nurse ratios, burnout and dissatisfaction are increased resulting in higher patient mortality. This staff shortage can lead to errors in patient care which are detrimental to the patient. The above is in line with Jordan et al (2016:53) in a South African study, which emphasises that clinical decisions not based on research can be detrimental to the patient.

According to Machitidze (2022:441), qualified nurses are needed for proper patient care and the lack thereof negatively impacts the patient. This problem of staff shortage has reached perilous levels in hospitals both globally and locally. Moreover, errors in nursing care occur due to short staff and the COVID-19 pandemic, as highlighted by Machitidze (2022:441). In this study, the findings revealed that the staff shortage prevented the participants from researching as they had an added workload and no time. The findings also revealed that the staff was asked to carry out non-nursing duties due to the shortage, which added to their frustrations.

According to Ndikwetepo (2018:1), in a Namibian study, the author's findings reveal that staff shortages contribute to the staff being unhappy, work completed under stressful conditions, high workloads and no recognition for the work done. Kaseka and Mbakaya (2022:2) assert that the need for research in healthcare decisions has substantially escalated in low- and middle-income countries. However, lack of staff and inadequate time for research posed a challenge. To add to this widely experienced challenge of staff shortage, Fashafsheh et al (2020:1) affirm that transferring evidence into practice continues to be slow, mainly due to insufficient finances, shortage of staff, poor performance communication and dependence on doctor's orders.

An Austrian study by Jeleff, Traugott and Jirovsky-Platter (2022:1) reveal that staff shortage resulted in a physical and mental strain which adversely affected nursing care as the staff were overworked and on high alert. Ghafoor, Yaqoob, Bilal and Ghafoor (2021:114) concur with the above study by stating shortage of staff affects the country's healthcare setting and results in the overall decline in healthcare in the country. This was a study in Pakistan where a shortage of nurses was the top challenge that negatively

affected the nurses. Staff shortage resulted in the nurses being overworked, having job stress, anxiety and physical and mental ill-health.

Augmenting the above studies is a study by Tamata, Mohammadnezhad and Tamani (2021:1), who state that the shortage of nurses negatively impacts performance and adds to stress or moral distress due to work overload and long hours. The resultant effect is physical, psychological, social and family relationship stress. Moreover, the nursing shortage has caused severe burnout, aggravating nurses' inability to leave their jobs.

In South Africa, the situation of nurse shortage has reached critical proportions and threatens the health system (*News24*:2022). According to Thomas, Venter and Boninelli (2022:46), adding to the South African context, the staff shortage impacted the staff morale and quality of service negatively. The hospital management's challenge was finding creative solutions to this problem, as the traditional ways were exhausted. The researcher found the study's title fitting as it stated, ‘a new remedy or the same prescription’ as the staff shortage has been experienced globally for over a decade.

The challenge of staff shortage is a worldwide problem and solutions to this problem are urgently needed so staff can be retained. Adequate staffing will help nurses be happy at work and reduce their workload, resulting in the nurses having a positive attitude and providing better nursing care to the patient. This positive effect will consequently positively impact health research. The literature validates the study’s findings as articulated by the participants.

4.7 SUMMARY

Chapter 4 discusses the findings from Chapter 3 with the relevant literature. The themes of professional nurses’ knowledge, attitudes and how they perceive health research, as well as the challenges, were discussed, integrating current and most relevant literature to give meaning. Chapter 5 will discuss the conclusion, limitations and recommendations of the study.

CHAPTER 5

CONCLUSIONS, LIMITATIONS AND RECOMMENDATIONS

5.1 INTRODUCTION

In the previous chapter, the findings from the focus group interviews were integrated and contextualised with current and relevant literature. The current chapter discusses the conclusions, limitations and recommendations pertaining to the study. The conclusions include the purpose and how the study's objectives were achieved under each theme. The study aimed to explore and describe newly qualified professional nurses' knowledge, attitudes and perceptions toward health research within uMgungundlovu health district, KwaZulu-Natal, South Africa. The objectives of the study were to:

- determine the level of knowledge of newly qualified professional nurses in health research
- explore and describe the attitudes and perceptions of newly qualified professional nurses toward health research
- make recommendations to enhance the culture of health research among professional nurses

Nursing is an essential component of healthcare and nurses are portrayed as the ‘heartbeat of healthcare”. Nurses must have extensive knowledge to execute their functions and provide holistic nursing care, including preventive, promotive, maintenance and restorative healthcare. Singh and Mathuray (2018:123) state that the nurse’s role has changed over the years to include a wider specialisation, greater autonomy and more accountability concerning rendering patient care competently, ethically and legally. Rispel (2020:1) further assert that by empowering and investing in nurses and nursing, South Africa will have added benefits of accelerating advancement towards the Sustainable Development Goals on Health.

Nurses integrating research into daily healthcare practices have the potential to improve patient outcomes and practice environment and build knowledge and confidence, according to Abu-Baker et al (2021:1). Al-Dalbhi et al 2019:1877 further reinforce

research in healthcare practice can help develop and interpret existing health-care resources, attitudes and values and is critical in creating healthcare policies.

Nursing research is searching out facts so that knowledge can be enhanced by collating and analysing information to improve understanding of patient care, according to Okoduwa et al (2018:2). This study highlighted newly qualified professional nurses' knowledge, attitudes and perceptions toward health research and unexpected challenges experienced. The findings of this study are to intensify nursing institutions' awareness of the benefits of health research on patient care.

The recommendations suggested will assist in reducing the gap from basic education of health research to conducting and utilising health research in patient care. The recommendations will promote the progressive movement of the novice nurse upward to expert in the nursing field as a culture of research is enhanced among nurses (Benner 2014:402).

5.2 SUMMARY OF THE METHODOLOGY

A qualitative, exploratory, descriptive design was used in the study to attain the objectives and to develop an understanding of the newly qualified professional nurse’s knowledge, attitudes and perceptions toward health research. The philosophical underpinning of the study was inductive and emergent, as each participant had their own perspective to share. For less than two years, professional nurses were employed at the two public health facilities in KwaZulu-Natal, South Africa, the population in the study. This study incorporated an integrated summary of the four focus group interviews held at Greys Hospital and Harry Gwala Regional Hospital in uMgungundlovu health district, KwaZulu-Natal, South Africa.

The data collection method the researcher employed was a focus group interviews using semi-structured interviews to gain an in-depth understanding of the knowledge, attitudes and perceptions toward health research from purposely selected individuals (Nyumba et al 2017:20).

During this study, South Africa experienced the COVID-19 pandemic, which required social distancing and wearing face masks (Annexure Q). The researcher took into

consideration the COVID-19 pandemic and the protocols of social distancing among participants and chose smaller focus groups instead of the recommended size of six to 12 (Hamilton & Finley 2020:3; Gundumogula 2020:300; Nyumba et al 2017:23).

Four focus groups were held, with a total of 20 participants in the study. Data saturation occurred during the third focus group, finalising the focus groups. However, the researcher conducted a fourth focus group to verify and authenticate data saturation. A co-facilitator was present at all four focus group interviews.

Themes and subthemes emerged from the data collected and were validated by seasoned researchers. An external co-coder and co-facilitator were consulted to verify the themes and maintain the integrity of the study. Data were analysed using Creswell and Creswell's (2018:316) five steps in data analysis which included the following: organise and prepare the data, read or look at all the data, start coding the data, generate a description and themes, represent the description and themes.

5.3 CONCLUSIONS DRAWN FROM THE STUDY

The conclusions drawn from the study are established on the focus group interviews findings in Chapter 3 and the integrated literature in Chapter 4 of this study. The conclusions of the demographic data are presented, thereafter the three objectives of the study. The findings from the study show that the objectives are achieved.

5.3.1 Demographic data

The demographic data represented the three race groups, both genders, the age, qualification of the nurse and work experience. This revealed that nursing is a multi-racial profession. The age ranged from 23 years to 60 years. From the findings it shows that nurses often enter the profession or transition to a professional nurse's qualification later in life instead of straight out of school. This could have significant relevance to the knowledge, attitudes and perceptions toward health research as the age could suggest nursing was not their first career choice. This is supported by Dos Santos (2020:2), who states that adult students and second-career changers choose nursing during the middle years of their adulthood. Furthermore, the bridging from enrolled nurse to professional nurse occurred much later in life, suggesting that the nurse experienced challenges in

attaining the initial qualification. From previous experience as a lecturer at a nursing campus, the researcher can affirm that the nurse who bridges from enrolled nurse to professional nurse experience some difficulty in the course. Most of the participants were females, concluding that nursing remains a profession with females being the majority, concurring with Mao, Cheong, Van and Tam (2021:1-2) and Loots (2016:31).

The demographic data further concludes that the professional nurses in the clinical domain consist of nurses who completed a degree, diploma and bridging course in nursing, revealing that nurse training was not limited to any one form of training.

5.3.2 Conclusions related to knowledge of professional nurses toward health research

The findings conclude that most newly qualified professional nurses have limited knowledge of health research and were merely introductory in nature. This knowledge was attained during their formal education and training, and by the staff in the wards they worked in. Furthermore, nurses felt that research was compulsory to complete and not by choice, and doing research was difficult. This is in line with Breimaier et al (2011:1744), who found that the nurse's requirements for knowledge and use of research were merely introductory.

The professional nurses, however, felt that this foundational knowledge was needed in their clinical practice as it helped them make decisions on nursing care. This concurs with Makhene (2022:1) and Ashktorab et al (2015:1), who state that foundational knowledge is acquired through education and practice and sets the foundation for critical thinking.

The findings further concluded that research was necessary for reducing illness and death of the patients in their care. According to some participants, health research allowed for innovative ways of treating the patient, believing it was beneficial in the 'long run'. This is in line with Bahadori et al (2016:1), who state that applying research findings is one of the most important indicators of professional development leading to efficient, effective and quality nursing care.

A further conclusion can be drawn that research assisted in discovering new and innovative ways of doing things which benefited the patient and the hospital as research

was a cost-saving intervention. This concurred with Kaseka and Mbakaya (2022:2), who affirm that the gold standard for providing safe and compassionate healthcare is a practice based on evidence.

5.3.3 Conclusions related to the attitudes and perceptions toward health research

The attitude of nurses toward health research can either be positive or negative. According to Aksoy et al (2018:38), the attitudes of a nurse toward research are closely related to their knowledge of research, indicating a positive correlation between the two. Nurses' positive attitudes contribute to the increase in quality care as they transfer research into practice (Karakoc-Kumsar et al 2019:271). From the study it can be concluded that nurses who were knowledgeable about health research had a positive attitude towards health research.

It was concluded that newly qualified professional nurses have a positive attitude toward health research and believe the research was necessary to prevent hospital-acquired infections and promote quality patient care, despite their knowledge being introductory. This is in line with Al-Yateem et al (2019:216), Rojjanasrirat and Rice (2017:49), Sin and Bliquez (2017:447) and Zhou et al (2016:4-5), who justify that although nurses lacked knowledge in research, they still had a positive attitude toward research.

The researcher concluded that support from the ward staff and hospital management was necessary for the use and conducting of research in the clinical setting. This is supported by Parchebafieh, Memarian and Vanaki (2020:1), who state that recognition as a team member is vital for the psychological atmosphere and motivation of learning in the nurse.

With regard to critical thinking and the traditional method of doing things in the ward, the conclusion is newly qualified professional nurses still carried out doctor’s orders due to lack of knowledge to change orders and fear and anxiety. The conclusion concurs with the study by Dereje et al (2019:48) and Mthiyane (2018:3), who states that nurses are unwilling to try new ideas or change old ideas and feel they do not have enough authority to change patient care procedures.

Regardless of the challenges experienced, it can be concluded that newly qualified professional nurses have a positive attitude toward health research and perceive health research as important to patient care.

5.3.4 Conclusion on recommendation to enhance a culture of research among nurses

This conclusion addresses the third objective of the study. According to Akpa et al (2021:361), organisational culture is the organisation's way of life and the members who think, act and perform similarly. Coetzee (2019:2) states that research culture is the specific culture of an academic to the task of research and Caldwell et al (2017:2) emphasise the need for continuous training in health research uptake and positive research culture.

The culture of research in the healthcare domain must be valued to institute an empowering environment for research and researchers (Wilkes 2015:1036), as many nurses believe that research is needed, but only a few actively engage in it (Okoduwa et al 2018:1).

A conclusion that may be drawn is that support for the research culture is lacking. This conclusion highlighted the need for support in enhancing a culture of research among nurses in the clinical domain. Although not specifically indicated, the conclusion can be suggestive of a mentoring programme for nurses with regard to support in health research and the enhancement of a culture of research.

5.3.5 Conclusions regarding short staffing and bureaucracy

The study's findings uncovered unexpected challenges that the participants experienced in the ward, which directly impacted their knowledge, attitudes and perceptions toward health research. The barriers were a lack of support from the staff and bureaucracy.

The participants disclosed that staff shortage was evident in the wards and they were allocated non-nursing duties combined with nursing duties. The impact of short staffing led to the participants being exhausted and “drained”, leaving no room for research.

Staff shortage is a common problem nationwide and worldwide. This is affirmed by Tamata et al (2021:2), who state that staff shortage negatively impacts patients and nurses. Machitidze (2022:441) further adds that a shortage of nurses makes the nurse busier, more stressed and less focused on details. The outcome of nurse shortage leads to less communication among staff, increase in mistakes and errors and unsafe conditions for the patient. The above is in response to the World Health Organization's prediction that by the year 2035, there will be 12.9 million deficits in nurses worldwide.

According to Ndikwetepo (2018:1), in a Namibian study, the author reveals that staff shortages contribute to the staff being unhappy, work completed under stressful conditions, high workloads and no recognition for the work done.

This is in keeping with Fashafsheh et al (2020:2), who indicate that the nurses' lack of transferring research into practice is due to staff shortage, insufficient time to implement research findings and inadequate time to read the research. A study in China by Zhou et al (2016:4-5) concurred that nurses had a positive attitude toward research but were limited in their knowledge due to lack of time and workload.

The findings concluded that staff shortage leads to dissatisfied, overworked, unhappy and stressed staff who contribute to mistakes and errors in patient care.

Regarding bureaucracy, the participants fully understood how vital policies and procedures are in running the institution. This is in keeping with Ebben et al (2018:1), who state that clinical practice guidelines and protocols are in place to improve the quality of care, limit variations in practice and ensure evidence is used appropriately. From the study findings, it can be concluded that bureaucracy was essential however, it negatively impacted health research.

5.4 STUDY LIMITATIONS

The limitation identified was the participants in one institution knew the researcher was a lecturer, and the researcher became concerned that the participants would not give a true account of their knowledge, attitudes and perceptions toward health research. The participants were reassured that the researcher was there as a researcher and not as a lecturer. The reassurance allowed the participants freedom to verbalise during the focus

group interviews. To minimise any potential bias, the following measures were supportive: A co-facilitator assisted in collecting and analysing the data. The researcher also used a co-coder to guarantee objectivity of the data analysis. The researcher used bracketing and remained unbiased throughout the data analysis process.

Inclusion of a larger group of participants was difficult as the size of group interactions was regulated by the Covid-19 restrictions in the country at the time of the study.

The study was conducted in two government institutions and the findings could only be applied to their setting. However, the study could be further researched in other health locations.

5.5 RECOMMENDATIONS

The recommendations for the study are based on the study's findings. The following recommendations are for knowledge, attitudes and perceptions toward health research and recommendations for the enhancement of a culture of research among professional nurses.

5.5.1 Recommendations for nursing education

The findings revealed that the students who completed the diploma in nursing through the nursing colleges had limited or basic research knowledge. Currently, the research process is taught, but the emphasis is not on how to incorporate the evidence in the clinical area. The researcher recommends that the research module be taught in detail and as a year module in the degree programme, as this would equip the nurses with the required research knowledge. This was evident in the findings of a professional nurse who achieved a degree in nursing with more research knowledge.

Nurse educators and students should engage in collaborative research to expose students to an actual research project.

Another recommendation, also supported by Mthiyane (2018:110) is that the research module is taught over the course duration. Engaging students in research throughout their training will enhance a culture of research. It is recommended that students are engaged

in “Research Day” activities, where research studies are presented, so the importance of health research can be recognised. Recognition of the research proposal at a “Quality Day” celebration, where the student is acknowledged for the research conducted, will serve as motivation to students to pursue health research post-qualification. The researcher also recommends recognition in the form of certificates for students who excelled in research during their training. The research studies can be archived for the motivation of future students and further reference.

5.5.2 Recommendation for practice

The recommendation for practice is to include health research in the orientation programme on the induction of new professional nurses to the institution.

Preceptors in the clinical setting support the newly qualified professional nurses in research uptake and strengthen health research in patient care. It is recommended that the novice professional nurse is involved in quality assurance, where research is conducted to improve patient care in the institution so the impact of health research can be fully understood. Novice professional nurses can attend research workshops and seminars and present their research to motivate novice professional nurses toward health research and as a capacity-building intervention.

Collaborative research between the clinical settings and training institutions are vital for creating a research culture and scholarship development. Collaboration with institutions (e.g. Universities or nursing colleges) is important to support the novice professional nurse in taking an active role in health research and assistance in possible publication. Awards and recognition in the form of certificates and continuous professional development (points are to be given to the novice professional upon completion of a research project and presentation.

Continuous professional development sessions should include research-related topics where novices can learn and debate about clinical research, general research methodology and their role in the research context.

Healthcare institutions must ensure that research policies are clear. A policy on conducting and utilising health research in patient care is compulsory for a professional nurse's continued education, training and practice.

5.5.3 Recommendation for future research

The researcher recommends the following for future research in this field:

- A study on what type of research-related activities are available in the clinical practice in institutions, will provide information for future planning of research-related training and activities in the clinical field.
- Further research is to be conducted to explore the effect of extending the research module for a year or the duration of the course.
- Future research on the novice professional nurse conducting health research to obtain CPD points.
- Further research is to be conducted to explore how a mentoring programme enhances the culture of health research among novice professional nurses.
- Future research on the effect of support as the novice professional nurse moves from novice to expert in the clinical domain (Benner 2014:402).

5.6 CONCLUSION

Nursing is an essential component of healthcare and nurses are portrayed as the ‘heartbeat of healthcare”. Nurses integrating research into daily healthcare practices have the potential to improve patient outcomes and practice environment according to Abu-Baker et al (2021:1). Nursing research is searching out facts so that knowledge can be enhanced by collating and analysing information to improve understanding of patient care (Okoduwa et al 2018:2). It is vital that nurses are knowledgeable, have a positive attitude and perceive health research as an essential component in patient care in order to positively impact the health needs in KwaZulu-Natal, South Africa.

Chapter 5 included the conclusions of each objective, the limitations of the study, the recommendations for the study and the references used.

According to Hines et al (2022:2), professional nurses must participate in health research practice and be research literate (read and understand articles that use research language). Qureshi et al (2018:31) state that nurses have found difficulty in practice based on research as nurses are required to be knowledgeable, have a positive attitude and have good research skills over the years.

Hansen (2021:1) drew attention to the global novice nurse who needs guidance to adapt to the ever-changing healthcare environment. In addition, Al-Dalbhi et al (2019:1877) encapsulates health research by nurses as an important process of developing new knowledge, skills, attitudes and values. Health research assists the nurses deliver optimal healthcare to the patient, which is cost-effective for the patient and institution.

From this study's findings, the researcher concludes that the newly qualified professional nurses have a good attitude toward health research. However, the knowledge of research of professional nurses was basic or introductory as no one had conducted a research study post-graduation. Lack of research knowledge led to professional nurses using the traditional method of patient care of carry-out doctor's orders instead of using research in their care. Furthermore, professional nurses encountered challenges in the workplace of staff shortage and bureaucracy, discouraging them from using health research.

The study's objectives were met, the purpose achieved and recommendations made to improve knowledge, attitudes and perceptions of newly qualified professional nurses toward health research.

LIST OF REFERENCES

Abouelfettoh, A & Al Ateeq, E. 2018. Nurses' KAP related to research conduct and utilization: EBNP "are we ready yet". *International Journal of Advanced Nursing Studies* 7(1):72-76.

Abu-Baker, NN, AbuAlrub, S, Obeidat, RF & Assmairan, K. 2021. Evidence-based practice beliefs and implementations: A cross-sectional study among undergraduate nursing students. *Bio Medical Central Nursing* 20:1-8.

AbuRuz, ME, Hayeah, HA, Al-Dweik, G & Al-Akash, HY. 2017. Knowledge, attitudes, and practice about evidence-based practice: A Jordanian study. *Health Science Journal* 11(2):1-8.

Adedoyin, OB. 2020. Qualitative research methods. Department of computer education and educational technology. Unpublished thesis. Near East University. Nicosia.

Adom, D, Hussein, EK & Agyem, JA. 2018. Theoretical and conceptual framework: mandatory ingredients of a quality research. *International Journal of Scientific Research* 7(1):438.

Akpa, VO, Asikhia, OU, Nneji, NE. 2021. Organizational culture and organizational performance: A review of literature. *International Journal of Advances in Engineering and Management (IJAEM)* 3(1):361-372. From: www.ijaem.net (accessed 1 February 2022).

Aksoy, HB, Arici, MA, Ucku, R & Gelal, A. 2018. Nurse's knowledge, attitudes, and opinions towards clinical research: A cross-sectional study in a university hospital. *Journal of Basic and Clinical Health Science* 2(2):38-44.

Akyildiz, ST & Ahmed, KH. 2021. An overview of qualitative research and focus group discussion. *International Journal of Academic Research in Education* 7(1):1-15.

Al-Busaidi, IS, Al-Suleimani, SZ, Dupo, JU, Al-Suleimani, NK & Nair VG. 2019. Nurses' knowledge, attitudes, and implementation of evidence-based practice in Oman: A multi-institutional, cross-sectional study. *Oman Medical Journal* 39(6):521-527.

Al-Dalbhi, S, Alodhayani, A, Alghamdi, Y, Alrasheed, S, Alshehri, A & Alotaibi, N. 2019. Difficulties in conducting clinical research among healthcare practitioners in Saudi Arabia: A cross-sectional survey. *Journal of Family Medicine Primary Care* (8):1877-1883.

Alkhatib, AH, Ibrahim, EA, Ameenuddin, M & Ibrahim, IA. 2021. Nurses' knowledge, perception, and attitude towards evidence-based practice at King Abdullah Medical City, Saudi Arabia. *American Journal of Nursing Research*, 9(1):1-7. DOI:10.1269/ajnr-9-1-1.

Alkhaldi, M, Abed, Y, Pfeiffer, C, Haj-Yahia, S, Alkaiyat, A & Tanner, M. 2018. Understanding the concept and importance of the health research system in Palestine: A qualitative study. *Biomedical Central* 16(49):2.

Almaze, JP & Emmamally, W. 2015. Exploring awareness on evidence-based practice and research utilisation in critical nurses in selected hospitals in Ethekwini District KwaZulu-Natal. *Africa Journal of Nursing and Midwifery* 17(2):89-102.

Alqahtani, JM, Carsula, RP, Alharbi, HA, Alyousef, SM, Baker, OG & Tumala, RB. 2022. Barriers to implementing evidence-based practice among primary healthcare nurses in Saudi Arabia: A cross-sectional study. *Nursing Reports* 12:313–323.

Altmann, T. 2008. Attitude: A concept analysis. *Nursing forum* 43(3):144-150. DOI: 10.1111/j.1744-6198.2008.00106x.

Al-Yateem, N, Griffiths, J, McCreadie, M, Robertson-Malt, S, Kuzemski, D, Anthony, MJ, Fielding, M, Khatib, FA, Sojka, ME & Williams, JJ. 2019. A national scoping study on barriers to conducting and using research among nurses in United Arab Emirates. *Nursing Practice* 20(4):216-227.

Amin, MEK, Nørgaard, LS, Cavaco, AM, Witry, MJ, Hillman, L, Cernasey, A & Desselle, SP. 2020. Establishing trustworthiness and authenticity in qualitative pharmacy research. From: https://doi.org/10.1016/j.sapharm.2020.02.005 (accessed 1 May 2022).

Ashktorab, T, Pashaeypoor, S, Rassouli, M & Alavi-Majd, H. 2015. Nursing student's competencies in evidence-based practice and its related factors. *Nursing Midwifery Studies* 4(4):1-4.

Aspers, P & Corte, U. 2019. What is qualitative in qualitative research. *Qualitative Sociology* 42:139-160.

Bahadori, M, Raadabadi, M, Ravangard, R & Mahaki, B. 2016. The barriers to the application of the research findings from the nurses' perspective: A case study in a teaching hospital. *Journal of Education and Health Promotion* 5:1-14.

Bhardwaj, P. 2019. Types of sampling in research. *Journal of the Practice of Cardiovascular Sciences* 5(3):157.

Bastani, P, Mohammadpour, M, Bahmaei, J, Ravangard, R & Mehralian, G. 2021. Hospital management by health services management graduates: The change paradigm in Iran. *Heliyon* 7(11):1-2.

Benner, P. 2014. From novice to expert. *The American Journal of Nursing* 82(3):402-407.

Benner, P. 2005. Using the Dreyfus Model of Skill Acquisition to describe and interpret skill acquisition and clinical judgment in nursing practice and education. *The Bulletin of Science, Technology and Society Special Issue: Human Expertise in the Age of the Computer* 24(3):188-199.

Bhembe, TM. 2014. Challenges faced by nurse educators in teaching research to undergraduate nursing students. Unpublished Dissertation. University of South Africa, Pretoria.

Bitter, CC, Ngabirano, AA, Simon, EL & Taylor, DM. 2020. Principles of research ethics: A research primer for low- and middle-income countries. *African Journal of Emergency Medicine* (10):1-5.

Bleich, MR, MacWilliams, BR & Schmidt, BJ. 2015. Advancing diversity through inclusive excellence in nursing education. *Journal of Professional Nursing* 31(2):89-94.

Bolisani, E & Bratianu, C. 2018. *The elusive definition of knowledge. Emergent knowledge strategies: Strategic thinking in knowledge management*. New YorK:Springer International:1-22. DOI: 10.1007/978-3-319-60656_1.

Boru, T. 2018. Chapter five research design and methodology 5.1. Introduction citation: Lelissa TB research methodology. University of South Africa, PhD Thesis. DOI: 10.13140/RG.2.2.21467.62242.
From: https://www.researchgate.net/publication/329715052 (accessed 13 March 2022).

Bostley, MA. 2019. Basics of research design: A guide to selecting appropriate research design. *International Journal of Contemporary Applied Researches* 6(5):79-87.

Bradbury-Jones, C, Taylor, J & Herber, O. 2014. How theory is used and articulated in qualitative research: Development of a new typology. *Social Science and Medicine* 120:135-141.

Bradshaw, C, Atkinson, S & Doody, O. 2017. Employing a qualitative description approach in health care research. *Global Qualitative Nursing Research* 4:1-6.

Breimaier, HE, Halfens, RJG & Lohrmann, C. 2011. Nurses wishes, knowledge, attitudes and perceived barriers on implementing research findings into practice among graduate nurses in Austria. *Journal of Clinical Nursing* 20:1744-1756.

Brink, H, Van der Walt, C & Van Rensburg, G. 2018. *Fundamentals of research methodology for healthcare professionals*. 4th edition. Cape Town: Juta.

Caldwell, B, Coltart, K, Hutchinson, C, McJurry, M, Morrison, A, Paterson, C & Thompson, M. 2017. Research awareness, attitudes and barriers among clinical staff in a regional cancer centre. *European Journal of Cancer Care* 26(5):1-12.

Carcary, M. 2020. The research audit trail: Methodological guidance for application in practice. *The Electronic Journal of Business Research Methods* 18(2):166-177. DOI: 10.34190/JBRM.18.2.008.

Casci, T & Adams, E. 2020. *Research culture. Setting the right tone Improving the research culture of an institution may lead to a fairer, more rewarding and successful environment, but how do you start making changes?* From: www.elifesciences.org (accessed 20 June 2022).

Cherry, K. 2021. *Attitudes and behaviour in psychology*. From: www.very well mind.com (accessed 20 June 2022).

Chigozie, MP & Chijioke, E. 2015. Effects of research and development on organisational product quality. *Asia Pacific Journal of Research in Business Management*, 6(3):29-50. From: www.skirec.org (accessed 1 July 2022).

Chizolum, OH. 2021. *Nursing research: Challenges and opportunities*. Nnamdi Azikiwe University Teaching Hospital, Nnewi.

Coelho, CM, Suttiwan, P, Arato, N & Zsido, AN. 2020. On the nature of fear and anxiety triggered by COVID-19. *Frontiers in Psychology* 11:1-3.
DOI: 10.3389/ fpsyg.2020.581314.

Coetzee, LS. 2019. A framework for enhancing the research culture within the faculty of health sciences at the University of the Free State. Health Sciences Education, University of the Free State.

Cole, NL. 2020. "So What Is Culture, Exactly?" *ThoughtCo.*
From: www.thoughtco.com/culture-definition-4135409 (accessed 12 May 2022).

Collins English Dictionary. 2021a. Sv “initiate”.
From: https://www.collinsdictionary.com/dictionary/english/initiate (accessed 1 January 2022).

Collins English Dictionary. 2021b. Sv “perception”.
From: https://www.collinsdictionary.com/dictionary/english/perception (accessed 01 January 2022).

Collins, CS & Stockton, CM. 2018. The central role of theory in qualitative research. *International Journal of Qualitative Methods* 17:1-10. DOI: 10.1177/1609406918797475.

Correa, VC, Lugo-Agudelo, LH, Aguirre-Acevedo, DC, Contreras, AP, Borrero, AMP, Patino-Lugo, DF & Valencia, DAC. 2020. Individual, health system, and contextual barriers and facilitators for the implementation of clinical practice guidelines: A systematic meta-review. *Health Research Policy and Systems* 18:1-11.

Crable, J. 2020. Evidence-based practice knowledge, attitudes, practices, and barriers: A nurse survey. *Nursing Critical Care* 15(5):24-32.

Creswell, JW & Creswell, JD. 2018. *Research design. Qualitative, quantitative and mixed methods approaches*. 5th edition. Los Angeles: Sage.

Cunze, MJ. 2016. Student nurses' perceptions of professional nurses as role models in the clinical learning environment. Unpublished dissertation. Pretoria, University of South Africa.

Cypress, BS. 2017. Exploring the philosophical, paradigmatic, conceptual-theoretical underpinnings of qualitative research: A focus on a phenomenological study in intensive care unit. *Dimensions of Critical Care Nursing* 36(3):208-216.

Dagne, AH & Ayalew, MM. 2020. Factors affecting research utilisation of nurses and midwives working in North Gondar and West Gojjam Zone public hospitals, Ethiopia: A cross-sectional study. *British Medical Journal* 10:1-10.
DOI: 10.1136/bmjopen-2020-039586.

Degu, AB, Yilma, TM, Beshir, MA & Inthiran, A. 2022. Evidence-based practice and its associated factors among point-of-care nurses working at the teaching and specialized hospitals of Northwest Ethiopia: A concurrent study. *Public Library of Science ONE* 17(5):1-20. From: https://doi.org/10.1371/journal. pone.0267347 (accessed 1 February 2022).

DeJonckheere, M & Vaughn, L. 2019. Semi-structured interviewing in primary care research: A balance of relationship and rigour. *Family Medicine and Community Health* 7(2):1-8.

Department of Health, Kwazulu-Natal. [s.a.]. *District "uMgungundlovu District"*. From: http//www.kznhealth.gov.za/umgungundlovu.htm (accessed 19 February 2022).

Dereje, B, Hailu, E & Beharu, M. 2019. Evidence-based practice utilisation and associated factors among nurses working in public hospitals of Jimma Zone Southwest Ethiopia: A cross sectional study. *School of Nursing and* Midwifery:47-56.

Dizon, JM, Grimmer, K, Louw, O, Machingaidze, S, Parker, H & Pillen, H. 2017. Barriers and enablers for the development and implementation of allied health clinical practice guidelines in South African primary healthcare settings: A qualitative study. *Health Research Policy and Systems* 15:1-13.

Dos Santos, LM. 2020. I want to become a registered nurse as a non-traditional, returning, evening, and adult student in a community college: A study of career-changing nursing students. *International Journal of Environmental Research and Public Health* 17:1-20. DOI: 10.3390/ijerph17165652.

Ebben, RHA, Siqeca, F, Madsen, UR, Vloet, LCM & Van Achterberg, T. 2018. Effectiveness of implementation strategies for the improvement of guideline and protocol adherence in emergency care: A systematic review. *British Medical Journal Open* 8(11):1-13.

Eiroa-Orosa, FJ. 2020. Understanding psychosocial wellbeing in the context of complex and multidimensional problems. *International Journal of Environmental Research and Public Health* 17(16):1-8. DOI: 10.3390/ijerph17165937.

Elo, S, Kääriäinen, M, Kanste, O, Pölkki, T, Utriainen, K & Kyngäs, H. 2014. Qualitative content analysis: A focus on trustworthiness. *Open* 4(1):1-10. From: https://doi.org/10.1177/2158244014522633 (accessed 1 April 2022).

Engel, GL. 1977. The need for a new medical model: A challenge for biomedicine. *Science* 196(4286):129-136. DOI: 10.1126/science.847460.

EzzatAbdElnasar, A & Mohamed, H. 2019. The perception of nurses toward barriers and facilitators of evidence-based practice in hospitals. International Organisation of Scientific Research (IOSR). *Journal of Nursing and Health Science* 8(2):44-52.

Fashafsheh, IH, Ayed, A, Mohammed, JA & Alotaibi, YA. 2020. Nurse's perception of barriers to research utilisation in hospitals. *Open Journal of Nursing* 10:1-14.

Feringa, MM, De Swardt, HC & Havenga, Y. 2020. 'Registered nurses' knowledge, attitude and practice regarding their scope of practice in Botswana' *Health SA Gesondheid* 25(0):1-10.

Forero, R, Nahidi, S, De Costa, J, Mohsin, M, Fitzgerald, G, Gibson, N, McCarthy, S & Aboagye-Sarfo, P. 2018. Application of four-dimension criteria to assess rigour of qualitative research in emergency medicine. *Bio-Medical Central Health Services Research,*18(120):1-11. From: https://doi.org/10.1186/s12913-018-2915-2 (accessed 1 June 2022).

Forsman, H, Rudman, A, Gustavsson, P, Ehrenberg, A & Wallin, l. 2012. Nurses' research utilization two years after graduation − a national survey of associated individual, organizational, and educational factors. *Implementation Science* 7:1-12. From: https://doi.org/10.1186/1748-5908-7-46 (accessed 1 February 2022).

Fredua-Kwarteng, E. 2021. Lecturers are key to ending colonial epistemicide. *University World News*. Africa Edition.
From: https://www.universityworldnews.com/post.php?story=20211006114502190 (accessed 1 July 2022).

Fritscher, L. 2022. *What is fear? Very well mind*.
From: https://www.verywellmind.com/the-psychology-of-fear-2671696 (accessed 1 July 2022).

Ghafoor, Y, Yaqoob, A, Bilal, A & Ghafoor, S. 2021. Impact of nurse shortage on patient care. *Saudi Journal of Nursing and Health Care* 4(4):114-119.

Gilbert, C & Womack, B. 2012. Successful transition from expert nurse to novice educator? Expert educator: It's about you! *Teaching and Learning in Nursing* 7:100-102.

Godsey, JA, Houghton, DM & Hayes, T. 2020. Registered nurse perceptions of factors contributing to the inconsistent brand image of the nursing profession. *Nursing Outlook* 68(6):808-821.

Gray, JR, Grove, SK & Sutherland, S. 2017. *The practice of nursing research: Appraisal, synthesis, and generation of evidence*. 8th edition. St Louis, Missouri: Elsevier.

Gullone, E. 2000. The development of normal fear: A century of research. *Clinical Psychology Review* 20(4):429-451.

Gundumogula, M. 2020. Importance of focus groups in qualitative research. *International Journal of Humanities and Social Science* 8(11):299-302.

Haddad, LM, Annamaraju, P & Toney-Butler, TJ. 2022. *Nursing shortage*. StatPearls [Internet]. Treasure Island (FL): Stat Pearls Publishing:1-11.

Halabi, JO. 2016. Attitudes of Saudi nursing students toward nursing research. *Saudi Journal for Health Sciences* 5(3):118-124.

Hadgu, G, Almaz, S & Tsehay, S. 2015. Assessment of nurses' perceptions and barriers on evidence-based practice in Tikur Anbessa specialised hospital, Addis Ababa Ethiopia. *American Journal of Nursing Science* 4(3):73-83.

Hamilton, AB & Finley, EP. 2020. Reprint of: Qualitative methods in implementation research: An introduction. *Psychiatry Research* 283(112629):1-8.
From: www.elsevier.com/locate/psychres (accessed 1 July 2022).

Hansen, W. 2021. 'The perceptions of newly qualified nurses on the guidance by preceptors towards becoming experts in nursing. *Curationis* 44(1):1-9.

Hayashi, P, Abib, G & Hoppen, N. 2019. Validity in qualitative research: A processual approach. *The Qualitative Report* 24(1):98-112.

Hines, S, Ramsbotham, J & Coyer, F. 2022. Registered nurses' experiences of reading and using research for work and education: A qualitative research study. *Bio-Medical Central Nursing* 21:1-14.

Huma, P & Nayeem, S. 2017. Research ethics. Media and communications study. *Quadrant-I (e-Text)-e-PG Pathshala*:1-13.

Iradukunda, F & Mayers, PM. 2020. Rwandan nursing students' knowledge, attitudes and application of evidence-based practice. *Curationis* 43(1):1-7.

Jahan, F, Maqbali, AAl, Siddiqui, MA & Al Zadjali, NM. 2016. Attitude and barrier towards research amongst health care professionals working in primary care service of Oman. *Journal of Health Education Research and Development* 3(3):1-5.

Jabonete, FGV & Roxas, REO. 2022. Barriers to research utilization in nursing: A systematic review. *Sage Open Nursing* 8:1-5. DOI: 10.1177/23779608221091073.

Jeleff, M, Traugott, M & Jirovsky-Platter, E. 2022. Occupational challenges of healthcare workers during the COVID-19 pandemic: A qualitative study. *British Medical Journal* 12:1-8. DOI: 10.1136/bmjopen-2021-054516.

Jordan, P, Bowers, C & Morton, D. 2016. Barriers to implementing evidence-based practice in a private intensive care unit in the Eastern Cape. *South African Journal of Critical Care* 32(2):50-54.

Khan, P, Afzal, MF, Hamid, MH & Hanif, A. 2019. Barriers towards research among medical students. Shaikh Zayed Postgraduate Medical Institute. *Journal* of *Sheikh Zayed Medical College* (JSZMC) 33(2):13-17.

Karakoc-Kumsar, A, Polat, S & Afsar-Dogrusöz, L. 2019. Determining attitudes of nurses toward evidence-based nursing in a university hospital sample. *Florence Nightingale Journal of Nursing* 28(3):268-275.

Kaseka, PU & Mbakaya, BC. 2022. Knowledge, attitude and use of evidence‐based practice (EBP) among registered nurse‐midwives practicing in central hospitals in Malawi: A cross‐sectional survey. *Bio-Medical Central Nursing* 21:1-14.

Kassu, J. 2019. *Research design and methodology*. *Intechopen*:1-12. DOI: 10.5772/intechopen.85731.

Kemparaj, V & Kadalur, U. 2018. Understanding the principles of ethics in health care: A systematic analysis of qualitative information. *International Journal of Community Medicine and Public Health* 5(3):822-828.

Kivunja, C. 2018. Distinguishing between theory, theoretical framework, and conceptual framework: A systematic review of lessons from the field. *International Journal of Higher Education* 7(6):44-53. DOI: 10.5430/ijhe.v7n6p44.

Konwar, G & Kalita, J. 2018. The barriers and challenges of conducting nursing research and communicating research findings into practice. *International Journal of Health Sciences and Research* 8(6):221-222.

Korstjens, I & Moser, A. 2018. Practical guidance to qualitative research. Part 4: Trustworthiness and publishing. *European Journal of General Practice* 24(1):120-124.

Kovačević, A, Prlić, N & Matijašević, B. 2017. Nurses' attitudes toward nursing research. *South-Eastern European Medical Journal* 1(2):71-80.

Kuada, J. 2012. *Research methodology: A project guide for university students*. Frederiksberg: Narayana Press.

Lemon, LL & Hayes, J. 2020. Enhancing trustworthiness of qualitative findings: Using Leximancer for qualitative data analysis triangulation. *The Qualitative Report* 25(3):604-614.

Loots, I. 2016. Mentoring needs of clinical facilitators. Unpublished Dissertation. University of South Africa, Pretoria.

Makhene, A. 2022. Use of foundational knowledge as a basis to facilitate critical thinking: nurse educators' perceptions. *Hindawi Nursing Research and Practice*,1:1-7. Article ID 3736322. From: https://doi.org/10.1155/2022/3736322 (accessed 30 January 2022).

Mboineki, FF, Chen, C, Gerald, DD & Boateng, CA. 2019. The current status of nurses – doctors' collaboration in clinical decision and its outcome in Tanzania. *Nursing Open* 6(4):1354-1362.

Mokoena, MJ. 2017. Perceptions of professional nurses on the impact of shortage of resources for quality patient care in a public hospital: Limpopo Province. Unpublished Dissertation. University of South Africa, Pretoria.

Machitidze, M. 2022. Impact of the nurses education and shortage on the patients care outcomes-literature review. *American Journal of Biomedical Science and Research* 15(4):441-443. DOI: 10.34297/AJBSR.2022.15.002135.

Map of Greys Hospital, KwaZulu-Natal. [s.a.]
From:https://www.google.com/url?sa=i&url=https%3A%2F%2Fza.africabz.com%2Fkwazulu-natal%2Fgreys-hospital-68127 (accessed 27 February 2022).

Map of Harry Gwala Hospital, KwaZulu-Natal. [s.a.]
From: https://en.wikipedia.org/wiki/Edendale_Hospital (accessed 27 February 2022).

Maphumulo, WT. & Bhengu, BR. 2020. Perceptions of professional nurses regarding the national core standards tool in tertiary hospitals in KwaZulu-Natal. *Curationis* 43(1):1-9.

Manzi, A, Hirschhorn, LR, Sherr, K, Chirwa, C, Baynes, C & Awoonor-Williams, JK. 2017. Mentorship and coaching to support strengthening healthcare systems: lessons learned across the five-population health implementation and training partnership projects in Sub-Saharan Africa. *Bio-Medical Central Health Services Research* 17:5-94.

Mao, A, Cheong, PL, Van, LK & Tam, HL. 2021. "I am called girl, but that doesn't matter" − perspectives of male nurses regarding gender-related advantages and disadvantages in professional development. *Bio-Medical Central Nursing* 20:1-9.

Merriam-Webster Dictionary. 2022a. Sv "biopsychosocial". From: https://www.merriam-webster.com/dictionary/biopsychosocial (accessed 1 March 2022).

*Merriam-Webster Diction*ary. 2022b. Sv "bureaucracy". From: https://www.merriam-webster.com/dictionary/Bureaucracy (accessed 1 March 2022).

Merriam-Webster Dictionary. 2022c. Sv "culture". From: https://www.merriam-webster.com/dictionary/culture (accessed 1 March 2022).

Merriam-Webster Dictionary. 2022d. Sv "knowledge". From: https://www.merriam-webster.com/dictionary/knowledge (accessed 1 March 2022).

Mngomezulu, HP. 2015. Utilisation of research findings in practice: Professional nurses' perspectives. Unpublished Dissertation. University of South Africa, Pretoria.

Monde, MW, Akakandelwa, A & Kanyengo, CW. 2017. Nurses and use of research information in clinical practice: A case study of the University teaching hospital in Zambia. *Library Philosophy and Practice (e-journal)*:1-14.

Mthiyane, GN. 2018. The experiences of nurse educators in implementing the evidence-based practice in teaching and learning. Unpublished Dissertation. University of South Africa, Pretoria.

Mutisya, AK, KagureKarani, A & Kigondu, C. 2015. research utilization among nurses at a teaching hospital in Kenya. *Journal of Caring Sciences* 4(2):95-104. DOI: 10.15171/jcs.2015.010.

Ndikwetepo, MN. 2018. The experiences of critical care nurses regarding staff shortage at a regional hospital in Namibia. Faculty of Medicine and Health Sciences. Thesis. Stellenbosch University:1-30. From: www.https://scholar.sun.ac.za (accessed 2 June 2022).

Neuman, W. 2014. *Social research methods: Qualitative and quantitative approaches*. Essex, UK: Pearson.

News24. 2022. Shortage of nurses threatens health system. From: https://www.news24.com/news24/community-newspaper/express-news/shoratge-of-nurses-threatens-health-system (accessed 7 June 2022).

Nkrumah, I, Atuhaire, C, Priebe, G & Cumber, SN. 2018. Barriers for nurses' participation in and utilisation of clinical research in three hospitals within the Kumasi Metropolis, Ghana. *Pan African Medical Journal* 30:1-11.

Nyumba, TO, Wilson, K, Derrick, CJ & Mukherjee, N. 2017. The use of focus group discussion methodology: Insights from two decades of application in conservation. *Methods Ecological Evolution* 9:20-32.

Okoduwa, SIR, Abe, JO, Samuel, BI, Chris, AO, Oladimeji, RA, Idowu, OO & Okoduwa, UJ. 2018. Attitudes, perceptions and barriers to research and publishing among research and teaching staff in a Nigerian research institute. *Frontiers in Research Metrics and Analytics* 3(26):1-10.

Oldland, E, Botti, M, Hutchinson, A & Redley, B. 2020. A framework of nurses' responsibilities for quality healthcare − exploration of content validity. *Collegian* 27:150-163. From: www.elsevier.com/locate/coll (accessed 1 March 2022).

Olvido, MMJ. 2021. Developing research culture: An outcomes perspective. The *Journal of Research Administration* (52):15-37.

Oxford Advanced Learner's Dictionary. 2010. Sv "perceptions".
From: https://www.oxfordlearnersdictionaries.com/definition/english/perception
(accessed 1 November 2022).

Page, SA & Nyeboer, J. 2017. Improving the process of research ethics review. *Research Integrity and Peer Review* 2:1-7. DOI 10.1186/s41073-017-0038-7.

Parchebafieh, S, Memarian, R & Vanaki, Z. 2020. providing clinical safety and security for nursing students: Spontaneous learning. *Electronic Journal of General Medicine*17(3):1-8.
From: https://doi.org/10.29333/ejgm/7875 (accessed 30 March 2022).

Parveen, H & Showkat, N. 2017. Research ethics. *Quadrant-I (e-Text)-e-Pathshala:*1-13.

Paulose, B, Carvalho, LS, Mathew, B, Mani, Sr, D'souza, DG, Chanu, B & D'Silva, P. 2016. A study to assess the knowledge of nurses on evidence-based practice in selected setting. *International Journal of Nursing Education and Research* 4(3):1-5.
From: www.ijneronline.com (accessed 1 April 2022).

Polit, DF & Beck, CT. 2021. *Nursing research: Generating and assessing evidence for nursing practice*. 11th edition. Philadelphia: Wolters Kluwer Health/Lippincott William & Wilkins.

Qureshi, H, Firdos, U, Hussain, M, Afzal, M & Gilani, SA. 2018. Knowledge and attitude of nurses toward research at a tertiary care hospital Lahore. *International Journal of Graduate Research and Review* 5(1):31-38.

Ramón, C, Nievas-Soriano, BJ, García-González, J, Alarcón-Rodríguez, R, Requena-Mullor, M & Lozano-Paniagua, D. 2022. Motivation and barriers to research among nursing professionals in southeast Spain. *Healthcare*10:1-10.
From: https://doi.org/10.3390/healthcare10040675 (accessed 1 April 2022).

Razu, SR, Yasmin, T, Arif, TB, Islam, MS, Islam, SMS, Gesesew, HA & Ward, P. 2021. Challenges faced by Healthcare Professionals During the COVID-19 pandemic: A qualitative inquiry from Bangladesh. *Frontiers in Public Health* 9:1-8.

Reeves, S, Albert, M, Kuper, A & Hodges, BD. 2008. Why use theories in qualitative research? *British Medical Journal* 337:1-9.

Rekisso, AD, Mengistu, Z & Wurjine, TH. 2022. Nurses' attitudes towards the nursing profession and associated factors in selected public hospitals, Addis Ababa, Ethiopia, 2021: a cross sectional study. *Bio-Medical Central Nursing* 21(21):2.

Rojjanasrirat, W & Rice, J. 2017. Evidence-based practice knowledge, attitudes and practice of online graduate nursing students. *Nurses Education Today* 53:48-53.

Rockman, B. 2022. *Encyclopedia Britannica*, Sv "bureaucracy".
From: https://www.britannica.com/topic/bureaucracy (accessed 1 March 2022).

Rispel, L. 2020. *Why are nurses needed in South Africa? – careers portal*.
From: https://www.careersportal.co.za › careers › why-are-nur... (accessed 1 March 2022).

Sarab, SA. 2019. *Hospital management system*. Republic of Iraq, Ministry of Higher Education and Scientific Research, University of Baghdad − College of Science, Computer Science Department. DOI: 10.13140/RG.2.2.35189.19686.

Sekoto, T. 2020. Assessment of knowledge and attitudes towards health research among nurses working in public facilities in Botswana. Unpublished dissertation. University of South Africa, Pretoria.

Sin, M & Bliquez, R. 2017. Teaching evidence-based practice to undergraduate nursing students. *Journal of Professional Nursing* 33(6):447-451.

Singh, A & Mathuray, M. 2018. The nursing profession in South Africa – are nurses adequately informed about the law and their legal responsibilities when administering health care? *De Jure*:122-139.
From: http://dx.doi.org/10.17159/2225-7160/2018/v51n1a8 (accessed 11 March 2022).

South Africa. 2005. *Nursing Act, 2005 (Act No. 33 of 2005)*. Pretoria: Government Printers.

South African Nursing Council. 2005. *Regulations relating to the approval of and the minimum requirements for the education and training of a nurse leading to registration as a professional nurse. Regulation R.173, in terms of the Nursing Act, 2005 (Act no. 33 of 2005)*. Pretoria: SANC.

South African Nursing Council. 1984. *Regulations relating to the scope of practice of persons who are registered or enrolled (R.2598 of 30 November 1984), in terms of the Nursing Act, 1978 (Act no. 50, 1978, as amended)*. Pretoria: SANC.

Squires, JE, Estabrooks, CA, Gustavsson, P & Wallin, L. 2011. Individual determinants of research utilization by nurses: A systematic review update. *Implementation Science* 6(1):1-20. DOI: 10.1186/1748-5908-6-1.

Tamata, AT, Mohammadnezhad, M & Tamani, L. 2021. Registered nurses' perceptions on the factors affecting nursing shortage in the Republic of Vanuatu Hospitals: A qualitative study. *Public Library of Science One* 16(5):1-17.

Taschereau-Dumouchel, V, Michel, Lau, H, Hofmann, SG & LeDoux, JE. 2021. Putting the "mental" back in "mental disorders": a perspective from research on fear and anxiety. *Molecular Psychiatry* 27:1322-1330.

Taukeni, SG. 2020. Biopsychosocial model of health. International Conference on Natural products and traditional medicine. *Psychology and Psychiatry: Open access,* 4(1):1-3. (accessed 1 March 2022).

Thomas, A, Venter, AB & Boninelli, I. 2010. Addressing the nursing shortage at Netcare: A new remedy or the same prescription? *South African Journal of Labour Relations* 34(1):46-67.

Van Rensburg, GH, Armstrong, SJ & Geyer, N. 2017. A systems orientation to research capacity development: A South African perspective. *Africa Journal of Nursing and Midwifery* 19(3):1-14.
From: https://doi.org/10.25159/2520-5293/1733 (accessed 3 March 2022).

Varkey, B. 2021. Principles of clinical ethics and their application to practice. *Medical Principles and Practice* 30:17-28.

Vijayalakshmi, P, Pashupu, DR, Nagajaiah, Thimmaiah, R & Math, SB. 2015. Nurses' attitudes and perspectives of nursing research: An Indian perspective. *Asian Journal of Nursing Education and Research* 4(4):509-513.

Wangdi, U & Dorji, N. 2019. Perception on nursing profession and academic and work-related stress among nursing students in Bhutan. *Bio-Medical Journal of Scientific and Technical Research* 22 (3):16672-16683.

Wilkes, L. 2015. Developing a research culture with clinical nurses: Personal reflections from the field. *Annals of Nursing Practice* 2(4):1036.
From: http://www.jscimedcentral.com/Nursing/nursing-2-1036.pdf (accessed 1 March 2022).

Yli-Länttä, H. 2020. Young people's experiences of social fears. *International Journal of Adolescence and Youth* 25(1):1022-1035.
From: https://doi.org/10.1080/02673843.2020.1828110 (accessed 2 March 2022).

Zammar, A. 2022. Nurses' knowledge and attitude regarding evidence-based practice: An integrative review. *Open Journal of Nursing* 12:103-112.

Zhou, F, Hao, Y, Guo, H & Liu, H. 2016. Attitude, knowledge and practice on evidence-based nursing among registered nurses in traditional Chinese medicine hospitals: A multiple center cross-sectional survey in China. *Evidence-Based Complementary Alternative Medicine*:1-5. DOI: 10.1155/2016/5478086.

Zulu, VP. 2017. Investigating the contributions of smmes toward economic development in Nongoma local municipality. College of Law and Management School of Management, IT and Governance: 1-164. University of KwaZulu-Natal.

ANNEXURES

ANNEXURE A: Ethical Clearance: College of Human Sciences, University of South Africa

UNISA university of south africa

COLLEGE OF HUMAN SCIENCES RESEARCH ETHICS REVIEW COMMITTEE

29 October 2021

Dear Mrs Krishnavalli Rajbally

Decision:
Ethics Approval from 29 October 2021 to 29 October 2024

NHREC Registration # :
Rec-240816-052
CREC Reference # :
63403611_CREC_CHS_2021

Researcher(s): Name: Mrs Krishnavalli Rajbally
Contact details: 63403611@unisa.ac.za
Supervisor: Name: Prof GH van Rensburg
Contact details: 012 429 6514

Title: Knowledge, attitudes and perceptions of newly qualified professional nurses toward health research in uMgungundlovu health district, Kwa-Zulu Natal, South Africa
Purpose: MA

Thank you for the application for research ethics clearance by the Unisa College of Human Science Ethics Committee. Ethics approval is granted for three years.

The *low risk application was reviewed by* College of Human Sciences Research Ethics Committee, in compliance with the Unisa Policy on Research Ethics and the Standard Operating Procedure on Research Ethics Risk Assessment.

The proposed research may now commence with the provisions that:

1. The researcher(s) will ensure that the research project adheres to the values and principles expressed in the UNISA Policy on Research Ethics.
2. Any adverse circumstance arising in the undertaking of the research project that is relevant to the ethicality of the study should be communicated in writing to the College Ethics Review Committee.
3. The researcher(s) will conduct the study according to the methods and procedures set out in the approved application.
4. Any changes that can affect the study-related risks for the research participants, particularly in terms of assurances made with regards to the protection of participants' privacy and the

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confidentiality of the data, should be reported to the Committee in writing, accompanied by a progress report.

5. The researcher will ensure that the research project adheres to any applicable national legislation, professional codes of conduct, institutional guidelines and scientific standards relevant to the specific field of study. Adherence to the following South African legislation is important, if applicable: Protection of Personal Information Act, no 4 of 2013; Children's act no 38 of 2005 and the National Health Act, no 61 of 2003.
6. Only de-identified research data may be used for secondary research purposes in future on condition that the research objectives are similar to those of the original research. Secondary use of identifiable human research data require additional ethics clearance.
7. No fieldwork activities may continue after the expiry date (29 October 2024). Submission of a completed research ethics progress report will constitute an application for renewal of Ethics Research Committee approval.

Note:

The reference number 63403811_CREC_CHS_2021 should be clearly indicated on all forms of communication with the intended research participants, as well as with the Committee.

Yours sincerely,

Signature: pp

Prof. KB Khan
CHS Research Ethics Committee Chairperson
Email: khankb@unisa.ac.za
Tel: (012) 429 8210

Signature: PP

Prof K. Masemola
Exécutive Dean: CHS
E-mail: masemk@unisa.ac.za
Tel: (012) 429 2298

ANNEXURE B: Permission requested from the Department of Health, KwaZulu-Natal

Student name: Rajbally K

Student number: 63403811

152 Gandhi Road
Northdale
Pietermaritzburg
3201

13 January 2022

The Head of Department: Dr E Lutge
Health Research and Knowledge Management
KwaZulu-Natal Department of Health
Pietermartizburg

Telephone number: 033-395 2046
Fax: 033-394 3782

Email address: Elizabeth.lutge@ kznhealth.gov.za

Dear Dr E Lutge

REQUEST FOR PERMISSION TO CONDUCT A STUDY

Title: Knowledge, attitudes and perceptions of newly qualified professional nurses toward health research

I, Mrs Krishnavalli Rajbally am conducting research with Prof GH Van Rensburg a professor in the Department of Health Studies toward a Master of Arts at the University of South Africa.

The aim of the study is to explore the knowledge, attitudes and perceptions of newly qualified professional nurses toward health research.

The Department of Health has been selected because it employs the newly qualified professional nurses.

The study will entail conducting focus group interviews with the participants. Participants will be asked to answer questions pertaining to their knowledge, attitudes and perceptions toward health research. This will be answered in the presence of the researcher and co-facilitator. The participant's names will not appear on the interview guide and information will not be disclosed to anyone or linked to any data collected. All electronic information will be considered highly confidential and stored on a password protected computer, to avoid access to unauthorised person/s.

The interview is expected to last for 30-45 minutes for each participant.

There are no rewards or remuneration for participating in this study. Although participants will not benefit directly from this study, it will contribute to the body of knowledge in Nursing Education as the findings of the study will be made available to KwaZulu-Natal College of Nursing Resource Department and Department of Health on completion.

There is a minimal risk of emotional discomfort in the participants involved in the study. The researcher will ensure all measures are taken to minimize the risk.

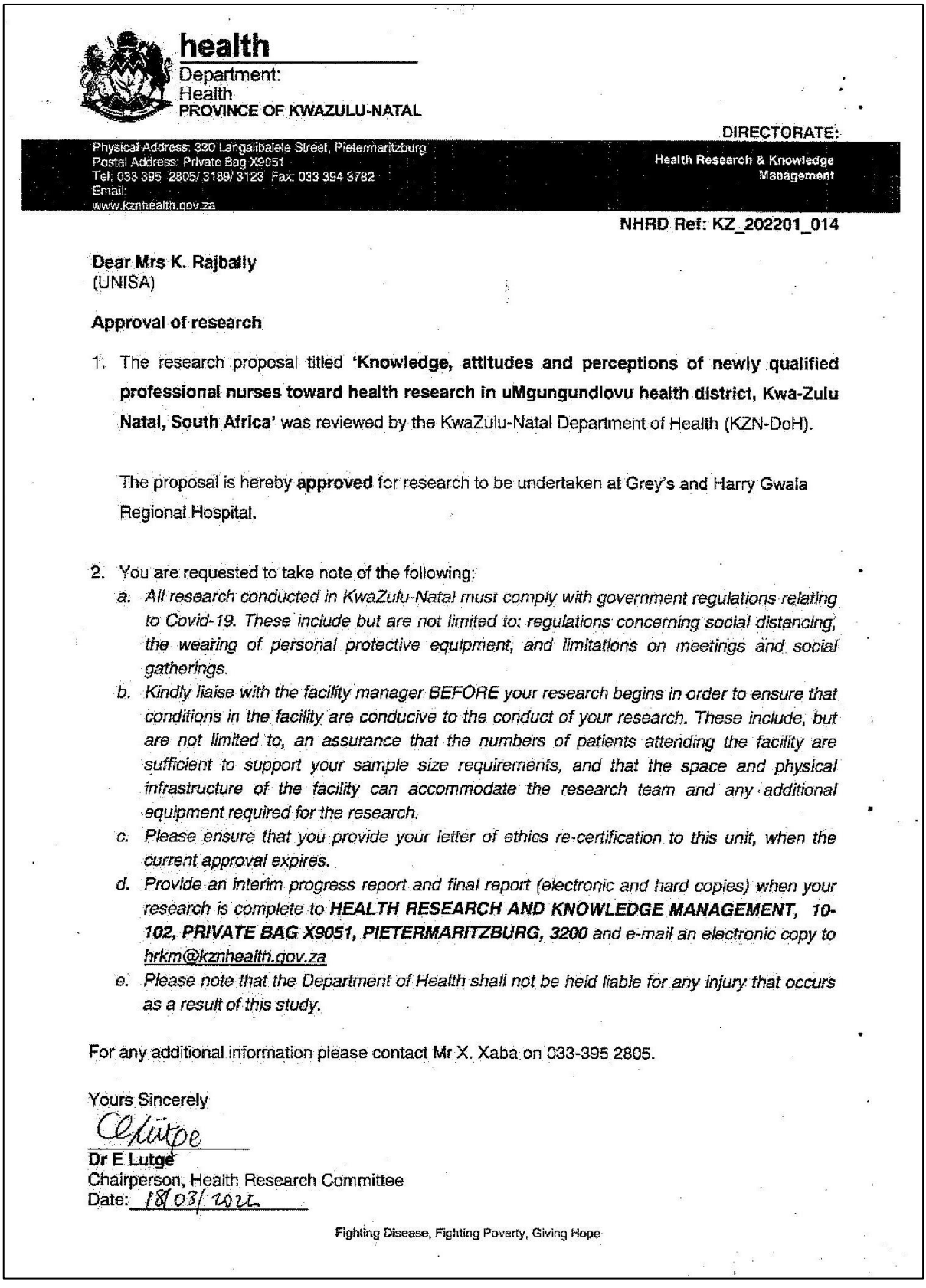
Feedback procedure will entail correspondence on the completion of the study and the findings in a published form. If you want to be informed about the results of the study, you may contact the researcher (email: krishneerajbally@gmail.com; cell:0813029529). You may also contact the Chairperson of the College of Human Sciences Research Ethics Committee (CREC) through Dr K Malesa (maleskj@unisa.ac.za) or the supervisor, Professor GH van Rensburg at 0124296514 or 0828920959 and by email at vrensgh@unisa.ac.za.

Yours sincerely

K.Rajbally (63403811)

Principal researcher

ANNEXURE C: Permission obtained from the Department of Health, KwaZulu-Natal to conduct the study



health
Department:
Health
PROVINCE OF KWAZULU-NATAL

DIRECTORATE:
Health Research & Knowledge Management

Physical Address: 330 Langalibalele Street, Pietermaritzburg
Postal Address: Private Bag X9051
Tel: 033 395 2805/ 3189/ 3123 Fax: 033 394 3782
Email:
www.kznhealth.gov.za

NHRD Ref: KZ_202201_014

Dear Mrs K. Rajbally
(UNISA)

Approval of research

1. The research proposal titled **'Knowledge, attitudes and perceptions of newly qualified professional nurses toward health research in uMgungundlovu health district, Kwa-Zulu Natal, South Africa'** was reviewed by the KwaZulu-Natal Department of Health (KZN-DoH).

   The proposal is hereby **approved** for research to be undertaken at Grey's and Harry Gwala Regional Hospital.

2. You are requested to take note of the following:
   a. *All research conducted in KwaZulu-Natal must comply with government regulations relating to Covid-19. These include but are not limited to: regulations concerning social distancing, the wearing of personal protective equipment, and limitations on meetings and social gatherings.*
   b. *Kindly liaise with the facility manager BEFORE your research begins in order to ensure that conditions in the facility are conducive to the conduct of your research. These include, but are not limited to, an assurance that the numbers of patients attending the facility are sufficient to support your sample size requirements, and that the space and physical infrastructure of the facility can accommodate the research team and any additional equipment required for the research.*
   c. *Please ensure that you provide your letter of ethics re-certification to this unit, when the current approval expires.*
   d. *Provide an interim progress report and final report (electronic and hard copies) when your research is complete to **HEALTH RESEARCH AND KNOWLEDGE MANAGEMENT, 10-102, PRIVATE BAG X9051, PIETERMARITZBURG, 3200** and e-mail an electronic copy to hrkm@kznhealth.gov.za*
   e. *Please note that the Department of Health shall not be held liable for any injury that occurs as a result of this study.*

For any additional information please contact Mr X. Xaba on 033-395 2805.

Yours Sincerely

Dr E Lutge
Chairperson, Health Research Committee
Date: 18/03/2022

Fighting Disease, Fighting Poverty, Giving Hope

ANNEXURE D: Permission requested from Greys Hospital, Pietermaritzburg to conduct the study

152 Gandhi Road
Northdale
Pietermaritzburg
3201

28 January 2022

The CEO: Greys HospitalDr K Bilenge
P/Bag 9001
Pietermaritzburg
3200

Dear Sir

REQUEST FOR A SUPPORT LETTER TO CONDUCT A STUDY

I hereby request a support letter to conduct a research study at Greys Hospital for my research proposal entitled:

“Knowledge, attitudes and perceptions of newly qualified professional nurses toward health research in uMgungundlovu health district, KwaZulu-Natal, South Africa**”**

I am undertaking studies to obtain a Master’s in Nursing at the University of South Africa in the School of Health Sciences. One of the requirements for the degree is to conduct a research project.

The study aims to explore the knowledge, attitudes and perceptions of newly qualified professional nurses toward health research within uMgungundlovu health district, KwaZulu-Natal, South Africa. Focus groups using semi-structured interviews will be used to collect data. Data will be recorded on a digital voice recorder. A co-facilitator will make field notes after signing a confidentiality binding form ensuring the ethical principles are

adhered to. All C0VID-19 protocols according to Higher Health and Universities South Africa (USAf) will be adhered to regarding wearing of masks, hand sanitising and social distancing.

The findings will add to the body of knowledge of research, as it will highlight the gaps in knowledge, attitudes and perceptions of newly qualified professional nurses toward health research. This will assist in developing support systems to enhance continuous development and training.

Your consideration is greatly valued.

Yours faithfully

Krishnavalli Rajbally
Cell: 0813029529
Work: 033-3927578
Email: krishneerajbally@gmail.com

Research Supervisor:
Prof GH van Rensburg
Telephone number: 012 429 6514
Department of Health Studies
Email: vrensgh@unisa.ac.za

ANNEXURE E: Permission obtained from Greys Hospital, Pietermaritzburg to conduct the study

health

Department:
Health
PROVINCE OF KWAZULU-NATAL

GREYS HOSPITAL
OFFICE OF THE CEO
Private Bag X 9001, Pietermaritzburg, 3200
Town Bush Road, Chase Valley, Pietermaritzburg, 3201
Tel.:033 – 897 3321 Fax.: 033 - 8973398
www.kznhealth.gov.za

To:	**Mrs K Rajbally** **Professional Nurse and Lecturer**
From:	**Dr. K. B. Bilenge** **CEO - Greys Hospital**
Date:	**15 March 2022**
Re:	**Request for permission to conduct research at Grey's Hospital: *Knowledge, attitudes and perceptions of newly qualified professional nurses toward health research in uMgungundlovu health district, Kwa-Zulu Natal, South Africa***

Dear Mrs Rajbally

Your request to conduct research at Grey's Hospital refers.
Permission to conduct the above study is hereby granted under the following conditions:

- Final ethics approval is a prerequisite for conducting your study at our hospital. Once obtained, please submit a copy of the full and final ethics approval;
- You are also required to obtain approval for your study from the Provincial Department of Health KZN Health Research Unit **prior to commencement**. You will find more information at: *http://www.kznhealth.gov.za/hrkm.htm*
- Confidentiality of hospital information, including staff and patient medical and/or contact information, must be kept at all times; **Patient/staff records are not to be removed from the hospital premises nor are you allowed to photocopy/ photograph them.**
- **You are to ensure that your data collection process will not interfere with the routine services at the hospital;**
- You are to ensure that hospital resources are not used to manage your data collection, e.g. hospital staff collecting and/or collating data; photocopying; telephone; facsimile, etc.;
- Informed consent is to be obtained from all participants in your study, if applicable;
- Policies, guidelines and protocols of the Department of Health and Grey's Hospital must be adhered to at all times;
- Professional attitude and behaviour whilst dealing with research participants must be exhibited;
- The Department of Health, hospital and its staff will not be held responsible for any negative incidents and/or consequences, including injuries and illnesses that may be contracted on site, litigation matters, etc. that may arise as a result of your study or your presence on site;
- You are required to submit to this office a summary of study findings upon completion of your research.
- You are requested to make contact with the **Nursing Manager, Mrs KT McKenzie** at Grey's Hospital once you are ready to commence data collection.
- Please keep a copy of this approval on your person at all times whilst in the facility.

Recommended by:

Dr E. Marais
Manager: Medical Services

Approved by:

Dr. K. B. Bilenge
Hospital CEO

ANNEXURE F: Permission requested from Harry Gwala Hospital, KwaZulu-Natal to conduct the study

152 Gandhi Road
Northdale
Pietermaritzburg
3201
28 January 2022

The CEO: Harry Gwala Campus
Mrs NT Xaba
P/Bag X509
Plessislaer
3201

Dear Madam

REQUEST FOR A SUPPORT LETTER TO CONDUCT A STUDY

I hereby request a support letter to conduct a research study at Harry Gwala Hospital for my research proposal entitled:

“Knowledge, attitudes and perceptions of newly qualified professional nurses toward health research in uMgungundlovu health district, KwaZulu-Natal, South Africa”

I am undertaking studies to obtain a Master’s in Nursing at the University of South Africa in the School of Health Sciences. One of the requirements for the degree is to conduct a research project.

The study aims to explore the knowledge, attitudes and perceptions of newly qualified professional nurses toward health research within uMgungundlovu health district, KwaZulu-Natal, South Africa. Focus groups using semi-structured interviews will be used to collect data. Data will be recorded on a digital voice recorder. A co-facilitator will make field notes after signing a confidentiality binding form ensuring the ethical principles are adhered to. All C0VID-19 protocols according to Higher Health and Universities South

Africa (USAf) will be adhered to regarding wearing of masks, hand sanitising and social distancing.

The findings from the study will contribute to the body of knowledge of research, as it will highlight the gaps in knowledge, attitudes and perceptions of newly qualified professional nurses toward health research. This will assist in developing support systems to enhance continuous development and training.

Your consideration will be greatly appreciated.

Yours faithfully

Krishnavalli Rajbally
Cell: 0813029529
Work: 033-3927578
Email: krishneerajbally@gmail.com

Research Supervisor:
Prof GH van Rensburg
Telephone number: 012 429 6514
Department of Health Studies
Email: vrensgh@unisa.ac.za

ANNEXURE G: Permission obtained from Harry Gwala Hospital, KwaZulu-Natal to conduct the study

KWAZULU-NATAL PROVINCE
HEALTH
REPUBLIC OF SOUTH AFRICA

DIRECTORATE:
MEDICAL SERVICES

Harry Gwala Regional Hospital
Lot 65, Selby Msimang Road, Pietermaritzburg, 3216
Tel: 033 395 4005 Fax: 033 395 4167

Enquires: Miss NF Mbele
Tel No. 033 3954042
Date: 21 February 2022

Mrs K Rajbally
Harry Gwala Regional Hospital Tutor
152 Gandhi Road
Northdale

Dear Mrs Rajbally

RE: KNOWLEDGE,ATTITUDESAND PERCEPTIONS OF NEWLY QUALIFIED PROFESSIONAL NURSES TOWARD HEALTH RESEARCH IN UMGUNGUNDLOVU HEALTH DISTRICT, KWAZULU NATAL, SOUTH AFRICA

Your request dated 28 January 2022 is acknowledged and refers.

I have pleasure in informing you that permission has been granted by Harry Gwala Regional Hospital to conduct research in the form of filming a documentary program.

Please note the following:

1. Please ensure that you adhere to all the policies, procedures, protocols and guidelines of the Department of Health with regards to this research.
2. The Hospital will not provide any resources for this research.
3. You will be expected to provide feedback on your findings to Harry Gwala Regional Hospital.
4. You will also be expected to notify the Medical Manager's office prior start date of the research.

Yours Sincerely,

DR CJ SERFONTEIN
ACTING MEDICAL MANAGER
HARRY GWALA REGIONAL HOSPITAL
033 395 4005

GROWING KWAZULU-NATAL TOGETHER

ANNEXURE H: Informed consent form

CONSENT TO PARTICIPATE IN THE STUDY

I, _____ (participant name), confirm that the person asking my consent to take part in this research has told me about the nature, procedure, potential benefits and anticipated inconvenience of participation.

I have read and understood the study as explained in the information sheet.

I have had sufficient opportunity to ask questions and am prepared to participate in the study.

I understand that my participation is voluntary and that I am free to withdraw at any time without penalty.

I am aware that the findings of this study will be processed into a research report, journal publications and/or conference proceedings, but that my participation will be kept confidential unless otherwise specified.

I agree to the recording of the focus group interview.

I have received a signed copy of the informed consent agreement.

Participant Name & Surname…… (please print)

Participant Signature……Date……

Researcher's Name & Surname Mrs Krishnavalli Rajbally

Researcher's signature……Date……

ANNEXURE I: Interview guide for focus group

Student Name: Rajbally, K
Student Number: 63403811
Study Title: Knowledge, attitudes and perceptions of newly qualified professional nurses toward health research.

Welcome

Introduction of moderator (researcher)

Our topic for this focus group is: The knowledge, attitudes and perceptions of newly qualified professional nurses toward health research

The purpose of the study is to gain an in-depth understanding into the knowledge, attitudes and perceptions of newly qualified professional nurses toward health research.

The results from this study will be used for academic purposes and to make recommendations for support systems to enhance continuous development and training.

You have been selected because you are a newly qualified professional nurse and meet the inclusion criteria of the study.

Focus group interviews

Obtain consent

The researcher will confirm that the participants have read the information sheet and have a copy to keep. The researcher will ensure that the participants are aware of their rights, which includes the right to retract at any time, even during the focus group interview. The participants will be reassured of their anonymity and that their identities will not be revealed in any publications/reports.

Guidelines to establish ground rules

1. Only one person to speak at a time.
2. Confidentiality will be ensured by reinforcing that whatever is said in the room remains confidential.
3. There are no correct or incorrect responses to questions, ideology, opinions and experiences, as we all have different views which are equally valuable.
4. You may not have the same opinion with one another, but you need to respect their views.
5. My role as a moderator is to direct the dialogue so please share your thoughts with one another.

The rules of the group will be exhibited on a chart and an opportunity for any additions will be afforded.

Introduction to the topic

Due to the expectation of high-quality nursing care, clinical nurses are now expected to use research to provide nursing care for the patient. It is no longer acceptable to provide care based on experience and textbook knowledge. We are here today to discuss what you know and how you feel about health research.

Question1

What are your thoughts about health research?

Question 2

How familiar are you with health research in the clinical setting?

Question 3

How do you feel about using health research in your practice as professional nurse?

At the conclusion of the focus group interview, the moderator will clarify and summarise the information gathered.

Close and thank the participants

ANNEXURE J: Participant information letter

Student name: Rajbally, K
Student number: 63403811

REQUEST TO PARTICIPATE IN THE STUDY

Ethics clearance reference number: _____

Research permission reference number (if applicable): _____ 2022

Title: Knowledge, attitudes and perceptions of newly qualified professional nurses toward health research.

I, Mrs Krishnavalli Rajbally am conducting research with Prof GH Van Rensburg a professor in the Department of Health Studies toward a Master of Arts at the University of South Africa, and we are inviting you to participate in the study.

WHAT IS THE PURPOSE OF THE STUDY?

I am conducting this research to gain an in-depth understanding into the knowledge, attitudes and perception of newly qualified professional nurses toward health research.

WHY AM I BEING INVITED TO PARTICIPATE?

I have chosen you to participate in the study as you meet the criteria of being a newly qualified professional nurse who is employed for 2 years and less.

I have obtained your contact details from the hospital manager where you are presently employed.

WHAT IS THE NATURE OF MY PARTICIPATION IN THIS STUDY?

The study will entail conducting focus group interviews with the participants. Participants will be asked to answer questions pertaining to their knowledge, attitudes and perceptions

toward health research. This will be answered in the presence of the researcher and co-facilitator. The interview is expected to last 30-45 minutes for each group.

CAN I WITHDRAW FROM THIS STUDY EVEN AFTER HAVING AGREED TO PARTICIPATE?

Participation is voluntary and that there is no penalty for non-participation.

Participating in this study is voluntary and you are under no obligation to consent to participation. If you do decide to take part, you will be given this information sheet to keep and be asked to sign a written consent form. You are free to withdraw at any time, without giving a reason and no penalty will be imposed.

WHAT ARE THE POTENTIAL BENEFITS OF TAKING PART IN THIS STUDY?

There are no rewards or remuneration for participating in this study. Although participants will not benefit directly from this study, it will contribute to the body of knowledge. The findings will assist in developing support systems to enhance continuous development and training thereby augmenting the culture of research.

ARE THEIR ANY NEGATIVE CONSEQUENCES FOR ME IF I PARTICIPATE IN THE RESEARCH PROJECT?

There is a minimal risk of emotional discomfort in the participants involved in the study. The researcher will ensure all measures are taken to minimise the risk.

WILL THE INFORMATION THAT I CONVEY TO THE RESAERCHER AND MY IDENTITY BE KEPT CONFIDENTIAL?

The participant's names will not appear on the interview guide and information will not be disclosed to anyone or linked to any data collected. All electronic information will be considered highly confidential and will be stored on a password protected computer to avoid access to unauthorised person/s. The research report that is submitted will not have any names written so that anonymity is maintained. The researcher will ensure that no

names are mentioned if the study is presented at conferences. A confidentiality binding form will be signed by the co-facilitator and the co-coder and editor (Annexures P, L, R).

HOW WILL THE RESEARCHER(S) PROTECT THE SECURITY OF DATA?

The information obtained will be in an electronic form and this will be coded and stored on a password protected computer. The data will be stored for a period of 15 years in South Africa according to Gie and Beyers (2014:72). Future use of the stored data will be subject only to further Research Ethics Review and approval if applicable.

The data after three years will be destroyed by permanently deleting the information from the computer's hard drive using a relevant software programme.

WILL I RECEIVE PAYMENT OR ANY INCENTIVES FOR PARTICIPATING IN THIS STUDY?

No financial cost will be incurred by you during the study and no incentives will be provide for your participation in the study.

HAS THE STUDY RECEIVED ETHICS APPROVAL?

This study has received written approval from the Research Ethics Review Committee of the *[identify the relevant ERC],* UNISA. A copy of the approval letter can be obtained from the researcher if you so wish.

HOW WILL I BE INFORMED OF THE FINDINGS/RESULTS OF THE RESEARCH?

Feedback procedure will entail correspondence on the completion of the study and the findings in a published form. If you want to be informed about the results of the study, you may contact the researcher (email: krishneerajbally@gmail.com; cell:0813029529). You may also contact the Chairperson of the College of Human Sciences Research Ethics Committee (CREC) through Dr K Malesa (maleskj@unisa.ac.za) or the supervisor, Professor GH van Rensburg at 012 4296514 or 0828920959 and by email at vrensgh@unisa.ac.za.

Thank you for taking time to read this information sheet. If you are willing to participate in this study, kindly complete the consent form.

Yours sincerely

K Rajbally (63403811)

Principal researcher

ANNEXURE K: Demographic form

UNISA university of south africa

DEMOGRAPHIC DATA

Place an X in the box provided

1. Gender M ☐ F ☐

2. Age

22 -25 years	25 – 30 years	30 years and above

3. Ethnicity

African ☐ coloured ☐ Indian ☐ White ☐

4. Marital status

Married	Single	Divorced	Other

5. Highest educational level/qualification:

Doctoral degree ☐

Master's degree ☐

Bachelor degree ☐

Other ☐

6. Years of experience

One year	2-5 years	5-10 years	Above 10 years

Yours sincerely

Signature:

Mrs K.Rajbally

Principal researcher

University of South Africa
Preller Street, Muckleneuk Ridge, City of Tshwane
PO Box 392 UNISA, 0003 South Africa
Telephone: +27 12 429 3111 Facsimile: +27 12 429 4150
www.unisa.ac.za

ANNEXURE L: Co-coder confidentiality binding form

Student name: Rajbally. K

Student number: 63403811

CONFIDENTIALITY BINDING FORM

Research project:

I Dr. S. Chandramohan (co-coder) to the focus group interview data analysis for the study entitled 'Knowledge, attitudes and perceptions of newly qualified professional nurses toward health research', conducted by Mrs Rajbally, from the University of South Africa, agree freely to co-facilitate in the focus group interview and to abide to the following:

- ✓ I will keep confidential all the information shared during the focus group interview data analysis
- ✓ I will respect the opinion expressed by the group members
- ✓ I will not disclose any information outside the group
- ✓ I will not link any information to any group member
- ✓ The researcher/facilitator agrees to take all reasonable steps to protect personal identity of the participants
- ✓ The researcher/facilitator agrees to take all reasonable steps to protect the privacy of the participants.

I fully understand the content of this entire agreement and undertake to freely co-code in the focus group interview data analysis.

Name: Sandhya Chandramohan

Sign.....

Date....2022.06.27.....

Researcher/s

Name: MRS K. RAJBALLY (63403811)

Sign.....

Date....27/06/2022.....

KWAZULU-NATAL PROVINCE
HEALTH
REPUBLIC OF SOUTH AFRICA

CERTIFICATE OF VERACITY

This is to confirm that I, Dr S. Chandramohan was consulted by Mrs K. Rajbally, a student researcher at UNISA, to provide the service of an Independent co-coder.

I obtain my PhD in Health Science and have published in both national and international peer accredited journals. I have also co-authored a chapter for the Royal College of Nursing, U.K; and presented a paper at the First Spiritual Health Care international conference at Trinity College, Ireland. I have also supervised many under graduate research students and assisted many post graduate research students.

My PhD study utilized a qualitative framework where I conducted focus group discussions and semi structured interviews.

I was given hard copies (transcripts) by Mrs K. Rajbally; which I analysed and created themes independently. We thereafter met were the themes I created and the ones Mrs K. Rajbally developed were discussed. We had very similar findings and were able to discuss, verify and finalize the resulting themes.

Warm Regards

Dr Sandhya Chandramohan

Senior lecturer (Greys Nursing Campus: KwaZulu-Natal College of Nursing)

ANNEXURE M: Researcher acknowledgement

Student name: Rajbally, K

Student number: 63403811

RESEARCHER ACKNOWLEDGEMENT

Hereby, I Mrs Krishnavalli Rajbally, ID number 6810020245086, in my personal capacity as a researcher, acknowledge that I am aware of and familiar with stipulations and contents of the

- Unisa Research Policy
- Unisa Ethics Policy
- Unisa IP Policy

and that I shall conform to and abide by these policy requirements.

Signature: 

Date: 2022

ANNEXURE N: Certificate of veracity

CERTIFICATE OF VERACITY

We, hereby certify that in as far as it is audible the aforegoing is a true and correct transcript of the recording provided by you in the matter:

(NAME OF AUDIO: Focus Group 1.5.5.2022)

DATE COMPLETED : 26/05/2022
NUMBER OF PAGES : 21

[00:00] INTERVIEWER: Okay good morning everyone again

[00:02] PARTICIPANT 1: Good Morning

[00:02] INTERVIEWER: And today we just going to look at research, now when you look at research, research is around us and we are all a part of research or partake of research almost all the time without us even realising that we are partaking of research. Now when you look at nursing, nursing has changed so much from where we used to be the doctors' handmaiden and we took doctors' orders to where we are critically thinking and making decisions for our patients. And when we think about it as nurses we spend the most amount of time with our patients, so we are the first to see when the condition changes, the patient either gets well or the patient's condition deteriorates. And then we ask ourselves so where does research come into all of this. Now remember every time we carried out an order somebody researched that for that order to take place. So when somebody said we should give penicillin for this it was because somebody researched penicillin. So in other words we have been partakers of research throughout. Now we have moved away from where nurses purely relied on their knowledge and on textbook information to work with our clients to where we are saying that because nursing is a

dynamic profession, dynamic meaning it is continuously changing. The times, the trends causes nursing to change, nurses are now more involved in research.

[01:39] PARTICIPANT 1: Uhm.

[01:39] INTERVIEWER: And especially health research. Now when you reflect back on your training or throughout your life you will find that you were a part of research, or you are presently partaking in research, or you are helping somebody else in their research which is what you are doing today.

[02:03] PARTICIPANT 1: Uhm.

[02:03] INTERVIEWER: So the first question is what I want to ask you is, how do you feel? So I want to see your feelings, how do you feel, or what are your feelings of research, not health research now, research on a whole before we bring it to health research. What do you feel, if somebody asked you what do you think research is all about, how do you feel about research? So that is what we asking today, what are your feelings towards research as a whole?

PARTICIPANT 1: I think for me since I also did it [laugh], it is hard and it is very broad when you do research you really need to think not only out of the box but think broad.

It comes- For me like I had maybe a, research that I did and then I want to implement it, the thing is it comes with the attitude of the team as well. Like you get there, you are newly qualified, there are people who are older than you who are very resistant to change as well. So, you come up and you're so [inaudible 27:07] okay I've got this. I have this idea like. (giggles) They're like no, we have been doing things like this. [Cross-Talk 0:27:17] It has always been like this.

[00:27:18] INTERVIEWER: The traditional.

[00:27:20] PARTICIPANT 1: Yes. It's going to be like this there's no need of us doing that. So, it becomes very difficult even if you come with something that's very effective (door squeaking) for that manner. So, even if sometimes when you have some sort of something that's going improve your health care, it becomes quite difficult to come

straight and say this is what I've, that might be better for us to do. It's those attitude that makes you like, ah maybe they won't agree to that. Maybe you had maybe an incident where you try to say something, and they were like against that.

[00:28:05] INTERVIEWER: The rest of the team?

[00:28:06] PARTICIPANT 1: Yes, the rest of the team.

[00:28:09] INTERVIEWER: The multidisciplinary team?

[00:28:11] PARTICIPANT 1: Yes. And you're like ah, since they didn't agree to my first one even if you find out new information you become very sceptical of sharing that information as well. So, you end up having more information and then you keep it to yourself sometimes. But I think it just depends on the type of team that you have. If there are people that are very open to new ideas, the research and changes, if you had that kind of team, it becomes very easy for you to come with your research and maybe implement something. But then if you see that your team is not so [Cross-Talk 0:28:39] Yes, very resistant, you end up having so much of information for yourself and you don't even implement it. You're like ah, okay let's do it however they want to do it.

Focus group 3:

To improve our knowledge.

[01:43] 2a: Okay you want to elaborate just a little bit.

[01:46] 2b: Yes when we do research we discover new things because we only train once and then we work for ever and we not aware of what has changed and what has not changed. So the research helps us in that way.

[02:08] 2a: Okay.

[02:10] 1a: And also uhm to, to keep up with the, the disease profiles, uhm for example we are getting new diseases every day, even the, the old diseases that we have there is a, a, the new way to treat the diseases. The diagnostics uhm, the treatment uhm and for

example like now we having COVID 19 which started in 2019, just discovered in 2019. So we have to keep up to know the, the signs and symptoms, uhm the medication to be used, the preventive measures things like that. So actually we want to keep up with the, since we are in the health system, yes, ja.

[02:55] 2a: Okay.

[02:58] 1b: Ja and also to improve actually the knowledge that we have as, on how to carry out other methods of providing care to our patients, so this gives us an opportunity to learn new, new ways of implementing like, like as, example was made about COVID 19 on how to handle such disease if they do come so that the knowledge will be equivalent whatever that we are facing at that particular illness.

[03:29] 2a: Okay that sounds good.

[03:32] 2b: Yes health research, ja one, it helps a lot because if we keep on doing uhm health research you come up with the new schemes on how to tackle the new diseases that are coming and you come up with the schemes on how to innovate for certain ways on how to improve.

CERTIFICATE OF VERACITY

We, hereby certify that in as far as it is audible the afore-going is a true and correct transcript of the recording provided by you in the matter:

(NAME OF AUDIO: Focus Group 2 18.05.2022 Edendale)

DATE COMPLETED : 27/2/2022
NUMBER OF PAGES : 24

What do we understand about research?

[00:02:33] PARTICIPANT 1: I think what I can say is, um for starters, it seems time-consuming when we think research because it is not something that you're just going to um find out in a day. So, you need to prepare all of those things. So, it is kind of time-consuming and you, in as much as you find out what you want to find out, it's, it's not inclusive of everyone. We have different opinions and different views of things. So, by the time that your research actually has an impact, it, it might be a bit too late, maybe after some time. And then if it was something that you're going research about, find the results and use it now, maybe you will be more impactful. So, that's how I think about the research thing according to me.

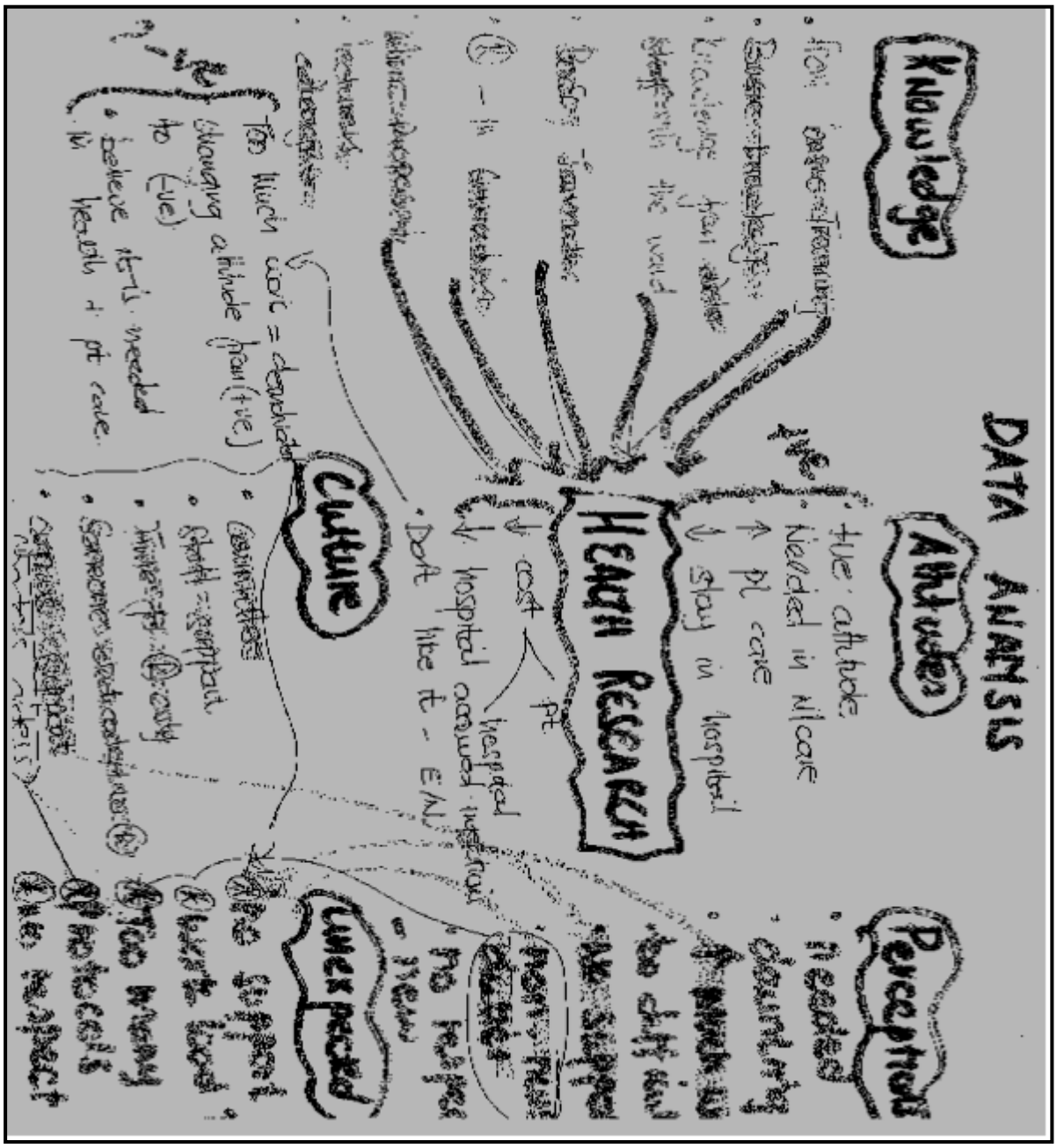
[00:03:37] PARTICIPANT 2: Ultimately research helps um to shed light on issues. Issues that um have been overlooked. So, that's what I like about research. Also, to add on Tess' statement, it is very daunting because it takes up quite a lot of time to collect all that information and refine it. So, but I also know we wouldn't be where we are not only as a profession but also as human beings without research. So, it is a necessary, yet daunting task.

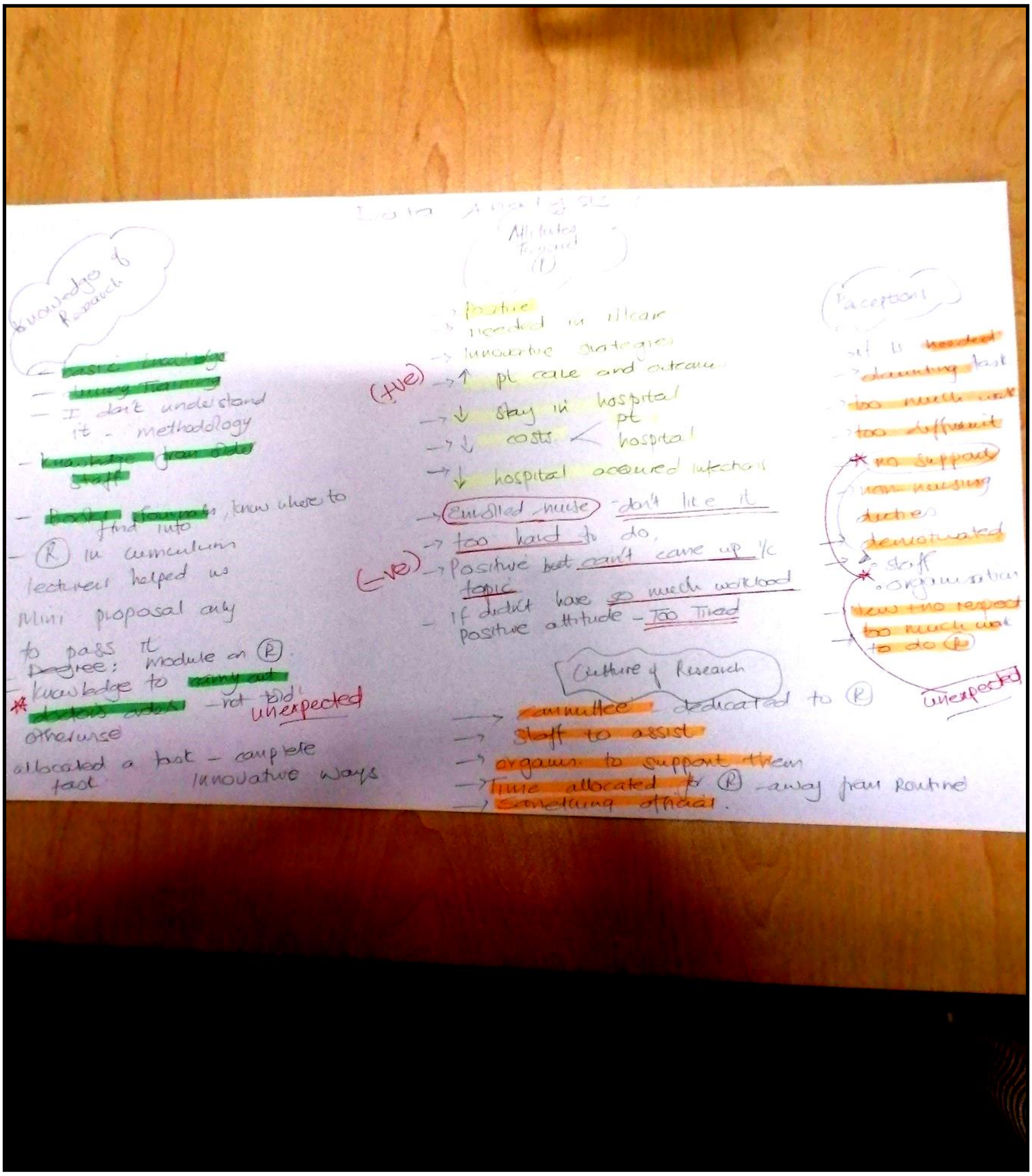
[00:04:29] PARTICIPANT 3: So, my understanding about research, because when we're in college we did do research. So, when we're introduced to research, so, it was a heavy process to go through. So, there is a lot of work that you have to do before you even start your research. For example, you are doing you are doing your Masters now, and you have to do research; so, this is taking you away from your normal duties and activities of your day. So, for example, just to, just to get us here was a mission, you know. And then you have to get your questionnaires in place, you have to get approval from various authorities just to conduct your research. And it's not an easy process. (sneezing) It's a lot of work here to put into research to get your result at the end.

[00:33:42] PARTICIPANT 3: There's no time now. There's not time. If you're studying and like for example you if we go and do our degree and stuff, I think research is part of it. So, I think that's the only time I think I'll do research to comply.

[00:33:56] PARTICIPANT 2: Also considering the fact that, you know all the red tape that surrounds going doing research you know, because it wouldn't be a thing that'll be easy. Also considering the fact that your day is chock and block. We are short, staffed like to the max. I don't see anybody having time to sit down and research something let alone think of researching something else. Because the time you arrive at seven o'clock in the morning till the time you leave, you are either on your feet probably taking back the food that you came with, you're taking it back home because you haven't eaten, or you eat on the run. So now, with the routine that is so chock and block considering forty patients, only four nurses, that's ten patients per nurse you think about it. The way it's so packed, you don't even get to finish the stuff that you're supposed to be doing that day for that patient. You see. So now, to have the time to stop and research something, I think it will be more at leisure

ANNEXURE O: Reflective notes




Knowledge of Research
I don't understand it - methodology
R in curriculum
lecturers helped us
Mini proposal only to pass it
Degree; module on R
unexpected
otherwise
allocated a task - complete task
innovative ways
Attitudes
Positive
innovative strategies
(+ve)
pt care and outcome
stay in hospital
costs
hospital
hospital acquired infections
Enrolled nurse
don't like it
too hard to do
(-ve)
Positive but can't come up with topic
so much workload
If didn't have positive attitude - Too Tired
Culture of Research
dedicated to R
staff to assist
organisation to support them
Time allocated to R - away from Routine
Perception
daunting task
too much work
too difficult
no support
non nursing duties
demotivated
staff
organisation
too much work to do R
unexpected

ANNEXURE P: Co-facilitator confidentiality binding form

Student Name: Rajbally. K
Student Number: 63403811

CONFIDENTIALITY BINDING FORM

Research project:

I …… (co-facilitator) to the focus group interview for the study entitled 'Knowledge, attitudes and perceptions of newly qualified professional nurses toward health research', conducted by Mrs Rajbally, from the University of South Africa, agree freely to co-facilitate in the focus group interview and to abide to the following:

- ✓ I will keep confidential all the information shared during the focus group interview
- ✓ I will respect the opinion expressed by the group members
- ✓ I will not disclose any information outside the group
- ✓ I will not link any information to any group member
- ✓ The researcher/facilitator agrees to take all reasonable steps to protect personal identity of the participants
- ✓ The researcher/facilitator agrees to take all reasonable steps to protect the privacy of the participants.

I fully understand the content of this entire agreement and undertake to freely co-facilitate in the focus group interview.

Name: ……

Sign……

Date……

Researcher/s

Name: MRS K.RAJBALLY (63403811)

Sign……

Date……

ANNEXURE Q: COVID-19 compliance letter

Student Name: Rajbally. K

Student Number: 63403811

Study Title: Knowledge, attitudes and perceptions of newly qualified professional nurses toward health research.

COVID COMPLIANCE LETTER

TO: The Chairperson

Research ethics committee, CHS

Date

Re: COVID 19 SAFETY MEASURES DURING DATA COLLECTION

COVID 19 epidemic has affected the whole world, it is necessary that precaution be taken to prevent risk of infection during data collection for both the researcher and the participants. This letter serves to indicate measures that will be taken to protect the researcher and the participants from COVID 19 during data collection.

The researcher will use universal prevention measures for COVID 19 as stipulated by World Health Organization (WHO) and approved as public prevention measures in Ethiopia:

- The researcher will avoid direct contact through implementing a social distance of 2 meter between the researcher and the participant.
- Focus group interviews will be made out of less than ten participants at a time, and the social distancing will be emphasized.
- Researcher will provide temperature checks and recording, any high temperature recorded the participant will be send for full screening and the interview will be cancelled.
- The participants will be provided with a face mask or be informed to use their own if they prefer to do so.
- A 70 % alcohol-based sanitizer will be used to sanitize the hands before and after the interview by both the researcher and the participants.
- The researcher will clean surfaces used such chair using alcohol-based surface cleaner.

In addition to the measures the participants will be provided with a 0800 029 999 number for COVID 19 screening to call at their convenience.

Yours, Mrs. Krishnavalli Rajbally (63403811)

Signature: 

ANNEXURE R: Editor confidentiality binding form

Student Name: Rajbally. K
Student Number: 63403811

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Research project:

I, Petrus Johannes Cillie Swart (editor), in the focus group interview for the study entitled 'Knowledge, attitudes and perceptions of newly qualified professional nurses toward health research', conducted by Mrs Rajbally, from the University of South Africa, agree freely to co-facilitate in the focus group interview and to abide to the following:

- ✓ I will keep confidential all the information shared during the focus group interview
- ✓ I will respect the opinion expressed by the group members
- ✓ I will not disclose any information outside the group
- ✓ I will not link any information to any group member
- ✓ The researcher/facilitator agrees to take all reasonable steps to protect personal identity of the participants
- ✓ The researcher/facilitator agrees to take all reasonable steps to protect the privacy of the participants.

I fully understand the content of this entire agreement and undertake to freely co-facilitate in the focus group interview.

Name: Cillie Swart

Sign: 

Date: 16 Nov 2022

Researcher/s

Name: MRS K.RAJBALLY (63403811)

ANNEXURE S: Letter from the language editor

TransKaroo COMMUNICATIONS

26 October 2022
Pretoria, South Africa

To whom it may concern,

I hereby confirm that I undertook the language editing for the thesis:

KNOWLEDGE, ATTITUDES AND PERCEPTIONS OF NEWLY QUALIFIED PROFESSIONAL NURSES TOWARD HEALTH RESEARCH IN UMGUNGUNDLOVU HEALTH DISTRICT, KWAZULU NATAL, SOUTH AFRICA

By KRISHNAVALLI RAJBALLY

The work was well written overall.

Cillié Swart BA (Harvard) MBA (Kuehne)
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pjcswart@transkaroo.net

ANNEXURE T: Turnitin report

turnitin

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File size:	3.46M
Page count:	154
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