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OCCUPATIONAL HEALTH AND SAFETY ISSUES OF PROFESSIONAL NURSES IN SOUTH AFRICA

By

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DECLARATION

I declare that this dissertation is my own unaided work. All citations, references and borrowed ideas have been duly noted. It is being submitted for the degree of Master of Social Sciences in the Faculty of Humanities, the school of Applied Human Sciences at the University of Kwa-Zulu Natal, Durban, South Africa. None of the present work has been submitted previously for any degree or examination in any other university.

Signature: 

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Date: 26 May 2023

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ABBREVIATIONS AND ACRONYMS

COIDA- Compensation for Injury and Occupational Diseases Act

DPSA- Department of Public Services and Administration

DoH- Department of Health

IOD- Injury on Duty

ISRDS- Integrated Sustainable Rural Development Strategy

ILO- International Labour Organisation

HIV/AIDS- Human Immunodeficiency Virus/ Acquired Immunodeficiency Syndrome

KZN- KwaZulu-Natal

NDoH- National Department of Health

OHS- Occupational Health Safety

PHC- Primary Health Care

SADC- South African Development Community

SHERQ- Safety Health Environment Risk and Quality Management

TB- Tuberculosis

WHO- World Health Organisation

ABSTRACT

Background: Occupational health and safety is important in organizations as it allows for the evaluation of risks, hazard control, protection of staff, and prevention of occupational injuries and diseases. Occupational health and safety is a well-legislated area, however, the enforcement of legislation has been considered lacking across various sectors in the SADC region. The public healthcare sector has been reported as lacking in terms of enforcing OHS practices. Nurses in South Africa have been found to face a quadruple burden of diseases that have had an impact on their health. Previous research on the healthcare system and occupational health and safety has focused largely on the tertiary healthcare facilities in South Africa. However, primary healthcare is the first point of treatment for South African citizens. Rural areas are often neglected and under-resourced. It was then deemed necessary to study the occupational health and safety issues rural nurses face.

Aim: This research study aimed to explore the occupational health and safety challenges of rural nurses in primary healthcare.

Methods: A qualitative research method was employed to complete this study. In-depth semi-structured interview schedule was used for data collection which allowed for flexibility of responses. The interview schedule comprised of open-ended questions which allowed participants to speak in depth and enabled probing to occur on each subject raised. This further helped in the exploration of the developing themes. Purposive sampling was used to invite 9 nurses to participate in the study and thematic analysis was used to analyze the data.

Findings: The findings presented the participants' insider perspectives of their experiences regarding the OHS issues they face in rural primary healthcare. These findings were presented in four themes: understanding of OHS; human resources; geographical factors; and safety, as well as sub-themes. These themes and their supporting excerpts provided evidence of the participants' experiences and perceptions regarding OHS.

Conclusion: The findings of this study demonstrated the OHS issues faced by rural nurses, as well as their understanding of OHS practices. The findings also illustrated that human resources issues are a predominant area of concern, as the participants cited that the clinics were under staffed and that they experience poor staff retention, as well inadequate recruitment practices. These findings also explicitly expose the complexity compression that nurses are

continually under, partly due to their geographical location. Furthermore, the findings also highlight the premise of the Rural Nursing Theory in that rural nursing practice needs tailor-made solutions, as the context is different from the urban nursing context.

Keywords: Rural Nursing Theory; Complexity Compression; Primary Healthcare; Occupational Health and Safety

CHAPTER ONE: INTRODUCTION

1.1 Background

Occupational health and safety (OHS) is important in any organisation. It allows for the evaluation of risks, hazard control, protection of staff, and prevention of occupational injuries and diseases (Kielkowski et al., 2008). Although OHS is widely considered to be essential in organisations, it has been reported to be inhibited by poor integration of political, economic and social environments in the Southern African Development Community (SADC) states. These states are Angola, Botswana, Democratic Republic of Congo, Lesotho, Madagascar, Malawi, Mauritius, Mozambique, Namibia, Seychelles, South Africa, Tanzania, Zambia and Zimbabwe (SADC, 2017). The International Labour Organisation (ILO) has set guidelines for the promotion of OHS and the management of OHS programs; however, SADC member states are still reported to have inadequate OHS policies and resources to implement OHS (Moyo et al., 2017).

Occupational health service in Southern Africa is regarded as being in the infancy stage, except for South Africa. South Africa is considered to have slightly better systems than the other Southern African countries. It has been reported that other countries in Southern Africa have less than 5% access to OHS, while in South Africa, outside of mining, access levels are less than 20% (Moyo, 2021). This gives an indication that OHS in the South African context has been focused on the mining sector. South Africa lacks a comprehensive occupational health service within the public healthcare sector. Ideally, the occupational health service would aim to achieve preventive functions and be informed by best practice for the context in which it is delivered. This has proven to be a challenge for South Africa, as we face a significant disease burden and have issues with limited resources. As a result, holistically, OHS can be regarded as neglected to non-existent, within public health settings especially (Govender & Rajaram, 2018).

OHS is well legislated in South Africa. The Occupational Health and Safety (OHS) Act and Compensation for Injury and Occupational Diseases Act (COIDA) provide for the safety and health of employees, and for compensation in the event of an injury on duty (IOD) and/or occupational diseases. Apart from these Acts, the South African government has also developed policies in the White Paper on the Transformation of the Health System where it is

clearly stated that employers are required to provide, and are responsible for providing, OHS services for their employees (NDoH, 1997).

Although OHS is a well-legislated area, the enforcement of legislation is often lacking across various sectors in the SADC region. For example, Gervase et al. (2022) conducted a study on the management of OHS in construction sites in Tanzania. It was reported that there is various legislation that exists and governs OHS; however, lack of compliance with the legislation is still present. Incompliance with OHS practices has also been cited within the Tanzanian construction industry. Initially, workers' were seen as the cause of unsafe behaviours that occur within construction sites. However, research uncovered that this was due to the power dynamics and the precarious nature of work within construction; thus, the workers felt that they had to perpetuate the incompliance when completing their work as an attempt to complete the construction projects. Clearly, despite various legislative acts enforcing health and safety within the industry, incompliance with such legislation is still present (Gervas et al., 2022).

The public healthcare sector has also been reported as lacking in terms of enforcing OHS practices. Cloete et al. (2019) conducted a study to uncover the compliance with OHS and infection and prevention control (IPC) in 60 primary healthcare facilities in the Western Cape. A comparison between the 2011-2012 baseline audits and follow-up audits from 2014-2015 was undertaken to determine if the compliance rate had improved from the baseline audit stats. At baseline, it was found that 25% of the facilities were non-compliant, 48% were conditionally compliant, and only 27% of the facilities were compliant (Cloete et al., 2019). The results indicated that there was no significant improvement in terms of compliance three years after the baseline audits. It was suggested that the non-compliance was due to the historical neglect of OHS and IPC in primary healthcare facilities, as there was minimal accountability from senior management. Moreover, it was found that there was no provincial OHS/IPC unit to coordinate and support OHS/IPC activities (Adams et al., 2013). It was therefore concluded that, although there were policies and legislation around OHS., There is, however, inadequate implementation of these provisions in primary healthcare as there is no structure to ensure that implementation occurs in an effective manner (Cloete et al., 2019).

Nurses in South Africa face a quadruple burden of diseases that have had an impact on their health (KZN Department of Health [KZN DoH], 2015). A quadruple burden of disease means

that South Africa has simultaneously experienced four overlapping ‘epidemics’. These epidemics are human immunodeficiency virus/acquired immunodeficiency syndrome (HIV/AIDS) and tuberculosis (TB); maternal and child mortality; non-communicable diseases; and violence leading to injuries and trauma (KZN DOH, 2015). This situation has been exacerbated by the ongoing Covid-19 pandemic.

The burden of communicable diseases mainly concerns HIV/AIDS and TB. South Africa has the highest HIV incidence in the world and is one of the countries over-burdened with a high incidence of TB. Therefore, the healthcare environment is an extremely high-risk working environment and plays a major role in exposing nurses to hazards and risk. Due to the nature of healthcare, health and safety is a concern for health workers as they are at higher risk of exposure to occupational risks such as infections, chemical agents, carcinogens, musculoskeletal disorders, accidents and radiation (Edet et al., 2017). Nurses are further exposed to risk by factors such as long hours of work (Kleiner & Pavalko 2010); physical handling of equipment and medical material; the labour-intensive nature of their work and musculoskeletal complications related to the nature of the duties performed (Schoenfisch & Lipscomb 2009); insufficient material resources; poor planning for provision of skilled professionals in public hospitals; and lack of medical surveillance (DoH, 2011). Furthermore, the bulk of staff shortages in the public health system have been found to be at the nursing level (Maphumulo & Bhengu, 2019). However, little is known of the health and safety issues which nurses in rural settings encounter. The importance of a focus on rural areas is also important because 64.7% of the South African population live in provinces which have vast rural areas (Mahlati & Dlamini, 2017) and hence utilise healthcare facilities in these areas.

1.1.1) Rural Primary Health-Care

This study aims to give a focus on the experiences of nurses in rural primary healthcare. It is therefore necessary to provide working definitions for rurality, primary healthcare and rural primary healthcare. It has been reported that there is no standardised definition of rurality. However, there have been attempts to define rurality in accordance with densities, size of towns, characteristics of infrastructure, and prevalence of agriculture (Kok & Collison, 2005). Rurality has been characterised in the Integrated Sustainable Rural Development Strategy (ISRDS) as areas with populations that are spatially dispersed. Agriculture in these areas is often widespread and is the main source of income, and there are limited opportunities for

resource mobilization. As a result, the residents of rural areas frequently face high levels of deprivation, and their rural goods and services are not rendered effectively (Gaede & Veersteeg, 2011).

Primary healthcare (PHC) is regarded as the first level of care and the first point of contact that people have with the healthcare system. PHC can provide quality healthcare to people by encouraging health promotion and disease prevention, health assessments, diagnosis and treatment of chronic conditions, and supportive and rehabilitative care. PHC is structured in a manner that allows for primary care services to be coordinated and accessible to everyone (Munyewende et al., 2014). The primary care services are facilitated by healthcare professionals such as doctors and nurses. Delivering on the equitable distribution of health services and achieving on efficiency and effectiveness in health service delivery is considered to be the essential principle in PCH as this potentially contributes to improved community health through properly coordinated district health systems (Dookie & Singh, 2012).

Rural primary healthcare is regarded as "[a]n approach and a method that involves planning for, creating access to and providing all types of community-based health services and programs including health promotion, health planning, priority setting, evaluation and community capacity building" (Preston et al., 2010, p 5). By this definition, the importance of understanding rural primary healthcare in a country where the 71% of the population resides in rural areas becomes clear.

1.1.2) Nursing Categories

It is important to understand and differentiate between the different categories of nurses in South Africa. Vuk'uzenzele (2011) state that a nurse can work in a hospital or clinics in the community; they can also specialise in general medical and surgical nursing science, trauma nursing, community nursing, psychiatric nursing, midwifery nursing, paediatric nursing, neonatal nursing, nursing management and nursing education. The Nursing Act of 2005 identifies four nursing categories: professional nurse, midwife, staff nurse, nursing auxiliary or auxiliary midwife. The Nursing Act of 2005 also gives a clear scope of the profession and the practice of nursing. It defines the scope and practice of a professional nurse as a person who is qualified to independently provide midwifery and is able to take responsibility and accountability for their practice at their prescribed level. The scope of a midwife as prescribed by the Nursing Act of 2005 is a person who can independently provide nursing care and is able

to take responsibility and accountability for their practice at their prescribed level. The Act further defines the scope of a staff nurse as a person who has undergone educational training to practice basic nursing at their prescribed level. An auxiliary nurse or midwife is trained to provide elementary nursing care at their prescribed level. It must be noted that the four categories of nurses are obligated to register with the South African Nursing Council (SANC) in their category before practicing as a practitioner.

There are also professional nurses who specialize in community care by measuring health status and determining the health needs of communities and groups so that they are able plan, develop and implement intervention strategies while taking into account the national and international health indicators. A professional nurse specialising in community care works within a multidisciplinary team of policy-makers, community representatives and other members of the health team (SANC, 2018). They are also responsible for coordinating, collaborating and managing activities in the planning and provision of relevant evidence-based healthcare within communities and groups (SANC, 2018). Community nurses are particularly important in health service delivery, as they provide primary health care to the community and lessen the burden on the health service (Kuhn et al., 1990). This study will focus on professional nurses who physically work in primary healthcare clinics and as well the professional nurses who specialise in community care and work directly in the community. This is so a holistic view of the nurses OHS issues in rural healthcare can be given.

1.2 Rationale

Previous research around the healthcare system and OHS has focused largely on the tertiary healthcare facilities in South Africa. However, primary healthcare is the first point of treatment for South African citizens. The rural areas are neglected and under-resourced; therefore, it is relevant that the issues of nurses who work in the rural areas are studied. Infectious diseases have been the main focus with regard to the OHS issues health practitioners have; however, other risks such as chemical exposures, stress, violence and musculoskeletal demands have been neglected (Kielkowski et al., 2008).

The SANC (2007) states that for a nurse to be able to be considered as competent, they need to complete a full year of paid community service prior to obtaining registration as a nurse in the category of general, psychiatric, community and midwifery. Nkoane and Mavhandu-Mudzusi (2020), however, found that the bulk of nurses do not complete their community service due to

volatile working conditions. The nurses in training experienced limited resources, including a shortage of human resources and lack of professional support and supervision (Nkoane & Mavhandu-Mudzusi, 2020). Previous research in the global OHS field has focused on needlestick injuries, workplace violence and musculoskeletal injuries due to handling of patients (De Castro et al., 2006). With the progression of time, other OHS areas such as workload, work hours, job stress and fatigue became more prominent as workplace challenges (Trinkoff et al., 2007). The American Nurse Association in 2011 conducted research around the OHS concerns of nurses and found that the majority of the health concerns were centred on the chronic effects of stress and work overload, disabling back injury, and the contraction of infectious diseases (Edet et al., 2017). This gives an indication that there is a gap in the literature and OHS needs to be studied holistically, particularly in primary healthcare. This study will specifically focus on the perceptions and experiences with respect to OHS of professional nurses working in rural areas. Understanding OHS within primary healthcare will enable greater access to rural primary healthcare. This in turn will allow for improved overall physical, social, and mental health status; disease prevention; detection, diagnosis, and treatment of illness; improved quality of life; decreased preventable deaths; and increased life expectancy for the rural citizen (Murphy et al., 2019).

1.3 Research Questions

This study focuses on professional nurses in primary healthcare in South Africa. Nurses in rural areas have to cover a wide range of roles and responsibilities. This study thus aims to explore the OHS experiences of professional nurses working in rural areas. The following research questions frame this study:

1) How do professional nurses understand health and safety in their workplace?
2) What are the workplace health and safety issues professional nurses experience?
3) What are the challenges that professional nurses face that impact on their health and safety and impact on their service delivery to the community?
4) What strategies do professional nurses use to manage or overcome the OHS issues in their workplace?

CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

This chapter aims to provide an overview of the literature on OHS globally and within the South African context. This chapter will provide a working definition of OHS; consult the relevant legislation relating to OHS; look at the structure of the South African healthcare system; and give a detailed review of the existing literature on the factors that impact OHS practices for professional nurses working in rural areas.

2.2 OHS within the South African Context

2.2.1 Occupational Health and Safety Definition

The International Labour Organisation (ILO) and World health Organization (WHO) define OHS as:

> *The main focus in occupational health is on three different objectives: (i) the maintenance and promotion of workers' health and working capacity; (ii) the improvement of working environment and work to become conducive to safety and health and (iii) development of work organizations and working cultures in a direction which supports health and safety at work and in doing so also promotes a positive social climate and smooth operation and may enhance productivity of the undertakings. The concept of working culture is intended in this context to mean a reflection of the essential value systems adopted by the undertaking concerned. Such a culture is reflected in practice in the managerial systems, personnel policy, principles for participation, training policies and quality management of the undertaking.*
>
> Joint ILO/WHO Committee on Occupational Health

The emphasis in the above definition illustrates that OHS is concerned with the promotion and maintenance of mental and social wellbeing of all employees in all occupations. Wellbeing is understood to exist at the subjective and objective levels. This suggests that wellbeing can be measured from an individual's personal experience, focusing on their own evaluations of their life satisfaction, happiness, and/or a negative emotional state. Wellbeing can also be understood from the perspective of quality-of-life indicators such as household income, food, and housing, as well as social values such as education, health, political voice, and social networks and connections (Western & Tomaszewski, 2016). By this description, we can understand wellbeing and health as interactive concepts where health and social systems are the

two connecting factors between the two factors. Health is therefore seen as a factor that influences overall wellbeing, while wellbeing impacts on future health (World Health Organization [WHO], 2012).

It is important to note from this definition of wellbeing that the main aim of OHS is to prevent any ill health and risk factors that may arise from the working conditions of employees. OHS is the phenomenon that ensures a conducive and healthy work environment, so that work deliverables are met. Effective managerial systems, human resource policies, principles for participation, and voluntary quality-related management practices are considered as central components to improving OHS (WHO, 2012). This relates directly to how employee wellbeing is understood in the South African public sector.

In South Africa, the Employee Health and Wellness Strategic Framework (EH&WSF) for the South African Public Service of 2019 aims to provide the public service with a framework for implementing employee wellbeing in its organisations. The framework adopts an integrated approach to employee health and wellness and identifies the importance of linking individual health, safety and wellness, organisational wellness, environmental sustainability, and quality management to productivity and improved service delivery outcomes (Department of Public Service and Administration [DPSA], 2019). The framework is made up of four pillars, namely: HIV, TB and STI Management; Health and Productivity Management; Safety, Health, Environment, Risk and Quality Management (SHERQ); and Wellness Management. These four pillars are regarded as key initiatives for achieving high performance (DPSA, 2019).

2.2.2 Legislation Around OHS in South Africa

OHS is well legislated in South Africa; however, the implementation of the legislation provisions is lacking. The Occupational Health and Safety Act (OHSA) aims to promote the health and safety of all employees by putting in place preventative measures that will minimise work hazards, work injuries and occupational diseases. The OHSA regulates and controls the health and safety in all sectors of the economy (e.g. mines, construction sites, industrial plants, hospitals and office environments) (Farish, 2018). The Compensation for Occupational Injuries and Disease Act (COIDA) aims to compensate employees who have been injured on duty or have contracted an occupational disease. The claim process requires that the injury on duty (IOD) or occupational disease be reported as soon as possible after the occurrence or

diagnosing of the occupational disease. The IOD or occupational disease can be reported by the employee or the employer. The rights to benefits fall away if the employee does not report the IOD or disease within 12 months. The employer is also required to report the IOD or disease within seven days from when they have been notified. The employer is also required to state whether they agree to the incident being an IOD or occupational disease.

With respect to nurses, the South African *Occupational Health Services Manual for Healthcare Workers* provides various rights and responsibilities. The OHS manual defines the occupational health service as a service that is implemented in a workplace with the aim of: i) protecting workers against any potential health hazard which may arise out of the working conditions in which work is it carried out; ii) contributing towards physical and mental adjustment when there is work adaptation; and iii) contributing towards the implementation and maintenance of the highest possible level of physical and mental wellbeing of the workers (DoH, 2003). The establishment of an occupational service is shaped by the policy of the organisation, the size and configuration of the work, and the needs of the organisation (DoH, 2003).

The National Department of Health (NDoH) (2003) stipulates that the occupational health service should promote wellness for its staff, enabling the organisation to conduct medical surveillance and to encourage personal responsibility for healthcare and reduce absenteeism. The service should also prevent occupational injuries and diseases by monitoring the risks in the workplace that may lead to occupational injuries and diseases. In addition, so that there can be an effective evaluation of services and the developments of new trends in occupational health, there should be in place: a clinical service that has emergency primary healthcare as well as emergency medical care and monitoring of chronic conditions; occupational hygiene; consultation service; and administration so that there are information management systems in place; as well as a research component (NDoH, 2003). Special programs also need to be included in the establishment of occupational health services as, from time to time, certain health needs will arise in the workplace. An occupational health service is needed for healthcare workers so that there are minimal health and social problems for staff, so they are able to provide high quality services to their clients. Having a well-established and well-managed occupational health service allows for the reduction of costs, as there will be less need for compensation of occupational injuries and diseases while ensuring the health and wellbeing of employees is maintained (NDoH, 2003).

2.2.3 The South African Health System

Healthcare in South Africa is administered by the NDoH. However, South Africa does not have a universal system of healthcare as our healthcare system is distinguished by private and public healthcare. The public healthcare system is subsidised by the government, while private healthcare largely funds its own operations. According to Rensburg (2021) 71% of the South African population relies on the public healthcare system for their medical needs. It is reported that the majority of healthcare practitioners practice in the private healthcare system servicing the middle-class and upper-class minority population. As a result, there is an uneven distribution of resources, with the public healthcare system being constantly short of resources and the private healthcare system having an abundance of resources (Mahlati & Dlamini, 2017). The NDoHfacilitates the provision of healthcare services and derives its mandate from the National Health Act of 2003.The South African public health system provides access to healthcare through government hospitals, public clinics and private healthcare services. In 1996, government expanded its public health system by undertaking a clinic building program and revitalising hospitals across the country (Mahlati & Dlamini, 2017).

The public health system is categorised into primary, secondary and tertiary health facilities (Mahlati & Dlamini, 2017).The *Nursing strategy for South Africa* (NDoH, 2008) states that nurses carry the bulk of the responsibility for providing healthcare services to communities from the primary healthcare (PHC) to the tertiary healthcare services. The PHC facilities in South Africa are the clinics which are mainly run by nurses who are trained as primary healthcare nurses. PHC is considered as the organising principle to delivering quality healthcare to all citizens of South Africa. It is defined as "the broad range of primary prevention (including public health) and primary care services within the community, including health promotion and disease prevention, the diagnosis, treatment, and management of chronic and episodic illness; rehabilitation support; and end of life care" (Murphy et al., 2019, p1).

The secondary healthcare service refers to the community health centres which are essentially larger clinics that have doctors, nurses and laboratory facilities. It also comprises of district or regional hospitals that offer both outpatient and inpatient services that are inclusive of emergency care (Singhal & Khadilkar, 2014). The tertiary healthcare service refers to the specialised care that occurs within a tertiary hospital. The services performed in tertiary

healthcare are reserved for specialised and complex procedures that require highly trained staff. Furthermore, tertiary healthcare services also include university hospitals (Flegel, 2015). This study will investigate the PHC tier of the healthcare system as the PHC services the bulk of the South African population and is the key in delivering quality healthcare for the South African system (Kautzy & Tollman, 2008).

2.3 Factors that Impact on OHS in Nursing

The nursing profession currently is faced with various factors that impact OHS. This section will review the factors that affect OHS and the experience of work for nurses.

2.3.1 Organisational Factors

Organizational factors are the areas in an organization that, according to its users, contribute to the success of the information system. These areas include structure and philosophy, team resources and administrative support, and communication and coordination mechanisms (Valaitis et al., 2018). Organizational factors in nursing refer to staffing capacity, staff retention, access to resources, workloads and workplace safety. The nursing field is often required to do more with less, and do things differently with less, in an under-resourced environment. This is particularly true for rural nursing. There is a shortage of nursing personnel due to poor staff retention and limited access to resources, while the demands of the field have not lessened (Schlairet, 2017).

The nursing profession plays a crucial role in upholding the effective functioning of the healthcare system. The recruitment and retention of nurses, however, is often confronted with challenges. The World Health Organization (WHO) stated that there is a global deficit of healthcare workers. The shortage of healthcare workers in rural areas has been found to be worse than in urban areas (Rahman et al., 2019). Global research in rural nursing has previously focused on limited infrastructure and the isolation which working nurses face. Although these areas impact on the recruitment and retention of nurses, Rahman et al.'s (2019) research findings indicate that rural nursing requires nurses who have a multi-dimensional skillset that will enable them to navigate between their work and the community environment. It was also found that the retention of nurses transitioning from urban practice to rural practice was a challenge, as nurses needed to adapt their personal, social, and professional modes of operating (Sharp, 2010).

There is currently a shortage of nurses in South Africa, due to poor planning and other factors, which results in negative growth in clinical posts and the state's inability to retain community services posts. Mokoka et al. (2010) found that there is a high turnover rate in professional and enrolled nurses in the public sector due to low salaries, a lack of resources, lack of promotion opportunities, heavy workloads, and unsafe working environments (Mokoka et al., 2010). Globally, the retention of nurses has also proven to be a problem in the nursing profession for some time. Research has indicated that factors such as high vacancy and turnover rates, an unsupportive working environment, long work hours, and excessive physical and psychological demands negatively contribute to the retention of nurses and, as a result, there is a lack of human resources for healthcare (Buerhaus, 2008). Furthermore, professional nurses are said to lack appropriate preparation and orientation for the field (Naledi et al., 2011). This is said to be true for the South African context as noted by Maphumulo and Bhengu (2019), who studied the challenges of quality improvement within the South African healthcare system post-apartheid. Their literature review indicated a shortage of healthcare human resources which leads to prolonged waiting time for patients. The shortage of human resources was found to also have adverse effects for the health workers as it leads to physical and mental exhaustion (Maphumulo & Bhengu, 2019). The South African public healthcare system is currently characterised by a shortage of staff, as South Africa is unable to provide enough healthcare workers due to inadequate recruitment practices; poor retention of healthcare workers; dissatisfaction with salaries; and poor working conditions (Mokaka et al., 2010).

Thutse (2006) conducted a research study investigating the perceptions of professional nurses working in remote rural clinics in the Limpopo Province. It was found that there was a shortage of professional nurses in some rural districts and an overcrowding of clients who needed to be serviced by the nurses. It was also found that the NDoH struggled to recruit and retain health professionals to work in the rural areas. Haskins et al. (2016) found that the recruiting and retention of health professionals in rural areas required an increase in financial remuneration and improved housing, training and promotion, so that nurses could perceive working in rural areas as worthwhile.

Thutse (2006), furthermore, found that the nurses had both positive and negative perceptions of working in rural areas. The positive perceptions were characterised by respondents being happy

that they were able to have a positive impact in their communities. The nurses also expressed that they were happy with working in rural areas as the limited number of support staff meant they became better-rounded professionals with a wider scope of knowledge. For example, they did not have clerical personnel so they were required to capture the patients' history and vitals; they also had to prescribe and dispense medication on their own; refer patients to hospital; and participate in different projects such as supervision and home-based care.

The negative perceptions were due to the fact that nurses found it difficult to work in remote rural areas due to poor infrastructure, fear of insecurity, shortage of human resources, shortage of material resources, equipment and supplies, and lack of maintenance services (Thutse, 2006). Although Thutse's findings are from an old research study, her findings are still relevant to the current context, as the recruitment and retention of professional nurses remains a problem within the nursing field. *The National strategic plan for nurse education, training and practice 2012/13-2016/17* states that areas such as nursing education and training; resources in nursing; professional ethos and ethics; governance, leadership, legislation and policy; positive practice environments; and compensation, benefits and conditions of employment and nursing human resources need to be improved so that the nursing profession can be revitalised (NDoH, 2017).

2.3.2 Limited Resources

Another organisational factor impacting on OHS in nursing is access to adequate resources and tools of trade. Proper working tools are crucial in ensuring that the workplace is safe. The shortage of adequate resources is often cited in nursing. Oikonomidou et al. (2010) conducted a study in rural Greece and found that there was limited access to essential medical equipment which in turn led to decreased quality of care and reduced safety. In their study, it was highlighted that improvement of equipment alone is not sufficient to ensure the improved quality of care to patients; however, it is crucial in achieving a high level of service (Oikonomidou et al., 2010). Healthcare in South Africa? is also plagued with inadequate facilities, limited access to administrative equipment and the necessary skills to ensure stock control, which leaves the system vulnerable to theft of medications (Manyisa & van Aswegen, 2017).

Finch (2019) conducted a study on nurses and musculoskeletal diseases in Britian. In the study, it was found that there is a shortage in appropriate lifting devices for nurses who work in patients' homes and, as a result, nurses are at a higher risk for back injuries associated with musculoskeletal diseases. This in turn puts these nurses at high risk of injury in comparison to nurses who work in settings that have adequate lifting resources (Finch, 2019). The occupational exposure to musculoskeletal diseases that nurses face is often not taken as an urgent matter, as employers sometimes do not understand the severity of failing to implement safe work systems for employees (Finch, 2019).

The South African healthcare system is also characterised by a shortage of tools of trade. Moyimane et al. (2017) conducted research to understand the experiences of nurses at a rural district hospital who were challenged with a critical shortage of medical equipment. This shortage of medical equipment was exacerbated by low quality and poor maintenance of the equipment that was available. The shortage negatively impacted on nursing care and the nursing profession, and it hindered the delivery of quality health services. One of the nurses in the hospital stated that the experience of limited medical equipment was a common issue for the nurses in the hospital. The exit interviews indicated that the equipment was old, broken or under-maintained. It was further uncovered that the budget for the maintenance of the equipment was centralised and underwent a lengthy procurement process (Moyimane et al., 2017). Nkoane and Mavhandu-Mudzusi (2020) conducted a study in the Tshwane District and found that the nurses were experiencing deficient resources. A participant in the study shared that they had a lack of material resources and pharmaceuticals. The participant also shared that they found themselves improvising in how they delivered services.

Limited access to resources and staffing issues result in nurses being expected to take on added unplanned responsibilities while still being expected to complete their existing duties in the same amount of time. This, in turn, has serious implications for patient safety, quality of service and staff satisfaction (Schlairet, 2017).

2.3.3 Occupational Exposure

Occupational exposure refers to contact with a possibly harmful physical, chemical, or biological agent as a result of one's work. Healthcare providers in South Africa have a high rate of exposure to infectious diseases, occupational illnesses and injuries (van Rensburg et al.,

2016). Van Rensburg et al. (2016) found that in three state hospitals in the Free State, nurses worked in high-risk contexts where the occupational infectious diseases are under-reported and often misdiagnosed. It was also found that very few nurses had undergone TB screening, the majority of the nurses did not have N95 respirators when caring for patients with infectious diseases such as TB, and they washed their gloves and re-used them. Kabotho and Chivese (2020) conducted a cross-sectional study on the occupational exposure nurses faced in regard to HIV. The authors assessed the prevalence of occupational exposure to HIV and the use of post-exposure prophylaxis. They furthermore studied the infection control practices. The results indicate that 10.6% of the sample had experienced occupational exposure. Of the 10.6% sample 58.8% of the reported exposure, reported needlestick injuries and went on the post-exposure prophylaxis treatment. It was then deduced that there was poor reporting of the occupational exposure and the utilization of the post-exposure prophylaxis. These findings raise concern as they indicate that the OHS measures of infection control as outlined by the National Infection, Prevention and Control Strategic Framework of 2020 are not being effectively implemented. This in turn leaves the nursing staff at a high risk of exposure to occupational illnesses.

Sharps injuries among nurses, which occur due to poor infection control, are reported as one of the most serious occupational accidents as there is a high risk of the transmission of infectious diseases. Honda et al. (2011) therefore found it necessary to determine the prevalence of the sharps injuries and furthermore to identify the factors associated with the sharps injuries. It is common knowledge that healthcare workers are generally exposed to infectious diseases. Some of these diseases currently do not have any available treatment plan or vaccination, which causes high anxiety among healthcare workers. Although there is such a high risk in terms of sharps injuries, it has been stated that sharps injuries may be under-reported. Wicker et al. (2008) conducted a study on healthcare workers in Thailand between 1998 and 2003, where 820 incidents of occupational blood or bodily fluid exposures were reported. In this study it was found that nurses had the highest rate of exposure (Kiertburanakul et al., 2006). Other studies have also indicated that nurses are most at risk of sharps injuries, when compared to other healthcare workers. Continuous education and training, however, have been identified as the necessary tools for lessening the potential hazards in their routine work (Muralidhar et al., 2010).

Simon (2009) conducted a study to evaluate the effectiveness of guidelines that had been developed as a preventative measure for needlestick injuries. The findings of this study indicated that about 70% of the nursing staff had experienced a needlestick injury. It was furthermore discovered that the majority of the nurses did not report the incident. This was due to a lack of awareness around preventive measures and the importance of reporting the injury. If the incidents are reported, better prevention can be achieved (Simon, 2009). Sharps injuries, as a whole, have both physical and psychological consequences. Physically, the sharps injury could lead to occupational exposure to/infection with HIV, hepatitis B and hepatitis C. The emotional impact of the occupational exposure negatively affects the healthcare workers, even if they were not infected with any of the above diseases. The poor implementation of waste management and infection control in the medical field has dire consequences for the nurses. The prevalence of the needlestick and other sharps injuries is particularly alarming as it raises concern on the awareness of the potential consequences in terms of exposure to communicable diseases. It is also noted that the findings of the sharps injuries are dated so to it is necessary to investigate if sharps injuries are still as prevalent in the nursing profession currently.

2.3.4 Working Conditions

The nursing profession is known to be plagued with occupational stress. This is often due to the conditions described by Mokoka et al. (2010) of high turnover rates, low salaries, poor career growth opportunities, lack of resources, and heavy and unsafe working environments. The high turnover rate among nurses leads to the decline in healthcare standards. In addition, the nurses who remain in the field are left exposed to increased psychological risk factors.

Terry et al. (2015) studied the workplace health and safety issues among community nurses and the impact these health and safety issues have on providing care to rural citizens in Australia. It was found that the rural healthcare workers experienced high volumes of work, long working hours, high stress levels, workplace violence and limited support (Terry et al., 2015). It was noted that the workload was inconsistent; however, although the workload fluctuated from day to day, the high volumes of work stemmed from time constraints, large amounts of documentation and doing the work of community nurses who were on leave or were sick. The nurses also felt that they were not provided with appropriate support for the stress and burnout (Terry et al., 2015). These workplace health and safety issues that the community nurses shared

illustrated the underlying issues of the community health system and also indicated a need for more training and capacity-building (Terry, et al. 2015).

Working under strenuous conditions often depletes satisfaction. Job satisfaction among nurses is often considered to be closely related to the conditions under which they work. Research findings suggest that dissatisfied employees are more likely to provide poor quality and inefficient care (Grol & Lawrence, 1995). This once again aligns with Mokaka et al.'s (2010) notion that the nurses' poor working conditions decrease the healthcare standard in South Africa. A comparative study between private and public sector nurses and their job satisfaction was conducted by Pillay (2009). The findings showed that public-sector nurses had higher levels of job dissatisfaction as they were unhappy with their pay, workload and the lack of resources. The studies show that the high job dissatisfaction rate amongst nurses has been linked largely to high workload and demands.

Sorour and El-Maksoud (2012) conducted a study on the relationship between musculoskeletal disorders, job demands and burnout among emergency nurses. The authors deemed these variables as necessary to study in respect of OHS, as nursing is known to consist of physically demanding tasks which often lead to musculoskeletal disorders. These disorders negatively impact on the nurse's quality of life and have dire economic consequences for both the employee and employer due to the cost of treatment and sick leave days that may need to be taken (Sorour & El-Maksoud, 2012). The psychological risk factors such as job demands, job control, and job stress and burnout were also investigated as they also have a negative impact on nurses. It was hypothesised that increased job demands were associated with a higher number of reported musculoskeletal disorders and ultimately burnout.

Sorour and El-Maksoud's (2012) findings support their hypothesis as they suggest that an increased occurrence of musculoskeletal disorders, along with increased job demands, meant that 40% of the sample had a high level of burnout. The multivariate analysis conducted showed that increased job demands and more severe back pain positively predict for burnout. Therefore, it was concluded that increased job demands are associated with musculoskeletal disorders and ultimately burnout. These findings illustrate that the lack of proper OHS implementation in the workplace leads to undue stress for employees. These research findings show how occupational stressors, such as job demands and lack of support and resources,

affect the working conditions of nurses and have detrimental consequences, as they lead to the dissatisfaction and burnout of nursing professionals. This ultimately hinders the effective delivery of healthcare.

2.3.5 Geographical Factors

Geographical factors are conditions that are related to the physical positioning that affect humans living within a specific area. Poor road conditions, limited access to water, and poor network coverage are a few examples of geographical factors that affect the rural nursing profession. Unsatisfactory road conditions in rural areas have caused decreased road safety for nurses who work in rural areas, as they have to drive long distances and the road conditions are often poor. The community nurses also often work in isolation, as the homes of their clients are in remote areas where cell phone coverage is poor, and hence communication with the administrative staff is often not possible (Terry et al., 2015).

Furthermore, there is often poor infrastructure in rural healthcare facilities. Clinic structures have been described as being too small and not conducive for various services that nurses need to provide. The water supply and sanitation was cited as a problem as there were often water shortages in some of the remote rural areas. Power shortages were also reported and this hampered the effective and efficient rendering of health services. Lastly, the nurses did not have telephones in the clinics, which are crucial for communication with clients and other members of the health team. Nurses also stated that one reason for their negative perceptions of working in rural areas was fear for their safety as they had to provide a 24-hour service but the clinics were often not fenced; in addition, security guards did not have weapons and the clinics are far from their homes.

The nurses further stated that they faced staff shortages and a lack of material resources, equipment and supplies which all affected the service they provide and their perception of working in rural areas (Maphumulo & Bhengu, 2019). Nurses in rural settings may face barriers to technology as rural communities have limited access to internet and cell phone coverage; as a result, rural healthcare lags behind urban healthcare in health technology use, which in turn leads to reduced patient outcomes and autonomous practice for nurses (Schlairet, 2017).

It has been repeatedly reported that the working conditions in the nursing field negatively affect the retention of nurses and expose the nurses to negative psychological factors. The physical environment directly impacts how nurses experience their work. Terry et al. (2015) found in their research that the physical environment worked as a barrier to the nurses doing their job effectively as these groups of nurses worked directly in the homes of patients. These nurses were required to do home visits in rural Australia. As a result, the nurses sometimes had trouble accessing the patients' homes and furthermore found the conditions of the home unfavourable to work in as they were unhygienic, untidy and had animals present during the clinic services. These home conditions often interfered with treatment. The home conditions described show that the community nurses worked in uncontrolled working environments as their workplace changes with each patient's home. Their working conditions were also described as unfavourable as the community nurses also had to deal with unpredictable client behaviour as they reported an increased risk of exposure to threats and physical and verbal aggression (Terry et al., 2015).

2.3.6 Poor Hygiene and Infection Control

Limited access to basic resources such as water can lead to poor hygiene practices. Poor hygiene and poor infection control measures are currently prevalent in public health facilities, as the South African Medical Association has found that most of the facilities have poor waste management, lack of cleanliness and poor maintenance of the grounds and equipment. The DoH has also been faced with medical negligence litigation which results in large pay-outs and ultimately strains the health budget (Maphumulo & Bhengu, 2019). Infection control of tuberculosis (TB) in the South African primary healthcare (PHC) system has been found to be an area of concern, even with the availability of TB infection control guidelines, and good levels of healthcare worker knowledge about infection control (Engelbrecht et al., 2016). The effective implementation of infection control depends on healthcare workers' work behavior. It was found that poor training; conflicting policy guidelines; low levels of motivation; feelings of powerlessness; negative attitudes of healthcare workers; poor district health support; and general health system challenges hindered the successful implementation of infection control (Zinatsa et al., 2018).

2.4 Theoretical Framework

This study will be guided by Karasek and Theorell's (1990) Job Demands-Control-Support Model, the Rural Nursing Theory and complexity compression. Karasek and Theorell (1990) define job demands as the physical, emotional and cognitive effort as well as time restrictions an employee is given to complete their work. If an employee perceives that they are given tight deadlines to complete their work tasks, they would characterise their work has having high demands. The authors define job control as the amount of autonomy an employee is given over the timing of their work and how they conduct it. If an employee can plan and decide on the method they will use to do their work, they will regard themselves as having high job control. Karasek and Theorell (1990) define social support as the extent to which employees feel they can depend on their colleagues for any work-related matter. The model predicts that the interaction between the various constructs leads to health outcomes such as psychological strain, blood pressure and cardiovascular diseases (Tuner et al., 2011). Nursing is known as an occupation that is plagued with occupational stress. Understanding how the nursing environment affects the health outcomes of nurses would be helpful in attempting to remedy the recruitment and retention challenges the nursing field is currently facing. Furthermore, the psychosocial occupational hazards can be lessened in the future.

The Rural Nursing Theory by Long and Weinert (1989) works on the notion that rural healthcare is substantially different from urban healthcare. This theory emerged as it was realised that a framework for practice needed to adequately consider the perceptions and the needs of the person to whom the care is being provided. The Rural Nursing Theory (Long and Weinert, 1989) incorporates three relational statements: "rural dwellers define health as primarily the ability to work, to be productive, and to do usual tasks" (p. 120); "rural dwellers are self-reliant and resist accepting help or services from those seen as outsiders or from agencies seen as national or regional 'welfare' programs" (p. 120); and "healthcare providers in rural areas must deal with lack of anonymity and much greater role diffusion" (p. 120). These relational statements allude to the core theoretical concepts namely: work beliefs and health beliefs; isolation and distance; self-reliance; lack of anonymity; outsider/ insider; and old timer/ newcomer, that rural nursing practice and rural residents value. The Rural Nursing Theory enables us to identify specific issues reported in rural nursing practice literature and also consider the core concepts and relational statements in relation to OHS issues faced by rural nurses. The Rural Nursing Theory explicitly states that rural and urban nursing are

fundamentally different, and a blanket approach cannot be applied. It recognises that the rural dwellers are self-reliant and furthermore reluctant to accept help from outsiders; as a result, rural nurses end up facing role diffusion between being a healthcare provider and being seen as an insider by the rural dweller. This theory therefore assists us in understanding the interpersonal relations between the nurse and patient.

It has been stated by the literature presented above that nurses are under constant pressure to provide quality service with minimal resources. Krichbaum et al. (2007) report on complexity compression. They define complexity compression as what nurses experience when they are expected to undertake additional unplanned responsibilities while simultaneously carrying out their multiple responsibilities within a shortened time frame (Krichbaum et al., 2007). Complexity compression is characterised by 'the work of nursing', system factors and personal factors. The work of nursing is comprised of the unexpected elements in the workplace that inhibit the productivity of the nurse. System factors refer to the unpredicted elements in the nurse's work setting, emanating from the administration structure, which affect the nurse's ability to perform nursing tasks within a certain time frame. The last characteristic of complexity compression involves personal factors which are the elements emanating from the nurse's personal situation (Krichbaum et al., 2011). Complexity compression has been said to have an important role in job satisfaction for the nurse and for patient outcomes. Barrett et al. (2016) state that the identified challenges in rural nursing can be attributed to complexity compression, as rural nurses are required to provide greater complexity of care in community settings.

2.5 Summary

The aim of this chapter was to review the existing literature around OHS. This shows that there is limited research that has been done in South Africa on OHS and nursing. Furthermore, the sparse research studies that have been done around OHS and healthcare have focused largely on secondary health (hospitals), while primary healthcare has been neglected. This is particularly problematic as primary healthcare has been indicated as the driving force to ensuring that all South Africans receive quality healthcare. This chapter therefore reviewed the current research that is available in terms of OHS in the nursing field and found the common issues to be centred on organisational factors, physical environmental factors, and geographical factors.

Chapter 3: RESEARCH METHODOLOGY

3.1 Introduction

This section of the study aims to provide a step-by-step description of how the research process was conducted. It provides the in-depth structure of the complete research study. A qualitative, exploratory research methodology was adopted in this study and an interpretive research paradigm was used, so that an in-depth understanding of the nurses' experiences and perceptions could be given.

3.2 Research Design

This study adopted a qualitative and exploratory research design so that an in-depth understanding of uMshwati Local Municipality nurses' experiences of OHS issues could be generated. Qualitative research is concerned with collecting data in the form of participants' lived experiences and perceptions. The participants in this research design are considered the experts of their own lived realities (Maxwell, 2012).

A qualitative research design aims to generate an in-depth understanding of social processes and experiences, as well as aiming to explain the meanings individuals attribute to social phenomena (Maxwell, 2012). Due to its explorative approach, qualitative research has both pre-planned and developing questions; it is also repetitive in nature and enables the researcher to gather rich data. This can be achieved by using more open-ended questions and probing, which result in more detailed responses (Bradshaw & Stratford, 2010).

Neuman (2016) states that qualitative research focuses on subjective experiences of a selected sample and analyses these experiences by investigating patterns and themes. The qualitative research process keeps sight of natural details of social life. Furthermore, a qualitative research design states that people create meaning through interactions with one another and within their social systems. Therefore, the world is created and understood by people. For this reason, this study is located within an interpretivist paradigm. The researcher engaged with the participants to allow for the creation of knowledge, interpretations and observation of the social world through the lens of the participants (Alharahsheh & Pius, 2020).

3.3 Research Paradigm: Interpretivist Paradigm

The qualitative research design is rooted in the interpretivist paradigm. A paradigm is often described as a 'worldview' that informs the researcher's beliefs, values, assumptions and thinking, and how they understand and interpret data (Antwi & Hamza, 2015). It is a way of conducting research that is encompassing of the framework, structure, pattern and systems of academic and scientific values, ideas and underlying assumptions. The interpretivist paradigm comprises three main dimensions: ontology, epistemology, and methodology. Ontology is said to be the manner in which the researcher defines the truth and reality. Epistemology is the process through which the researcher comes to know the reality and truth, and lastly, methodology refers to the methods that are employed in conducting research. It must also be noted that the interpretivist paradigm relies largely on naturalistic methods such as observations and interviews (Alharahsheh & Pius, 2020). When combined, these three dimensions work together to provide an interpretive framework that informs the entire research process and provides insight into the subjective reasoning's that lie behind social action (Alharahsheh & Pius, 2020).

A qualitative study assumes that meaning is rooted in participants' personal experiences. Its methodology is reinforced by interpretivist epistemology and constructionist ontology, and that the researcher rationalises this meaning through their own perceptions (Kalu & Bwalya 2017). In qualitative research designs, researchers interact, observe and participate in activities such as interviewing the target population and analysing generated data so that they are able to centre themselves in the social experiences of individuals (King et al., 2018). This would allow the insider perspective of the target population being researched to emerge (Lee, 2012).

The interpretive paradigm relies on observation and interpretation as methods for the researcher to collect information on certain events and experiences and to try to make meaning of the collected information (Khan, 2014). It aims to understand meanings attached to individuals' lives and examines the context by interpreting he world from the subjective experiences of individuals (Antwi & Hamza, 2015). The core of this approach focuses on the complexity of human sense-making as the situation occurs, rather than using predefined dependent and independent variables as quantitative research would (Maxwell, 2012). This paradigm also aims to explain the subjective reasons and meanings that motivated social

action. Researchers within the interpretivist paradigm are naturalistic and aim to interpret real-world situations as they occur (Maxwell, 2012).

3.4 Study Setting and Context

The study was conducted through telephonic interviews with nine professional nurses who work in the rural community of uMshwati Local Municipality. Five of the nurses worked directly at the clinic, while four of the participants were based in the outreach program where they conduct home visits, school visits and general community visits. For the duration of each interview, I asked my participants to sit in a quiet room where they would have privacy and be able answer the questions as freely as possible. As the interviewer, I also ensured that I sat in a quiet room to ensure confidentiality for my participants.

3.5 Sampling Strategy

A sample is a subset of a population from which research participants will be selected (Etikan et al., 2016). This research study consisted of nine nurses who work with the rural community in the uMshwati Local Municipality. The nurses were from clinics that fall under the Applesbosch Hospital, which are Efaye, Emambedweni, Mayizekanye, eGcumisa and Mtulwa clinics**.** The nurses were required to be working in rural areas and to have at least two years' work experience, so that their responses were based on actual experience in the field. The whole sample demographic comprised of black female nurses. Participants were selected through purposive sampling, as a deliberate choice of participants with very specific criteria was needed for the data collection, thus making the purposive sampling the most effective method (Etikan et al., 2016). I shared the selection criteria for my sample with the operational managers (OM) from each of the clinics. The OMs then gave me the cellphone numbers of the qualifying nurses to participate in the study. All the nurses in my sample met my requirement of having at least two years' experience as a professional nurse.

Table 1: Participant Demographics

Pseudonym	Age	Race	Gender	Educational Level	Years of Experience
Patricia	36	Black	Female	Degree	10 years
Nonhlanhla	50	Black	Female	Diploma	11 years
Cindy	37	Black	Female	Diploma	>10 years
Nokuthula	38	Black	Female	Diploma	9 years
Mandisa	44	Black	Female	Degree	20 years
Zinhle	28	Black	Female	Diploma	5 years
Khanya	38	Black	Female	Diploma	14 years
Nosipho	36	Black	Female	Degree	5 years
Fundiswa	38	Black	Female	Diploma	2 years

3.6 Data Collection Techniques

3.6.1 Instruments Used

The data collection technique employed in this research study was the interview. An interview is best described as the process of gathering data using a conversation. There is an interviewer who coordinates the process and asks the questions while the interviewee responds to the questions that have been asked (Doody & Noonman, 2013). There are different types of interviews such as structured interviews, semi-structured interviews and unstructured interviews. For the purpose of this research study, the semi-structured interview was utilized as it has pre-determined questions but still allows for the interviewee to express themselves in a flexible manner and determine the direction of the interview (Stuckey, 2013). Each interview lasted from 20-45 minutes. The semi-structured interview guide (see Appendix A) was created through the gaps found in the literature, and this guide was employed for conducting the in-depth interviews. The open-ended nature of the interview questions enabled participants to speak in depth and allowed probing to occur on each subject raised. This further helped in the exploration of the developing themes. The demographic information of participants was also covered, and this included their age, race, nationality, language, and educational level. The similarity between the participants' and the researcher's demographics allowed for rapport to be built rapidly.

It is also important to note that the Covid-19 pandemic required everyone to maintain social distance as a means of lessening the spread of the virus. Accordingly, the semi-structured interviews were conducted telephonically. Telephonic interviews were still appropriate for the objectives of this study, as the targeted population have experience with using a telephone (Farooq & De Villiers, 2017). The telephonic interviews were convenient and also provided the participants with facial anonymity, which allowed for participants to be more open with what they shared in the interview in comparison to face-to-face interviews. It must be noted, however, that the disadvantage of telephonic interviews is that they were expensive (Hofisi et al., 2014).

3.6.2 Access

To gain access to my potential participants, I approached the CEO of Applesbosch Hospital with my permission letter (see Appendix B) and provisional ethics approval (see Appendix C) who put me in contact with the Head of Primary Health Care. The Head of Primary Health Care in turn put me in contact with the operational managers at each clinic who assisted by assigning nurses who could participate in my study. The interviews were then set up according to the availability of the nurses. It is important to note that access to my sample was only allowed once I was able to show the operational managers that I had received the relevant approvals to complete my study (see Appendix D).

3.6.3 Procedure Followed

The first step was to gain ethical clearance and to have the proposal approved by the Faculty Research Ethics Committee of the University of KwaZulu-Natal to conduct the research. I initially received provisional clearance from the university, on condition that I received approval to use the clinics as my research site from the Department of Health research committee. Once the approval from DoH was submitted, the university then gave me my final ethical clearance (HSSREC/00001600/2020). I then got in contact with the operational managers at the clinics so that I could arrange the interviews with my assigned participants. All participants were sent the informed consent form (see Appendix E), and interviews were scheduled to their convenience. The interviews were conducted in English and the participants were also told that the research findings would be disseminated to them once the research had been concluded. My details and my supervisor's details were shared with the participants in case they had any queries regarding the research.

3.7 Data Analysis

Data analysis is the process of evaluating data using analytical and logical reasoning to examine each component of the data provided (Liamputtong, 2009). For the purpose of this study, the collected data was analyzed using thematic analysis. According to Braun and Clarke (2006), thematic analysis assists in discovering and identifying the patterns in data. This data analysis method is thus very appropriate for the proposed study. There are six steps involved in thematic analysis: familiarizing oneself with the data; generating initial codes; searching for themes; reviewing themes; defining and naming themes; and lastly, producing a report (Braun & Clarke, 2006). To accurately analyse the data, the researcher started off by familiarizing herself with the data by listening to the recordings repeatedly, transcribing them and thoroughly reading the transcripts. This enabled the researcher to engage with and develop a thorough understanding of the data. The researcher then went on to the second phase of generating the initial codes. The researcher worked through the data and coded the points of interest in the data. She then went on to searching for potential themes in the data by organizing the different codes into broader themes, with relevant verbatim quotes from the participants, so that the codes could either be combined or collapsed into main themes and sub-themes. The themes that had shared units of meaning were combined, while the ones that did not were collapsed.

The fourth phase of thematic analysis requires the researcher to review and refine the themes. In this phase, the researcher made distinctions between the main and sub-themes. The fifth phase requires for the themes to be defined and named. The researcher then defined and named the themes in accordance with the literature review. The names of the themes were kept concise and each gave a clear depiction of what the theme was about. The final phase in the data analysis process requires the researcher to produce the report. This was done by compiling the narrative of the data. Direct quotes were used in this section to validate the narrative that was detailed in the report (Braun & Clarke, 2006).

3.8 Ethical Considerations

The essential requirement of research ethics is to do no harm to the research participants (Wassenaar & Mamotte, 2012). The first step in conducting research involved obtaining ethical clearance from the University of Kwazulu-Natal Research Ethics Committee and the Department of Health's research committee. Research participants were given an informed

consent form to confirm that they were willing to participate in the study. The informed consent form clearly stated that the highest level of anonymity and confidentiality would be given to each participant. The form also clearly stipulated that the participants were allowed to withdraw from the study at any given point, and that their data would not be used if they withdrew from the study.

3.8.1 Trustworthiness

Validity and reliability are two particularly important constructs in research, as they make research findings trustworthy and of the highest quality. It has been said that five criteria can be used to ensure trustworthiness in a research study: credibility, transferability, dependability, confirmability, and reflexivity. These criteria will be discussed further below.

3.8.2 Credibility

The credibility criterion refers to the confidence that can be placed in the truth of the research findings. It establishes if the research findings are a reasonable interpretation from the participants' data and initial perspective (Korstjens & Moser, 2017). Methods such as observation, triangulation, prolonged engagement and member checking are considered as suitable strategies for enhancing credibility (Moser et al., 2008). In this study, credibility was established by probing the participants' responses in order to expand and clarify the points they made in their responses, to ensure that the researcher had a thorough understanding of what the participants were saying.

3.8.3 Transferability

Transferability refers to the extent of which the research findings can be applied to similar contexts or settings with other participants. Transferability in this research study was established through thick description. This meant that we went over and above describing the behaviour and experiences and also made descriptions of the context. This means that detailed data had to be collected so that transferability judgements could be made (Korstjens & Moser, 2017). The purposive sampling employed in this research enabled a rich description of the findings, providing substantive data and enabling contextualization of the research findings of the study (Finfgeld-Connett, 2010).

3.8.4 Dependability

Dependability refers to the stability of the research findings over time. Furthermore, dependability also looks at the degree in which the reader can be convinced that the phenomena described in the findings did happen in the manner that the researcher describes (Korstjens & Moser, 2017). The researcher ensured dependability in the research study by providing an audit trail of the steps taken from the beginning of the research project to the data collection and analysis, and ultimately the findings of the research.

3.8.5 Confirmability

Confirmability refers to the degree to which the research findings can be confirmed by other researchers. It is largely concerned with ensuring that data and interpretations of the findings are a clear derivative from the data collected in the study and not the researcher's imagination (Korstjens & Moser, 2017). The researcher tried to establish confirmability through an audit trail by clearly describing the research process from beginning to end.

3.8.6 Reflexivity

Reflexivity refers to the researcher's process of critical self-reflection about themselves as a researcher. Being reflexive allows for the researcher to be aware of their own biases, preferences, preconceptions, and the research relationship (relationship to participant, and how this relationship influences participants' answers to questions) (Korstjens & Moser, 2017). The researcher tried to be reflexive at all times, as she understood that her conscious and unconscious biases affect the research process and research decisions. For instance, the researcher noticed in her earlier interviews during the research process that she had assumed that all the nurses were over-worked and not able to deal with the workload. This, in turn, influenced how she would phrase certain questions, and this had implications for the responses received. When the researcher realised that she was leading the questions, she practiced asking questions in a non-leading manner. This was done so that the research process could take its course without any influence from the researcher.

The researcher also noted that she is a black Zulu female speaking to other black females, as a result, she noticed in her earlier interviews that there was an unspoken expectation to conduct the interviews in Zulu. She noted that the participants were slightly withdrawn. She then deemed it necessary to disclaim at the beginning of the interview she would conduct prefer to

conduct the interview in English. She further explained the that the reason for using English as the language was so that their experiences do not get lost in translation.

3.9 Summary

The aim of this chapter was to provide a detailed description of the methods employed in this study. It provided details about the design of the study, its approach, its setting and context. It also outlined the sampling techniques, data collection tools, how data was analysed, and ethical considerations.

CHAPTER 4: PRESENTATION OF FINDINGS

4.1 Introduction

This research study employed a qualitative research design. Qualitative research designs assist the researcher make sense of the participants' lived experience as well as the meanings they give to those experiences within their natural context (Neuman, 2006). This chapter presents the analysed data collected through the telephonic semi-structured and open-ended interviews. The identified themes and sub-themes are shown in Table 2.

Table 2: Themes and Sub-themes

Themes and Sub-themes
Understanding of OHS
• Infection prevention and control
Human resource factors
• Staff shortage
• Workload
• Inadequate staffing practices
Geographical factors
• Inadequate resources
• Inadequate infrastructure
• Poor hygiene
Safety

4.2 Theme 1: Understanding of OHS

The participants presented as having a basic understanding of OHS. The participants expressed that they understood OHS to be comprised of safety for themselves as well as the patients; having sufficient resources such as appropriate equipment and personal protective clothing; conducive work environments; and protecting themselves from occupational exposure to contracting communicable diseases. Participants expressed the following:

> *"My understanding is that we need to be in-serviced first on how to protect ourselves and then we need to be provided with the necessary equipment and the resources like PPE, protective clothing that's enough for us to protect ourselves and we also – my*

understanding – I think what I'm about to say it falls under in-service [training] – *we need to know what to do should we have a crisis where employees are at risk. Like for example, we just had Covid? So, should there be a spread or an outbreak of a certain communicable disease, what is that we do? So* [I] *think we should be skilled in those, which we do but I won't say it's satisfactory, because not everyone goes to those trainings, you see?" (*Patricia)

"It's that employees should not get hurt or harmed at work; they need to know and understand the dangers and risks of the situation I have mentioned before, such as the [needle stick injury] *recapping, to use PPE so that they do not get blood on themselves because it's occupational. The use of PPE, since we are living in the times of Covid, wash their hands, availability of water, soap and what do you call this, hand sanitizer, proper disposal of waste. Medical waste must go to medical waste, domestic waste must go to domestic waste and then also Appelsbosch must make sure that they come to collect the waste every Tuesday so that it does not sit for a long time by us at the clinic."* (Nosipho)

The participants also expressed their understanding of OHS as having a favourable and accommodating environment that is safe both physically and psychologically. The participants stated:

"This is where you have to look for your safety at work and the environment to see if it's conducive enough for you to work without getting harmed and staying safe." (Cindy)

"What I understand is that I have to work in a place that is conducive for me to work. A clean, well-ventilated place since there are these diseases that are airborne. There mustn't be things that are hazardous that I work next to that will hurt me. Either physically on my body or in life or psychologically." (Khanya)

The participants also expressed that a conducive work environment extended to the provision and support in regard to IOD instances. A participant stated:

"My understanding is IOD. The employer should be able to help you if you get hurt in the place of work. So, since I do outreach, if I get hurt while I'm on the field I should be

able to report to the safety officer that, when I left I was okay, and now that I am back I am not okay anymore." (Mandisa)

The participants also shared that they understood OHS as being inclusive of patients as well. A participant shared:

"Uhh, I think, from my knowledge, [OHS] *is taking care of the workers and everyone who is there, like the patients, and also seeing how safe they are and just looking at that stuff and if there is something like… What can I compare it to? Like someone who is cleaning, if they're cleaning, there has to be like* [a] *sign they put to warn people that it's wet, so that a patient doesn't walk there and finds themselves injured, you see? Yeah, it's just being aware of that and like security and making sure there is security guards at the gate and, as there are security guards at the gate, they are there for our safety. No one is allowed to enter with a weapon or something, and when there is a problem – like psych – sometimes we have psych patients, and they enter when they're in a normal state but when they enter the building, they start disrespecting us and stuff like that."* (Nonhlanhla)

4.2.1 Infection Prevention and Control (IPC)

Participants also shared that their understanding of OHS is in terms of IPC programs that are run in the clinics. They reported that IPC was the main function, with OHS as the support function. A participant stated:

"Yes, IPC is the main focus and then it has like branches like occupational health and safety. It also adds under IPC because you talk about the dangers that are work, you report if you have injuries, you teach people how to separate waste. Like there's a lot of things there and it also includes the hepatitis vaccine we get up to five years. We also do a register and submit to the hospital." (Nokuthula)

South Africa has a history of outbreaks of communicable diseases in the public healthcare system. The KZN DoH has worked very hard to try to ensure that infection control is well managed in their facilities. As a means to lessen the adverse effects of all the infections nurses are exposed to, the DoH created and implemented IPC programmes. The participants expressed that the IPC program trainings were available. In this program, the nurses are taught the latest procedures in infection protocols for all major communicable diseases and the discarding of

medical waste, so the spread of communicable diseases such as TB and through needlestick/sharps injuries can be reduced significantly. One of the participants shared how the IPC program is rolled out in the clinics by stating:

> *"Perhaps let's say there's a TB patient, 'cause sometimes you can't really pick up TB by sending a sample to a lab, sometimes its hidden in the results but you pick it up in other ways like an X-ray. So you find that there is a patient that is admitted in that ward and there's like six patients in that ward. I've screened you and I've screened them all with the normal baseline screening and they came back negative. Then you find that there's an outbreak of TB in that cubicle, so you do further investigation. So those are nosocomial…. Those are the infections that are carried amongst the patients or those admitted. So we do get trained on that, on how to avoid those kinds of things or like for example: we transfer a patient from one hospital to another and we find that they infect patients there with something they contracted this side; we are taught how to detect those kinds of things."* (Nosipho)

Participants also shared how the IPC training places a big focus on needlestick injuries/sharps injuries and the process that needs to be followed in the event the needlestick injury occurs. A participant shared that:

> *"We are taught about the stick-prick injuries, for example, when you prick yourself, what to do? Or if you test a patient with a positive HIV case, you report it and file an incident report and report to the OHS nurse. Umm then they take over and then we write an incident report and management is aware of all those things. Umm, the manager of the department or whoever is there that is senior. We are taught how to clean and how to keep the facility clean."* (Fundiswa)

The IPC program also ensures that medical waste is correctly discarded. The importance of IPC is also strongly stressed. Participants reported this by stating:

> *"Yes, to reiterate the importance of it, yes, also to inform them about waste segregation that you can't mix blood products with paper because someone might get some infection if you place it in the wrong plastic. And we don't leave needles on the table because someone might, when cleaning, someone may prick themselves, so that is what we teach our staff about. So they are well aware, we do have SOPs and guidelines that tells us if someone is exposed how we deal with that issue."* (Nokuthula)

"Yes, we make sure that we protect ourselves in the process of discarding them. It's the way we put these things to like ensure someone doesn't get the bucket with the sharps lying around and making sure it's not in reach. Like you know how children are? You might find a child running around and putting their hands everywhere, so they may accidentally stick their hands in the bucket and find themselves hurt or injured, so the way we dispose of, we make sure that no child can reach it or get a hold of it. And separating, so we know that this is blood products, like the red plastic is for blood products, so when we are done, we tie it up and make sure we remove it and discard it. Because even in our waste there is a separation, so that we know that, okay, this is infectious this is not." (Nonhlanhla)

The IPC trainings are done on a continuous basis. The clinics assess to see which areas in infection control need more attention and they adjust accordingly. A participant shared that:

"We have the IPC training twice a month. But if it is noticed that certain mistakes are happening, we get reminded of IPC and the procedures that we need to follow … we also ask [oNompilo]*to teach the community on how to discard of glass bottle and tins or anything sharp. Because you will find that I will do a home visit, then I get stabbed by a bottle in the yard. So we asked* [oNompilo] *to tell them to have drums where they will discard the bottles and ask them to encourage cleanliness within the household."* (Mandisa)

This statement shows that IPC is something that is prioritised in the clinics, as trainings occur twice a month. Furthermore, this statement shows that the preventative measures of IPC are not just limited to the nurses but are also extended to the community, as they are taught how to discard sharp items.

4.3 Theme 2: Human Resource Factors

One of the strongest themes that emerged in the data collection process was the staff shortage within primary healthcare. The nurses who were interviewed reported that the human resource shortage is one the biggest occupational challenges nurses face in primary healthcare.
One of the participants articulated the challenge of a shortage of staff by saying:

"*We are short-staffed because of the chronic patients. There is like 1000s of chronic patients and people. So, we have different streams in the clinic. There are people who do chronic and minor elements; there is people will do children and the youth; and people who do pregnant women, and whatever. So each and every person has their own stream. But because with the chronic patients, they are a bit more, it's usually two people that we divide the patients amongst each other."* (Fundiswa)

The shortage of staff was also reiterated by another participant who said:

"*Like at the moment there are two EN's but there's supposed to be six EN's, so others are on leave and others are working outside for Covid vaccinations. So, now that there's, if the one calls sick, we try to borrow one from another facility, but it doesn't always work because sometimes you'll find they also have a crisis and they are short too."* (Patricia)

These utterances by the participants suggest that there is a high vacancy rate in primary healthcare.

4.3.1 Workload

An increase in work volumes was also reported due to the challenge of limited staff. One of the participants expressed that:

"What becomes difficult is, if you are going to do adherence clubs where you take pills to people, it is difficult when you are going to give people their repeats. You have to pack the pills yourself, whereas if it [is] *the first time, the pills are prepacked. You are also taking your own bloods. All those people are getting reviewed by you and you must do assessments to see if they are okay for them to take pills or do they need to go to the clinic. So if you are a professional nurse and you don't have an enrolled nurse helping you with the home visits, it gets hectic because the counsellor and oNompilo do not have the clinical experience to help you. So everything falls on you."* (Cindy)

"And just like how I mentioned, our clinic is the smallest clinic but we have a lot of people to work with, so the workload is strenuous. We work with people from farms. The workload is challenging. Yes, we don't have enough staff." (Nonhlanhla)

This illustrates that the staff shortage is strenuous for the nurses. This is said as the nurses are required to complete their tasks without the assistance of enrolled nurses as there are not enough staff available. This poses a risk, as the increased workload exposes nurses to burnout. One of the participants shared their apprehensions on the staffing:

> *"Short staff… that's an occupational hazard. Yeah, because it leads to burnout. The staffing. It is very bad."* (Fundiswa)

In the sub-theme of increased workload, it became apparent that with the Covid-19 pandemic being present, the nurses inherited an extra function for their day-to-day work. Nurses reported that their workload has increased. A participant shared that:

> *"…. but what I can say, maybe if we can have more staff 'cause we get overworked. Especially now that there is Covid we are more overworked; we do extra duties but I think it's the staffing."* (Nokuthula)

The participant further shared that:

> *" Uhm what I can say, before Covid we had our duties as professional nurses in the clinic. When Covid came, we had extra duties because we had to go and we test if we were suspecting. We had to leave your room and go test the patient in a hyperventilation room. So, during Covid, the vaccine was introduced, so now in our facilities we* [are] *offering vaccines. So I am responsible for dong the vaccines here in the clinic, so from what I was doing I had extra work to do because I also offer vaccination program. I also run that program."* (Nokuthula)

Based on these participants' experiences, it becomes apparent that Covid brought on a new workload for the nurses. The increased workload, coupled with the shortage of staff, can lead to an unpleasant work experience and increase the risk exposure for the nurses The participants shared that their daily functions went from doing general health screening, health education, chronic medication collections, and emergencies to having to do all of this as well as the Covid screening and vaccinations. This exerted strain on the participants as they had explicitly shared that they have limited staff capacity. The participants shared their experiences by stating that:

> *"Pre Covid, it was okay; there wasn't a lot of work – it was just health education for patients, screenings, vitals screenings and then we see patients that are sick and those that are coming to fetch their chronic medication and the emergencies that come up, if*

there are any emergencies on that day. Now during Covid, there is a lot [of] *work because it's health education screening of Covid before you enter the clinic, you have to do the Covid test on the suspects yourself, there is a clinician, again you have to go back and see the line of patients that are there to fetch their treatment and the ones that are sick. Then also the emergencies that come up, as you cannot plan for it."* (Nosipho)

A participant explicitly stated that the added functions have placed strain on her by stating:

"Yes, there have been added functions because we need to do the testing, we need to do the screening of the patient – that also needs manpower. That is also pulling on me. It's like a new routine." (Fundiswa)

Although the Covid pandemic increased the work volumes for the participants, the participants also shared their frustrations with the targets that were expected of them with the limited resources that they have.

"Sometimes you work without resources. Sometimes you are given targets which you cannot reach. And you don't know how you are going to meet those targets. So, in the end, because you love your work, you try by all means to meet the target. But throughout your work process, there are some hindrances. So, you cannot perform on some other things because … due to these things. Due to these things." (Zinhle)

It was further illustrated that participants felt that the targets were unrealistic and not representative of the population that they service:

"It's tools and it's the staff because you cannot expect me to see a 100 people who I need to spend at least 30 mins with one person. So, in my shift, I cannot be seeing a 100 people when I am supposed to spend at least 30 mins with the person. So, if you count that and you divide by 30 minutes, it does not give you a 100 people … not even your 60. You work trying to push your target. The service that you render is not the service that you are supposed to be giving people, because we are trying to chase the targets." (Fundiswa)

It was also uncovered that the targets are set by external stakeholders, and they do not employ a consultative approach when determining the targets.

"It's the district, it's the province who set the targets. So we get it from our supervisors that these are the targets that you need to reach, but they are set at the higher level, the district level and the province level. So how they determine your target is, it depends on your catchment area, okay. But then, with us, the catchment area. You can do the population count, but that population count doesn't mean all the people are staying here. We have a working population come in only on weekends, but they are still counted. So, they are not going to use our services. The population count doesn't mean all the people are staying here. So, if you are going to count through the population from the Census, it's not going to give you the exact figures." (Fundiswa)

The participant stated that they felt they still try to push work as much as possible so that they are able to try to reach their target; however, they are concerned that they might be compromising the quality of their work in the process of chasing targets.

"And some people try to push those targets; you won't do the total thing that you are supposed to do. So now you could compromise with the quality of work that you do, because you're trying to push the numbers." (Fundiswa)

The participant also shared that they do escalate the issue of the targets being unattainable but went on to indicate that they are unsure if their superiors escalate it any higher:

"I don't know if they escalate that but with our supervisors, we do mention that, we do point that out. So we don't know, because they are the ones who are supposed to escalate the information. But it is an everyday thing which, like every healthcare worker, complaining about the same thing." (Fundiswa)

Based on the reports given by the participants, it appears that they feel like they receive limited support from their managers.

"What am I going to say? What can I say? I mean, they support us, like they'll say we have to use what we have. So they support us in that sense because they also can't really do much, you know, like it's beyond their reach. But they're good and they do support us in that sense, so that we can fix what is already there. So, that work continues, and the patients receive the care they need. In the sense, you know, we help each other carry the load." (Nonhlanhla)

One of the participants also indicated that they felt like they did not receive adequate support and appreciation during the Covid pandemics.

> *"Yeah, it's very hectic, even during the Covid pandemic, we were the frontline workers but it's like there is no appreciation. You still need to focus on the Covid things, but still other things still need to be done, but there is no extra staff that we are given."* (Fundiswa)

The participants who were responsible for doing outreach programmes also shared that they felt that they did not have adequate support as they work in isolation and cannot seek assistance from a colleague. A participant shared that:

> *"Well, the challenge is, when you are not based in the clinic, you don't have the same support as someone who is based at the clinic. Because, if you are at the clinic, you can go to another consultation room and ask your colleague what to do if you are struggling with a patient. For instance, if you are taking blood, if you can't find the vein, you can ask another nurse to try and help you, whereas if you are at home, you must do it until you find it. So, it feels like you don't have support. Also, when you are in the homes, the network is bad so you can't even get support over the phone."* (Cindy)

4.3.2 Inadequate Staffing Practices

It has been indicated that the retention of nurses has been a problem. It has also been reported that, after a nurse resigns, the position does not get filled. One participant shared that:

> "*Sometimes when the one nurse resigns, the other one, just like how I was saying that the government doesn't even have agency staff to come and fill up those gaps. So the family health nurse, when their partner resigns, they'll have to stay in that position alone."* (Patricia)

The reasons why the positions do not get filled after resignations is unknown. However, the nurses shared their frustrations with the inadequate staffing and reported that they are feeling exploited by the system. The participants went on to share that the staffing issue is causing conflict amongst themselves. One of the participants reported that:

> *"It's because we are exploited, we are being exploited; employers always do that. Just like last week, in fact this week, I got into an argument when one of the sisters asked me to fetch her something in Appelsbosch, so I told her I would* [do] *this favour but I will*

start with the job that I was hired for, then I will go do it. But she wanted – well because she had asked me and she is supervising at the time – I must go do it. I said no, I can't do that. I have to start with the work I was hired to do, then when there is time, I'll help you with the thing you need me to help you with. So we clashed because she wanted me to do what she wanted." (Zinhle)

The participant further stated that:

"It's not a small load but I have to see for myself how I work around it. So this nurse wants to disrupt the way I work and wants me to work the way she wants, but for my job, I know how I am going to work because I am a team leader and I set the work myself. No one is going to tell me how I should work, you see." (Zinhle)

This illustrates that the workload volume and no clear role demarcation are potential sources of conflict amongst the nurses. Furthermore, the participant went on to express that they did not feel as if they receive adequate support in terms of the workload, as they felt that the only appropriate support would be management ensuring that vacant posts are filled as people exit the post. A participant stated that:

"But they do try; I won't say that they don't try. But that's the only way they can support us: by finding us staff. Otherwise they can immediately employ or have agencies that will send someone to come in and relieve." (Patricia)

The participants also shared that they felt as if they have additional tasks that they are required to take on so that they can complete their work effectively. A participant shared that:

"You see the thing is, you work alone, then you drive yourself, like you drive your own car when you are going to communities. The driving part is extra work that should be done by someone else because it is so intensive. So we should have drivers to help us, so by the time when [you] *get to someone's house, you get there and work. And having a driver helps a lot with safety. Especially as a woman in South Africa. Sometimes when you go to an area where people don't know you, you are vulnerable."*

This portrays the participants as having reduced positive work experience and overall wellbeing, as they view their work demands as unreasonable and have genuine concern for their safety.

4.4 Theme 3: Geographical Factors

4.4.1 Inadequate Resources

Proper working tools and adequate resources are necessary in ensuring safety within the workplace. The shortage of adequate resources is often cited in nursing. The issue of limited resources was repeatedly stated in the data collection process. Participants shared that they mostly do not have appropriate working cars, as the cars are too small to drive effectively on the gravel roads or they have to use un-serviced cars when they go into the field. It was also mentioned that the waiting times for the cars to be fixed and retuned to them are too long. One of the participants expressed that:

> *"I would like for us to get cars that are reliable and appropriate for the roads that we do. Currently our work cars break down, then they go get fixed, for three months you see … sometimes our cars overheat. We don't want fancy cars but decent cars with aircon. For instance, if it's hot, you can't open the window because you are on gravel and currently our cars do not have aircon."* (Cindy)

It was also stated that the nurses who work directly in the community do not have all the necessary equipment to provide their services in an efficient and safe manner. It was also highlighted that their work uniforms are not appropriate for their work context. One participant stated that:

> *"We should get different uniforms like scrubs for us nurses who go into homes so that we are accommodated better. It would also be nice to get mobile beds of some sort, so that we can help our patients better. Someone of them are on* amacansi [grass mats], *so a mobile bed sort of would really help. Maybe having like a mobile clinic instead going into the person's home, because going into a someone's home, you are exposing yourself to a lot."* (Cindy)

The nurses who conduct the outreach programmes require cars to get to the homes/schools in uMshwati. The cars that are used in each clinic are a shared resource. The nurses stated that the cars they use are not serviced regularly. This poses a safety risk for the participants, as the reliability of the car is compromised. One of the participants revealed this by stating:

> *"Yes, the cars are okay. But sometimes we use un-serviced cars because they will have a hard time booking them in. So the last time, I was travelling, it didn't have power. So*

I am still waiting for the car to be booked. So, the problem is that there is only one place that services the cars for eMshwati, so you can imagine the backlog. We're not even separated by wards. So, this causes hectic delays for us." (Khanya)

The participants stated that they report when the cars are due for service; however, the requests rarely get fulfilled in a timeous manner. One participant stated that in the event the car cannot get serviced in time, they will borrow another one if there is a spare car available. In the event there are no other cars available for use, the nurses are required to carry on using the un-serviced vehicles. The participant expressed this by saying:

"Sometimes we may borrow another car if we have one but if we don't, then we don't have one. Just like right now, the one I'm using is due for a service but I reported and they said there isn't a car they can give me, so I can't work. I have to wait till it's January and continue using it, even if its due for a service because I'm not going to get another car, you hear that?" (Zinhle)

The Covid-19 pandemic also highlighted how resources often run short. The participants expressed that they were required to change face masks regularly; however, the masks would run out. Some of the participants found it necessary to buy their own masks so that they could reduce their exposure risk, while others would go against the regulations put in place and use one mask for the whole day. One participant shared that:

"Also with PPE's, we run out of masks. On a normal day they say you need to change your masks three times. But because we don't have enough, you always wear one mask [through] *the day."* (Fundiswa)

Another participant stated that:

"They get Covid and you'll find that the six people with Covid have to stay away. So, as much as you want to not be around Covid, you still are exposed and it doesn't help the fact that we are keeping to standards set. We try by all means but there's that thing of [if] *we run out of masks, we run out; you need to buy your own mask obviously, because you can't go and expose yourself, you know?"* (Patricia)

The lack of resources is not only limited to PPE but also extends to other working tools. The nurses, however, interpret the resources not being readily available because of budget constraints. This was best expressed by a participant who stated that:

> *"It's also the resources that we work that we need that we don't get on demand and it depends, I guess it depends, on the financial stability of the institution to be able to provide. So if they don't have funds, we don't get the important things we need."* (Patricia)

4.4.2 Inadequate Infrastructure

The uMshwati Local Municipality is the deep rural areas of KZN. As a result, it is plagued with inadequate infrastructure and poor working conditions. The nurses typically work in areas where they have to drive long distances where the roads are in bad condition. They are also subjected to poor cellphone coverage. The nurses who do the outreach programs, visit schools, and conduct home visits also often work in isolation. The nurses also have limited access to water as they have to rely on the municipality to provide them with water for the Jojo tanks. One of the participants shared their experience by saying:

> *" .... Sometimes it has challenges because we work in rural areas. Our clinic is the smallest clinic eMshwati so we don't have enough infrastructure. So, sometimes we come across challenges of looking for places to work or maybe when we are working in the rural areas, we have to look for water. Because it does happen that there is no water. But now it's better because they have put in Jojo tanks and at least if we don't have water* [in the tap], *we can use the water from the Jojo tanks."* (Nonhlanhla)

Challenges with access to water are common for citizens in uMshwati. As seen above, the limited access to water is no different for the participants of this study. One participant stated that they do not have a constant supply of reliable water. They have to rely on the municipality providing them with water. A participant shared that:

> *"Sometimes we don't have water; sometimes we have water but we* [also] *have like reliable sources that can assist us with water. When we don't have water, we call the municipality and they make sure they bring water and fill up the Jojo tanks."* (Nokuthula)

Another participant stated that:

"Uuhm its okay. I mean challenges are there. Like we work in the deep rurals. So when we go to the homes, you may find that, because the roads are so bad, we have to leave the car there on the hill and then we have to walk down to the home. There you have to deal with dogs, snakes, you see. We get burnt in the sun. If it is raining, we slip and slide there. Sometimes when it's raining, we don't even leave the clinic because we can't move around in the community." (Mandisa)

As described above, the working conditions have been cited as unsatisfactory. The physical environment directly affects the experience nurses have of their work. The physical environment has also been reported as an obstacle in providing quality healthcare. One of the participants shared that:

"The environment is not good. The whole day you don't really have a toilet. The car you're using. The roads are bad. The weather also is bad and unpredictable. So it's unlike a person who is stationed [at] *the facility where there is proper ventilation and all the medication they need is freely available to them. That is the disadvantage, because when we go to the homes, we don't carry medication because the cars we use don't allow us to. So people sometimes ask: What are you going to help us with if you're not carrying any pills?"* (Cindy)

The uMshwati Local Municipality is known to have very underdeveloped infrastructure. They have gravel roads that are not maintained and, as a result, the nurses are only able to perform their outreach programmes if the weather permits. One of the participants stated that:

"We don't go out if it is raining because of the type of roads we have, it's just not safe. The cars also move in the rain due to the mud. Other homes don't have roads at all where they are." (Mandisa)

"So as I had mentioned, I work in deep rurals so you find that it rains. There are no roads like you would have in town. Its pure gravel or sometimes they add rocks. So when it rains its bad. I will give you an example of the one school I service. The school is on a hill. The road is not maintained; they just added rocks that sometimes move. So sometimes, they will place a rock so that the road is a little more even, then you find that the rock has moved. And it's the type of road where you drive up only in gear 1 or 2. You never get to gear 3, 4, 5." (Khanya)

These reports by the participants clearly illustrate how the poor roads hinder them from completing their tasks as planned if the weather inhibits them.

4.4.3 Poor Hygiene

As has been reported in the previous section, due to the location of the clinics, the water supply is limited. The lack of access to water poses a serious problem to the hygiene practices for nurses. As a result, their work experience is plagued with poor hygiene practices. The nurses who are stationed at the primary healthcare centeres reported having clean and decent work areas. The nurses who do outreach programmes, home visits and school visits, however, have a very different experience in terms of hygiene. These nurses reported that, when they do the home/school visits, they work in rooms that are not well kept and with limited access to water. One of the participants shared that:

> *"Homes are not the same. Sometimes you can see that they are really caught up with other things that they do not have time to clean. But we still maintain that oNompilo should still encourage them to clean and teach them how. They tell them to open doors and windows in the morning so that there is ventilation and we don't catch sicknesses that could have been prevented. So, general health education is key. So, when we go into the homes, we give feedback to them and let them know where they can improve." (Mandisa)*

The nurses who provide primary healthcare in the schools also shared that they work in conditions that that have minimal hygiene. They have limited access to water and there are no proper hygiene practices in place. The children in the schools also do not seem to have much knowledge on how to be hygienic and clean up after themselves. Participants shared their experiences of poor hygiene practices in the schools by stating:

> *"Yes, it's not okay. Children learn at such filthy places sometimes. The toilets are filthy. Sometimes you get to the school and there is no water and you find that the kids have used them to do number 2. They don't check to see if the toilets are clean or not. You're given these toilets to use regardless of how dirty they are."* (Khanya)

> *"The boy emptied the bucket in front of me. He said to me, Please hold on, the bucket is full. As he spilled the water the stench of the poop came out. So that bucket stayed full*

for months. The children went on holiday without the container being emptied or cleaned. They came back and still used that water for handwashing." (Khanya)

"It affects me a lot. You would find that you would come with your water. So, for instance, there is this school I go to. They do not drink their own water. You would find that they have a 20l of water that they have boiled for the classes that they use. And that 20l you would find that no one washes or cleans it. So let me make an example since there is Covid. There are these new devices that have been put in schools so that children are able to wash their hands and use sanitizers. You know at this one school I got there and the bucket that pours the water smelled of poop." (Khanya)

The experiences of the nurses clearly illustrate the severity of the hygiene issues in their work contexts. These hygiene issues are exacerbated by the limited access to running water and the poor hygiene education in schools.

4.5 Theme 4: Safety

In the data collection, safety concerns were presented by both the participants who are stationed at the clinics and the participants who conduct the outreach programmes. The participants expressed their concerns about their physical safety when they are out in the field and while stationed in the clinics. It was reported that they had to deal with dogs in the homes and a violent community. As a result, they felt that they had a diminished sense of security. The participants stated that:

"Yes it does happen sometimes. Like when you go into someone's home. Firstly, you're greeted by dogs. Who is going to hold the dogs for you? Sometimes you park far, as you cannot get the car into the yard. What do you do if there is someone who is mentally unstable, and they hit you?" (Cindy)

"Occupational health and safety is also involved in safety and security. Sometimes the community that you work in is very violent against – so we don't feel any protection, even though there is a security guard. So we used to start duty at 6 but then there was a break-in at the clinic and in winter, 6 am is still very dark, so we felt as if we were not safe, but we were trying to help those people that come in early before whatever. So

even support we didn't get after that break-in. So we felt as if our safety is not that important." (Fundiswa)

The setting of this study was in the rural area of uMshwati Local Municipality. As a result, nurses often worked in isolated, remote areas and had to drive long distances on roads in poor condition. It was also shared that the weather would limit their movement, as the condition of the roads often deteriorated with rain present. As a result, the nurses would not go out to the homes of patients when it was raining, as the condition of the roads may deteriorate further.

"And you know, if the weather changes while I'm there, I have to stop everything and leave because I can't be caught in the rain on that bad road." (Khanya)

The participants also shared that they experienced anxiety around their safety, as they travel and work in isolation and worried about the possibility of getting hijacked. However, those working in a clinic were less concerned about this risk:

"You don't have to worry about the car you will be using and that you might not get from point a to point b. You don't have that anxiety because you know you're going to the clinic where its safe and you have everything you need. You don't have the anxiety of the possibility of being hijacked." (Khanya)

The participants further stated that they were concerned about travelling in the state vehicles as it was reported that the cars they use were not reliable. One of the participants was particularly anxious about the risk this posed to her and stated:

"Like I just imagine that I am driving somewhere, and the car breaks down and you're alone. It has never happened, but can you imagine the risk? What are you going to do? You can't just leave the car. How will you get help?" (Cindy)

Another participant noted her safety concerns around being a woman in South Africa and felt that having a driver would not only relieve her of some of the demands of the job but would also make her feel less vulnerable in terms of her safety. The participant reported that:

"You see, the thing is, you work alone. Then you drive yourself, like you drive your own car when you are going to communities. … Especially as a woman in South Africa, sometimes when you go to an area where people don't know [you]*, you are vulnerable"* (Cindy)

The participants expressed their frustration at not feeling supported about the state of the vehicles that they are required to use. One participant shared her experience of escalating the matter stating:

> *"They just say there aren't any* [vehicles]*, this is all we have. And you know, I ended up writing a letter. Unfortunately because I'm not with them, I wrote a letter to my PSC* [Public Service Co-ordinating Bargaining Council] *stating that this car is no longer in working condition. And I've reported it before in the morning saying it is not in a good condition and they just said keep on using it during the day; the car just stopped in the middle of the road while I was going to Richmond in the morning. I told them that it's not in the best state and I don't know how many times that car has been fixed. I'm sure it has been fixed 15 times since I got here, and they just said, if I don't use that car, what am I going to use. So, I saw it was pointless. So, I saw it has to kill me, if it kills me."* (Zinhle)

4.6 Summary

This chapter presented the participants' insider perspectives of their experiences regarding the OHS issues they face in rural primary healthcare. These findings were presented in four themes: understanding of OHS; human resources; geographical factors; and safety, as well as sub-themes. These themes and their supporting excerpts provided evidence of the participants' experiences and perceptions regarding OHS.

CHAPTER 5: DISCUSSION OF FINDINGS

5.1 Introduction

This chapter aims to provide a thorough discussion of the empirical findings as presented in the previous chapter. The findings were categorized into four themes, namely the understanding of OHS; human resource factors; geographical factors; and safety, with various sub-themes. The chapter shows how the findings integrate with the Job Demands-Control-Support model, the Rural Nursing Theory and complexity compression. Furthermore, the findings are consistent with the literature review, as the main themes that were found were centered around understanding of OHS, human resource issues, lack of resources, and safety. The main objective of this study was to explore the OHS issues that nurses in rural primary healthcare are faced with, using a sample from the rural uMshwati Local Municipality. The analysis of findings was done through the different stages of thematic analysis, as explained in the previous chapter.

5.2 Theme 1: Understanding of OHS

"How do rural nurses understand health and safety in their workplace?" was one of the research questions guiding this study. The findings indicated that the nurses have an in-depth and conclusive understanding of OHS. Participants understand OHS as the provision of a healthy, safe and conducive work environment. They further stated that OHS measures should protect both the employee and the patient. The reports by the participants show that they understand the maintenance and promotion of workers' health and working capacity, as well as the improvement of the working environment and work to become conducive to safety and health (Righteous & Chibuzor, 2021). The findings indicate that the participants understand OHS in a comprehensive manner, as they expressed that OHS is comprised of safety for themselves as well as the patients; having sufficient resources such as appropriate equipment and personal protective clothing; conducive work environments; and protecting themselves from occupational exposure to contracting communicable diseases.

The nurses indicated that, in their service, they were required to attend IPC programs. The IPC programs are comprehensive as they are inclusive of all aspects of infection prevention and control. The programs cover education and training, surveillance, environmental management, waste management, outbreak investigation, development and updating of infection prevention and control policies, guidelines and protocols, cleaning, disinfection and sterilization,

employee health, and quality management in infection control (DoH, 2007). The IPC program aims to ensure that the minimum national standards for the effective prevention and management of healthcare-associated infections are effectively implemented so that hazards related to biological agents are lessened for patients, visitors and healthcare practitioners in healthcare establishments (DoH, 2007).

Previous literature has indicated that the South African public healthcare system is severely lacking in infection control (Kaboto & Chivese, 2020). It was also found that healthcare providers in South Africa have a high occupational exposure to infectious diseases, occupational diseases and injuries (van Rensburg et al., 2016). The public healthcare system was also considered to be lacking in infection control due to poor waste management, lack of cleanliness and poor maintenance of the grounds and equipment. The National DoH has previously faced medical negligence litigation (Maphumulo & Bhengu, 2019). The findings of this research study are, however, not consistent with previous literature, as IPC programs have been implemented to lessen the chances of the spread of infectious diseases. It can also be deduced that the implemented IPC programs in the uMshwathi Local Municipality clinics are effective as the participants stated that they had minimal occupational exposure.

It can be concluded that the focus on IPC is one of the driving reasons behind the discrepancy between previous literature and the current findings. Previous literature states that there has been an increase in medical negligence litigation against the DoH due to poor discarding of medical waste and malpractice by nurses in the urban area (Maphumulo & Bhengu, 2019). The findings of the current study, however, highlight the effectiveness of the IPC programs in uMshwati Local Municipality, as it was reported that the programs prioritise the correct procedures for discarding medical waste and sharps so needlestick injuries and sharps injuries can be reduced for both the healthcare workers and the patients.

The Employee Health and Wellness Strategic Framework of 2019 provided guidelines for the expectations of the OHS roll-out in the public sector. The safety pillar in this framework states that OHS is comprised of occupational hygiene; hazard identification and risk assessment (HIRA); health and safety representation; and management of occupational injuries and diseases (DPSA, 2019). The framework states that the pillar would be implemented through anticipating, recognizing, evaluating, and controlling health hazards in the Public Service to

protect employee health and well-being; it intended to safeguard the community at large by ensuring the coordination of a steering committee at provincial level to ensure that implementation and monitoring of the safety program occurs. The impact of the safety program would be ensured at this level. Based on the findings of the current study, we are unable to ascertain if the clinics in uMswhati Local Municipality implement a steering committee to monitor and evaluate the health and safety programs that have been administered.

5.3 Theme 2: Human Resource Factors

The findings indicate that the human resource issues are the most predominant area of concern in the nurses' experience. The human resource issues refer to staff shortage, workload and inadequate staffing practices. The participants in this study expressed on numerous occasions that they were understaffed in the clinics. The participants stated that they have a high vacancy rate as, when a nurse exits the system, the position is not filled for reasons unknown to them. Previous literature supports the finding of a shortage of staff in nursing generally and suggests that the staff shortages are mainly due to the inadequate recruitment practices and the lack of retention of nurses (Maphumulo & Bhengu, 2019).

5.3.1 Retention

The retention of nurses has proven to be a problem in the nursing profession at a global level for some time. Research has indicated that factors such as high vacancy and turnover rates, an unsupportive working environment, long work hours, and excessive physical and psychological demand negatively contribute to the retention of nurses and, as a result, there ends up being a lack of human resources (Mokaka et al., 2010). The lack of human resources that nurses are subjected to illustrates the compression complexity nurses face. Krichbaum et al. (2007) state that complexity compression is the phenomenon that nurses experience when asked to undertake extra, unplanned, responsibilities while still being required to complete their existing responsibilities in a compressed time frame. It becomes apparent that, due to the human resource factors, nurses are challenged within the uMshwati Local Municipality. Thus, they are plagued with compression complexity, as their workload increases due to having to assume additional work due to the high vacancy rate. This is said as the nurses expressed that they are still expected to perform at an optimal level and service patients effectively and efficiently while working with a reduced staff compliment. Barrett et al. (2016) state that complexity compression is a challenge for rural nursing practice as rural nurses are required to provide

greater complexity of care in community settings. Complexity compression was found to have a direct impact in job satisfaction for the nurse and for patient outcomes. In this current study, the level of job satisfaction of rural nurses experiencing complexity compression cannot be ascertained. The job satisfaction of rural nurses who work under complexity compression would be useful to investigate. The Job Demands-Control-Support model suggests that work control and social support encourage active coping with work demands, which in turn enhances wellbeing, health and productivity (Daniel & Harris, 2005). It can therefore be deduced that the nurses in uMshwati Local Municipality opt to exit the nursing system due to the perceived unsupportive conditions to which they are exposed. The nurses' wellbeing and health while they are still in the system, however, cannot be ascertained and would require further investigation.

As suggested above, a key contributing factor to the shortage of human resources in nursing is the poor retention of nurses. The poor retention of nurses is, furthermore, particularly true for rural healthcare. The new nurse turnover rate was reported to be as high as 60% for rural nurses (Schlairet, 2017). Rural nursing has been described as fundamentally different from nursing practice in urban settings (Long & Weinert, 1989). It was realised that a framework for practice needed to adequately account for the context for which it is intended. The decision to stay in rural nursing has been documented as being related to job satisfaction. When rural nurses are not satisfied with their job, they are more likely to leave their position. When compared to urban nurses, rural nurses were more likely to be planning to leave their practice within the next year, and were less satisfied with their job (Mbemba et al., 2013). These findings give an indication that job satisfaction has a direct effect on the amount of time a nurse spends in rural practice. Furthermore, the research findings and literature state that nurse retention is poor due to the unsupportive work environment. A participant in the current study stated that they felt they had limited support from managers, as they are often told to make do with what they have.

The recruitment and retention of rural nurses will continue to be a recurring issue if policy formulation and implementation does not address the issues of rural nursing retention. Kulig et al. (2015) state that educational opportunities, financial incentives and enhanced infrastructure must be developed to address recruitment and retention of rural nurses. Research revealed that Ghana has also faced a challenge with the recruitment and retention of rural healthcare workers (Kwansah et al., 2012). The results revealed that participants were dissatisfied with rural

practice as they were constantly faced with difficult working conditions, high workloads, limited career advancement opportunities and lack of formal learning or structured mentoring (Kwansah et al., 2012). The authors of this study deemed it necessary that the policy for rural practice in Ghana be adjusted to cater for the needs of rural healthcare workers as a strategy to promote the recruitment and retention of the rural healthcare workers. The proposed policy solutions were to develop incentives such as new rural training opportunities, preferential access to training, faster promotion, or a building fund for nurses who work in rural service (Kwansah et al., 2012).

The South African government attempted to address the issue of retention in nursing in the public sector by introducing the occupation-specific dispensation (OSD), which is a financial incentive strategy designed to attract and retain health professionals in the public sector. The implementation of OSD was, however, characterised by poor planning and management; this was related to the 2007 public service strike, as the government had to swiftly implement the OSD and, as a result, the government had less time to adequately plan for the implementation. Hospital managers reported that roll-out of OSD was rushed and financial resources were not made readily available for the implementation at the hospital level, resulting in problems for the hospital manager (Ditlopo et al., 2013). The implementation of OSD was also decentralised from the NDoH to the provincial health departments. This, in turn, led to insufficient coordination among different stakeholders, as well as different interpretations and variations in OSD policy implementation (Ditlopo et al., 2013). If the implementation of OSD had been successful, it would have mainly addressed the recruitment and retention issues of nurses in the urban public sector. The rural nurses in public health would still have been side-lined, as the RNT argues that rural nursing practice requires its own dedicated framework to address the issues that it faces.

5.3.2 Workload

Within the human resource factors, workload was reported as an area of concern for the nurses in rural primary healthcare. The heavy workload was ascribed to staff shortages within the clinics. Maphumulo and Bhengu (2019) state that shortage of staff has negative consequences, as it leads to increased work volumes and mental and physical exhaustion. The nurses also experienced an increase in workload due to the Covid-19 pandemic. During the pandemic, the nurses were expected to take on additional responsibility, so that Covid screenings and other

Covid-related functions could be covered. Their pre-existing duties were still required to be completed simultaneously with the newly added Covid-19 functions. This in turn left the nurses exposed to increased workload and stress.

When people are exposed to excessively high levels of work stress and workload, they can experience burnout. Burnout can also contribute to the poor turnover rate of nurses. The adverse effects of burnout are not limited to the high turnover rate of the nurses, however, but can also extend to decreased quality of patient care and cause an increase in absenteeism and reduced productivity (Medland et al., 2004). The burnout and job satisfaction of healthcare workers in rural areas in Slovenia nursing homes during the Covid-19 pandemic was studied (Leskovic et al., 2020). It was found that the burnout syndrome had increased significantly from 2013 to 2020, as the participants of the study had experienced emotional exhaustion, lack of personal accomplishment and lessened job satisfaction. However, it is believed that the Covid-19 pandemic worsened the existing burnout conditions of the participants (Leskovic et al., 2020). In the current study, it is unclear if the rural nurses experienced burnout because of the increased workload due to the Covid-19 pandemic or whether it pre-existed the pandemic; it would therefore be useful to further investigate burnout in rural nurses.

The increase in workload due to the Covid-19 pandemic expressed by the rural nurses in the uMshwati Local Municipality explicitly demonstrates the complexity compression that nurses must endure. This is said as nurses are expected continually take on extra unplanned responsibilities while simultaneously being obliged to complete their existing responsibilities in the constricted time-frame (Krichbaun et al., 2011). The complexity compression that nurses undergo leaves them vulnerable to emotional stress. Stress is considered to be one of the most significant health hazards for healthcare workers. The continuous overwhelming work demands, energy, and professional skills, along with the stress of direct responsibility for patient care, exposure to death and dying, and anxious and suicidal patients leave them at higher risk for stress (Righteous & Chibuzor, 2021). The Job Demands-Control-Support model by Karasek and Theorell (1990) states that work control and social support enables and enhances active coping with work demands that in turn enhances wellbeing, health and productivity (Daniels & Harris, 2005). Based on these findings, it is evident that the nurses in primary healthcare feel that their job demands are far greater than their work control and social support. This is said as the DoH is unable to retain nurses and the nurses who exit the system

do not get replaced. As a result, the nurses' job demands end up being excessive due to the shortage of human resources. The poor retention of nurses exposes the staff in the clinics to reduced social support as they are unable to seek support from co-workers as everyone is over extended and as a result they are unable to effectively support each other as required. Furthermore, the nurses who conduct outreach programmes and work directly in the community experience limited social support as they are separated from their co-workers as they are stationed in the community. It was expressed that on their structure, the professional nurses who work directly in the community should have an enrol nurse to assist them, however, the participants expressed that they do not have enough enrol nurses' to support them so they have to go into the community alone. As a result, when they are performing their duties, they do not have a person readily available to assist them with any difficulty they may face. This in turn has an effect on coping mechanics within the workplace and further exacerbates the retention issue.Furthermore,the nurses reported having unrealistic targets that cannot be met. The nurses also shared that they are not consulted with regard to the setting of targets. As a result, the targets that are set are not realistic and do not take into consideration the occupational issues faced by rural nurses. This highlights the limited job control rural nurses experience. The Job Demands-Control-Support model by Karasek and Theorell (1990) predicts that interaction between the between high work demands, low job control and low social support can lead to detrimental health outcomes such as psychological strain, blood pressure and cardiovascular diseases (Tuner et al., 2011).

5.4 Theme 3: Geographical Factors

The findings presented above give an indication that the nurses in rural primary healthcare are subjected to inadequate resources largely due to their geographic location. They reported using cars that are inappropriate for the type of roads they are required to travel on. The car resource becomes further strained as the nurses reported that the cars are often not serviced and are unreliable. The findings also give an indication that the nurses are subjected to poor infrastructure and overall network and connectivity issues.

Job control refers to the amount of autonomy an employee is given over how they complete their work tasks as well as the timing. If an employee has the autonomy to actively decide on the work methods they want to employ, they will regard themselves as having high job control (Karasek & Theorell, 1990). Due to the poor infrastructure the nurses must deal with as they

are based in the rural areas, nurses are finding themselves having limited job control, as the weather and access to water affect their ability to do their work as desired. The limited job control in turn reduces the nurses' wellbeing, health, and productivity (Daniels & Harris, 2005). These findings are consistent with the findings in the current rural nursing space. A previous study done in rural Australia, found that rural healthcare nurses experienced high volumes of work, long working hours, high stress levels, workplace violence and limited support (Terry et al., 2015).

The findings also show that the nurses stationed directly at the clinic and the nurses who provide primary healthcare in the community or schools (outreach programmes) have different experiences of their work. It appears that the nurses who do the outreach programmes feel that they have very little social support when it comes to doing their work as they often work in isolation, whereas the nurses who are placed in the clinics have the option of getting assistance from their colleagues. Karasesk and Theorell (1990) state that the interaction between the job demands, job control and social support may lead to adverse health outcomes such as psychological strain, high blood pressure and cardiovascular diseases. This would have to be investigated further so it can be established if the nurses face any of these health outcomes.

Previous literature states that rurality negatively impacts the health services provided. Rural nurses work in underfunded and under-resourced settings where they must meet the growing needs of the community. Often, the geographical factors impact rural nurses' service delivery. Aspects such as travelling long distances to visit clients, spending substantial amounts of time on the road on a daily basis while being subjected to bad weather, and difficult road terrain are often not considered in service delivery models. Furthermore, such circumstances create unfavourable and stressful working conditions (Terry et al., 2015). This relates directly with the Rural Nursing Theory which argues that rural nursing is fundamentally different from urban nursing, and therefore a specific framework for rural nursing practices is required.

According to Barrett et al. (2015), rural nurses need to be further equipped so that they can provide quality care to their patients and adequately address the needs of the community. This is in line with the premise of the Rural Nursing Theory that the support given to urban healthcare and rural healthcare cannot be the same. Furthermore, the service delivery models that are used for the assessment of performance cannot be universal between rural and urban

healthcare. For example, the Covid-19 pandemic encouraged the use of regular hand-washing as a preventive measure. The DoH rolled out campaigns promoting the use of hand-washing. However, hand-washing could be easily achieved in urban areas as they have access to water; this is not the case in the rural area of uMshwati, as they have limited access to water and rely on water tankers to provide them with water. The promotion of hand-washing in rural areas would not be as impactful as in urban areas. As a result, the two areas cannot be measured in the same manner.

Furthermore, the Rural Nursing Theory (Long & Weinert, 1989) is relevant to understanding OHS within rural primary healthcare and the OHS challenges nurses experience; it is important to note that the context in which the OHS practices would occur in an urban setting would not be the same as in a rural setting. The participants in the current study echoed the same sentiment as the Rural Nursing Theory that urban and rural nursing are fundamentally different. As a result, the participants who conduct outreach programmes stipulated that they would prefer to have work uniforms that are appropriate for their work context. When they go into the homes of patients, they have to walk through conditions that are unpleasant. As it currently is, the nurses conducting outreach programmes utilise the same uniforms as the nurses stationed at the clinics and hospitals. The outreach nurses stated that the uniform does not accommodate them in the field, as their stockings tear and the shoes are slippery. They suggested that when going out into the field, the use of scrubs should be made mandatory. The use of scrubs would enable a safer working context. This recommendation reiterates the point made by the Rural Nursing Theory that specialised solutions need to be provided for both rural and urban areas.

5.5 Theme 4: Safety

It has been repeatedly reported that rural nurses work a lot in isolation and suffer from poor connectivity when in the clinic as well as the patient's home. As a result, this raises concerns for the safety of nurses while in the field. Mokoka et al. (2010) state that the nursing profession has repeatedly been described as highly stressful. This is often due to the conditions such as high turnover rate, low salaries, poor career growth opportunities, lack of resources, and heavy and unsafe working environments. When these conditions are combined, they can exacerbate the psychological risk factors. This once again leaves the rural nursing field vulnerable to the poor retention of staff.

The findings of this study state that the major safety concerns of the nurses had been centered on the long distances that they had to drive. Furthermore, the nurses also reported that they were required to use un-serviced cars to see patients in poor road conditions. The commute to see patients in homes was also dependent on the weather. This finding is consistent with previous literature. The geographic environmental issues reported in the 2015 Australian rural healthcare study showed that the long-distance drives caused decreased road safety for nurses who worked in rural areas (Terry et al, 2015).

The findings of the current study also illustrated that the rural nurses were concerned about their safety, as they often work in violent communities. The participants expressed their concerns about their physical safety when they are out in the field, and even while stationed in the clinics. In the field, it was reported that they had to deal with dogs in the homes, as well as a violent community. As a result, they felt that they had a diminished sense of security. Hutchinson and East (2013) found that workplace violence and concerns for personal safety are positively correlated with psychological distress and emotional exhaustion among rural nurses. Furthermore, workplace violence in the health sector has a negative impact on the professional and personal lives of healthcare workers. This also negatively impacts on the quality of patient care provided. This ultimately has an adverse consequence for the working environment of rural nurses and further leads to poor retention and recruitment of rural nurses (Terry et al., 2015). This in turn further exposes the rural nurses to complexity compression.

5.6 Summary

This chapter presented a comprehensive discussion of the results to debrief the OHS challenges rural nurses face in their work. The discussion was informed by relevant literature and theoretical frameworks to give a detailed analysis and contribute to the existing body of knowledge.

CHAPTER 6: CONCLUSION, LIMITATIONS AND RECOMMENDATIONS

6.1 Conclusion

The findings of this study demonstrated the OHS issues faced by rural nurses, as well as their understanding of OHS practices. The nurses expressed that they have an in-depth understanding of OHS practices and understood OHS as a driving tool to completing their work effectively, while also ensuring the highest level of patient care. The nurses stated that their OHS training was embedded in the IPC program that is run throughout the uMshwati Local Municipality. It was also expressed by the participants that the IPC program was an effective training method for reducing the physical occupational hazards and occupational infection exposure that they faced. Furthermore, the IPC program was shown to be effective for its context, as the findings show that the occurrence of medical negligence litigation and the discarding of medical waste malpractice have decreased significantly, as the IPC programs focus largely on the correct procedures for discarding medical waste.

The findings also illustrated that human resources issues are a predominant area of concern, as the participants cited that the clinics were understaffed, and that they experience poor staff retention, as well inadequate recruitment practices. This was said as the participants expressed that they were faced with a high vacancy rate and a high turnover rate. As a result, the rural nurses experienced an increased workload. Furthermore, the Covid-19 pandemic was reported as another contributing factor to the increased workload. Based on these findings, it was concluded that nurses often face work demands that are higher than their work control and social support. The Job Demands-Control-Support model states that the negative correlation of these constructs has potentially adverse health outcomes. From this current study, we were unable to establish if the participants experienced any adverse health outcomes.

These findings also explicitly expose the complexity compression that nurses are continually under, partly due to their geographical location. Due to geographical factors, rural nurses are exposed to limited access to resources. The road infrastructure, un-serviced vehicles and poor connectivity issues are a few examples of what the nurses experience. The current service delivery models do not take into account the geographical factors that affect rural nursing.

Furthermore, the findings also highlight the premise of the Rural Nursing Theory in that rural nursing practice needs tailor-made solutions, as the context is different from the urban nursing

context. Developing a rural nursing framework might be useful to ensuring that effective service delivery is achieved within rural practice and the rural nurses feel that their work environment is supportive.

The findings of the study furthermore indicated that safety was another concern of the participants. Due to the isolation and violent communities within which rural nurses work, these nurses experience a diminished sense of safety. This, in turn, exacerbates the DoH's inability to attract and retain nurses into rural practice. In turn, this continues the cycle of poor retention and recruitment and, as a result, rural nursing remains characterised by a shortage of staff. This once again speaks to how a rural nursing framework needs be developed, so that the issues that are prominent in rural nursing practice can be adequately addressed.

6.2 Limitations

It is important to note that small qualitative research findings such as in this study cannot be generalized to the overall rural primary healthcare sector in uMshwati Local Municipality or the whole South African rural healthcare landscape. Therefore, more research is needed to be conducted, so that inferences can be made about the findings and the implications they have for rural healthcare within KwaZulu-Natal.

Another limitation to this study was that data was collected telephonically. The nurses participated in the interviews at the clinics. Due to their geographical location, there were some connectivity issues. As a result, some interviews had to be rescheduled due to the poor network connection. Building rapport with some of the participants also proved a challenge, as the researcher could not make use of other non-verbal communication skills such as body language and physical gestures.

6.3 Recommendations

The following recommendations are drawn from the findings and conclusion of the study. Throughout the research process, the researcher has been unable to ascertain if there is a rural nursing framework in South Africa. The Rural Nursing Theory stresses the point that urban nursing and rural nursing are fundamentally different. Therefore, it would be recommended that a rural nursing framework be developed so that the issues that are faced in rural nursing are

addressed effectively. Developing this framework would enable complex issues of geographical, social, economic, and policy limitations to be addressed.

This current study uncovered the occupational issues rural nurses faced and how they experienced these challenges. The findings illustrated that rural nurses are always expected to do more with less. Furthermore, the nurses expressed that they experienced stress and characterized their working environment as unsupportive. The Job Demands-Control-Support model predicts that, should the job demands and lack of job control surpass the level of social support one may experience, there are likely to be resulting adverse health outcomes such as psychological strain, high blood pressure and cardiovascular diseases (Turner et al., 2011). However, the relationship between job demands, job control and social support was not established in this current study. It is therefore recommended that further research on rural nurses be conducted to investigate the health outcomes rural nurses may experience due to their working environment.

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Appendix A: Interview Schedule

Biographical information: age, gender, race, education level, years of experience)

1) What does your job involve? Describe a typical work day. What services do you provide?
2) How would you describe your experience(s) of your work?
3) What are the occupational challenges you experience?
    - How do you deal with these challenges that arise?
    - What support do you receive in lessening the challenges that you face in your work?
4) What is your understanding of occupational health and safety in your work context?
5) What are the barriers to adherence of OHS?
6) What are the OHS measures implemented in your work context?
7) Do the occupational health and safety issues affect how you provide a service to your clients?
    - If so, how?
8) What training is provided for OHS?
9) Is there anything that you would like to see in the future to assist Community nurses in rural communities with respect to OHS in South Africa? If so, please explain.

Appendix B: Permission Letter

REQUEST FOR PERMISSION TO CONDUCT RESEARCH IN CLINICS AND COMMUNITY HEALTH CENTRES

Dear Sir/Madam

My name is Slindile Mtshali, and I am an Industrial Psychology Masters student at the University of Kwa-Zulu Natal, Howard College.

My Master's dissertation involves the exploration of workplace health and safety issues faced by community nurses working in rural areas. This study adopts a qualitative approach and involves semi-structured telephonic interviews. The duration of the interviews should be between 45 minutes to an hour.

This project will be conducted under the supervision of Ms Shaida Bobat.

I hereby request your consent to approach clinics and community health centers in the Umngundlovu District to provide me with nurse participants for this project. I have specifically identified the uMshwati Local Municipality as an appropriate area for my study. I will enclose a copy of my dissertation proposal which includes copies of the interview schedule and informed consent form to be used in the research process, as well as a copy of the approval letter which I received from the UKZN Research Ethics Committee. Upon completion of the study, I will provide the district nursing manager with a bound copy of the full research report.

If you require any further information, please do not hesitate to contact me on [redacted] or [redacted]

.

Thank you for your time and consideration in this matter.

Yours sincerely,

Slindile Mtshali

Appendix C: Provisional Ethics Approval

UNIVERSITY OF KWAZULU-NATAL
INYUVESI YAKWAZULU-NATALI

16 July 2020

Miss Slindile Sikhulile Asande Mtshali (220108397)
School Of Applied Human Sc
Howard College

Dear Miss Mtshali,

Protocol reference number: HSSREC/00001600/2020
Project title: Workplace Health and Safety issues among community nurses in South Africa.
Degree : Masters

Provisional Approval – Expedited Application

This letter serves to notify you that your application received on 22 June 2020 in connection with the above, was reviewed by the Humanities and Social Sciences Research Ethics Committee (HSSREC). The protocol has been provisionally approved, subject to the following conditions set out below being addressed:

1. Gatekeeper permission letter(s) required.

Kindly upload your response on Tab 8 of the RIG online system as soon as possible.

This approval is granted provisionally and the final clearance for this project will be given once the above-mentioned condition(s) has been met. Note that data collection may not proceed until final ethics approval letter has been issued after the remaining conditions have been met and approved by the research ethics committee.

HSSREC is registered with the South African National Research Ethics Council (REC-040414-040).

Yours faithfully

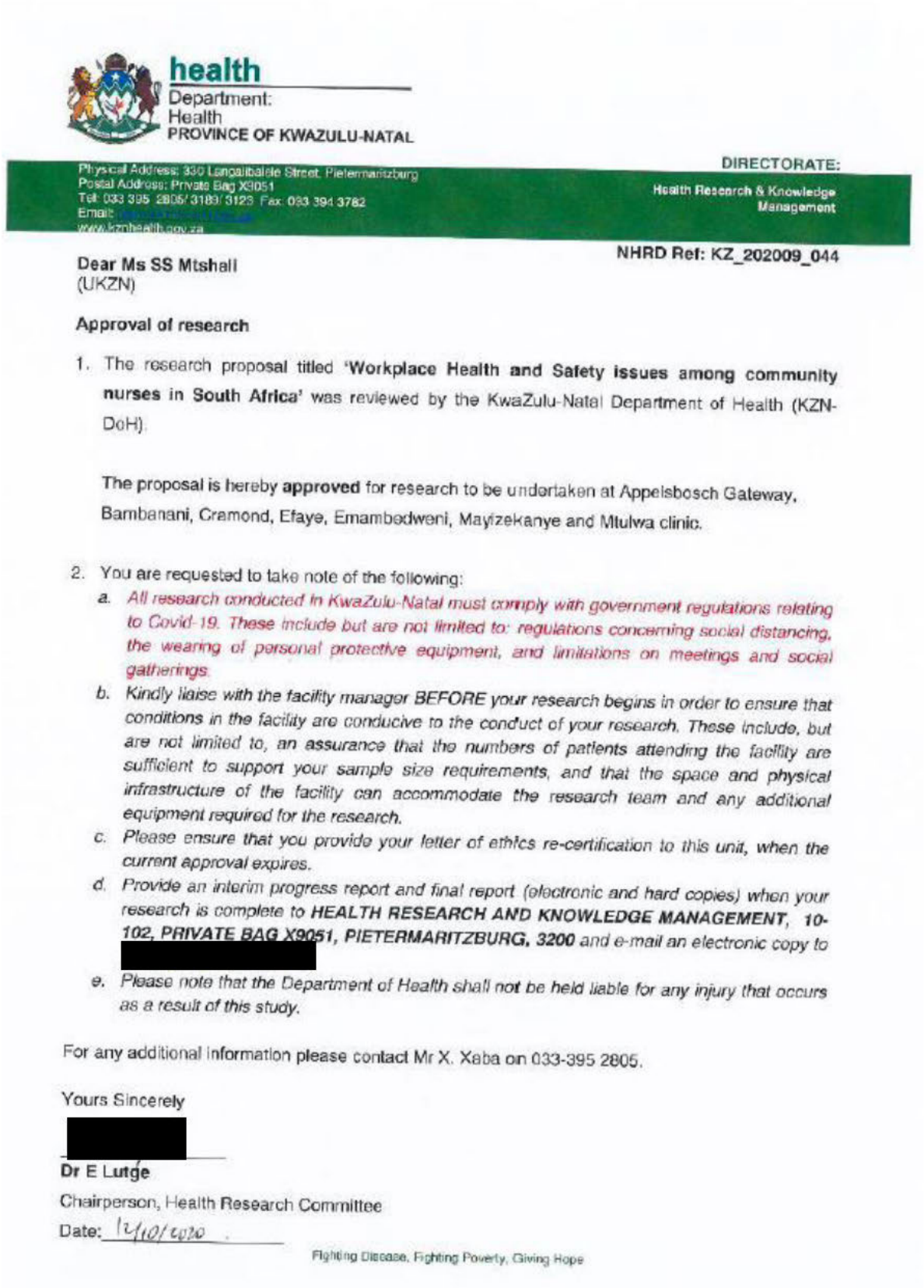
[redacted]

.....
Professor Dipane Hlalele (Chair)

/dd

Humanities & Social Sciences Research Ethics Committee
UKZN Research Ethics Office Westville Campus, Govan Mbeki Building
Postal Address: Private Bag X54001, Durban 4000
Tel: +27 31 260 8350 / 4557 / 3587
Website: http://research.ukzn.ac.za/Research-Ethics/

Appendix D: DoH Approval



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DIRECTORATE:
Health Research & Knowledge Management

NHRD Ref: KZ_202009_044

Dear Ms SS Mtshali
(UKZN)

Approval of research

1. The research proposal titled '**Workplace Health and Safety issues among community nurses in South Africa**' was reviewed by the KwaZulu-Natal Department of Health (KZN-DoH).

   The proposal is hereby **approved** for research to be undertaken at Appelsbosch Gateway, Bambanani, Cramond, Efaye, Emambedweni, Mayizekanye and Mtulwa clinic.

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* [redacted]
   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

[redacted]

Dr E Lutge

Chairperson, Health Research Committee

Date: 12/10/2020

Fighting Disease, Fighting Poverty, Giving Hope

Appendix E: Informed Consent Form

I _____, state that I agree to participate in a research project conducted by Slindile Mtshali, who is a Masters in Industrial Psychology student at the University of KwaZulu-Natal, Howard College.

The aim of the study is to explore and understand the OHS experiences of community nurses.This is research study will be completed in partial obligation of my degree. I will be assisted by my supervisor Ms Shaida Bobat in carrying it out.

I am aware of and understand that the research conducted will provide insight into my experiences and issues I face when providing care to those in the rural areas. The information will solely be used for the requirements of my degree.

I agree to participate in an individual telephonic interview. I acknowledge that Slindile Mtshali has explained the task to me fully; has informed me of my right to withdraw from participation at any stage of the project without penalty; has offered to answer any questions that I might have concerning the research procedure; has assured me that information obtained will be reported collectively, without identifying my personal identity – thereby ensuring anonymity; the information will be confidential.

_____ _____

Signature of Researcher Signature of Participant

Slindile Mtshali

Student No: 220108397

Cell: [redacted]

If you wish to obtain information on your rights as a participant, please contact Ms Phumelele Ximba, Research Office, UKZN, on 031 360 3587.

Appendix F: Turnitin Report