# ANALYSIS OF THE PRACTICE ENVIRONMENT OF NURSES IN A PUBLIC HOSPITAL

by

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## **MASTER OF PUBLIC HEALTH**

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## **UNIVERSITY OF SOUTH AFRICA**

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## **DECLARATION**

I declare that ANALYSIS OF THE PRACTICE ENVIRONMENT OF NURSES IN A PUBLIC HOSPITAL is my own work and that all the sources that I have used or quoted have been indicated and acknowledged by means of complete references.

I further declare that I submitted the dissertation to originality checking software and that it falls within the accepted requirements for originality.

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

January 2019

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## **ABSTRACT**

The National Health Act aims to protect the health care users and workers by ensuring that their work environments are protected against injuries. Practice environment is described as a physical, social and psychological characteristic of a work setting in which policies, procedures and systems are designed so that employees can meet the organisational objectives and achieve personal satisfaction in their work environment.

The aim of the study was to describe and analyze characteristics of the practice environment of nurses. A quantitative descriptive study was conducted in a public hospital in Gauteng Province. Practice Environment Scale-Nursing Working Index (PES-NWI) questionnaires were distributed to 207 nurses who were proportionately stratified.

Data was analysed using the SPSS version 25. Findings identified gaps of the current characteristics of the practice environment and developed strategies that will assist managers to enhance practice environment. There was alignment and correlation between the means, standard deviation and the frequencies which were drawn from the findings. The overall Cronbach's alpha was 89% which confirmed the internal consistency of the instrument. The majority of the variables demonstrated statistical significance which had a p value of 0.001.

In conclusion, practice environment affects all health care professionals although the study only analyzed the practice environment of nurses.

## **Key concepts**

Analysis; nurses; magnet hospital; practice environment (PE); practice environment scale of nursing work index (PES-NWI); regional hospital.

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#### **LIST OF ABBREVIATIONS**

ANCC American Nurses Credentialing Centre

ANM Assistant nurse managers

ANA Auxiliary nursing assistant

CEO Chief executive officer

DOH Department of Health

EN Enrolled Nurse

OHSC Office of health standards and compliance

NDP National development plan

PE Practice environment

PESNWI Practice environment scale of nursing working index

PN Professional Nurse

PPE Positive practice environment

QA Quality Assurance

SA South Africa

SANC South African nursing council

SD Standard deviation

SN Staff Nurse

SPSS Statistical Package of Social Sciences

## **CHAPTER 1**

## ORIENTATION TO THE STUDY

#### 1.1 INTRODUCTION

The National Health Act aims to protect health care users and workers, by ensuring that their work environment are protected against injuries, addressing what should be provided to human resources and positive practice environment, where policies need to be developed and utilised by human resources (South Africa 2003). The same is addressed by the Office of Health Standards Compliance (OHSC) domains where some are to ensure that the system delivers its core business, with staff as a key factor in achieving this, through development of positive practice environment (PPE) (South Africa 2011a:10).

The constitution of South Africa indicates that citizens have rights; among them are right to life, dignity, environment that is not harmful to health and wellbeing and a right to access health care services. It continues to state that, the state must take responsibility of ensuring that they are respected, promoted, fulfilled and realised (South Africa 1996). However, the nursing strategy highlights a concern regarding the declining standards of nursing and shortage of staff, equipment, medicine and supplies and workplace violence to be contributing to the low morale and quality of health care services (South Africa 2012/13-2016/17:24).

The nursing strategy (South Africa 2012/13-2016/17:11) notes the role of OHSC norms and standards, that it "addresses the practice environment partially and proposes that there be a structured roll out and monitoring of positive practice environment done in conjunction with the OHSC". Positive practice environment (PPE) is the crucial component in ensuring quality patient care. Health care organisations monitor patient experiences in order to evaluate and improve the quality of care (Kieft, deBrouwer & Delnoij 2014:246).

Research shows that if health care workers are operating in the positive practice environment, there will be good patient outcomes and high quality care (WHO 2012).

The majority of nations have vowed to support the positive practice environments as it alluded by the World Health Organisation (WHO). The support led to a PPE campaign by alliance members worldwide to generate public awareness and political will to introduce PPE and monitor improved working conditions and environments within health systems (WHO 2012).

The study will use Positive Practice Environment (PPE) and Practice environment (PE) interchangeable in this context.

#### 1.2 BACKGROUND OF THE RESEARCH PROBLEM

The nursing strategy (South Africa 2012/13-2016/17:14) point out that health care system in South Africa is predominantly nurse based and recognises that like in any other country they are the largest number of health care providers. Nurses constitute an amount of up to 80% compared to the 12 % of doctors. Similar patterns prevail in Brazil and Thailand with 71% and 67% respectively but different from Colombia (17%) and Argentina (10%) with a doctor based health care system (South Africa 2011b: 35).

South Africa is facing a quadruple burden of disease and emigration of refugees from other African countries aggravates staff shortage leading to a human resource crisis. This is a nursing crisis due to the large number of nurses in the system. Shortage undermines health systems effectiveness and the delivery of health care services to the needy (South Africa 2012/13-2016/17:14). Nursing is practiced under unfavourable conditions, non-enabling conditions of shortage of human and non-human resources. These conditions make it to be a stressful profession that affects them and quality of health services they provide (Munyewende, Rispel & Chirwa 2014:12).

Copanitsanou, Fotos and Brokalaki (2017:172) echoes nurses view of their work environment as stressful because of the impact staff shortage, limited resources and pressured conditions has on their performance and patient's outcomes. However, Klopper, Coetzee, Pretorius and Bester (2012:686) highlights that reasons for shortage of nurses in South Africa are complex but key factor among them is unhealthy practice environment (PE).

According to Warshawsky, Lake and Brandford (2013:317) patient safety and quality of health care outcomes are greatly affected and reliant on hospital environments that support professional practice of nurses. For this reason one of the Negotiated Service Delivery Agreement outputs of the minister of health in South Africa is to strengthen the health system through improving quality of care (South Africa 2012/13-2016/17:14).

#### 1.3 RESEARCH PROBLEM

Research problem refers to an enigmatic or perplexing condition that can be investigated by the researcher through a disciplined inquiry to solve or contribute to its solution by generating relevant evidence (Polit & Beck 2012:73, 741).

The source of the research problem aroused from the interest that the researcher had as a professional nurse and would read articles from the newspaper about the working conditions of health care professionals, which portrayed a negative picture of the nursing profession. This generated an interest to want to know and contribute to the improvement of the status of the working conditions of nurses. The other interest is having being a worker representative; workers would raise concerns regarding their working conditions. Most of the South African Nursing Council disciplinary cases emanate from the poor working environment. The high litigation charges are as a result of poor performance by staff members, which is contributed indirectly by the work environment (Delihlazo 2016: 20).

The positive practice environment of nurses is important for quality of health care, their wellbeing, image of nurses and to the public. Enhancing it, benefits nurses work life environment, enables nurses to achieve the goals of the department and its customers.

## 1.3.1 Research questions

The research question for the study is:

 What are the current characteristics of the practice environment of nurses in the Regional Hospital in Tshwane District?

## 1.3.2 Hypotheses

Polit and Beck (2012:58) refers to hypotheses as a prediction about the relationship between variables and as the predicted answers to the research question.

This study hypothesis is that, practice environment of nurses at the public hospital is negative.

#### 1.4 AIM OF THE STUDY

## 1.4.1 Research purpose

The purpose of the study was to analyse the practice environment of nurses with a goal of identifying its characteristics that need to be enhanced to contribute to positive practice environment.

## 1.4.2 Research objectives

To describe the characteristics of practice environment of nurses working in a selected hospital

To examine the relationship between variables that contributes to positive practice environment.

To make recommendations that contributes to positive practice environment

#### 1.5 SIGNIFICANCE OF THE STUDY

The study aims to analyse characteristics of the state of the practice environment of nurses in the regional hospital and identify gaps related to it. Areas of the practice environment that need to be addressed to enhance it will be highlighted. It is anticipated that when nurses respond and answer the questionnaires findings may help nurse managers of the hospital for the improvement of the hospital working environment.

## 1.6 DEFINITION OF CONCEPTS

Analysis; auxiliary nurse; nurse; Magnet hospital; practice environment (PE); practice environment scale of nursing work index (PES-NWI); professional nurse; regional hospital; staff nurse.

**Analysis** is defined in *Oxford South African School Dictionary* (2010, Sv "analysis") as a process of carefully examining the different parts of something so that you can understand it. Analysis in this study will mean the researcher will assess critically and make conclusions regarding the status of aspects practice environment of nurses as reported.

**Auxiliary nurse** is a person educated to provide elementary nursing care in the manner and to the level prescribed (South Africa 2005:25).

**Nurse** is a person registered in a category under the section 31(1) to practice nursing or midwifery (South Africa 2005:6).

**Magnet hospital** is a hospital accredited by the American Nurses Credentialing Centre (ANCC), as a hospital that has an ability to attract and retain nurses, diminish burnout and discontent in the PE and improve the quality of care (Kelly & Tazbir 2014: 308).

**Practice environment:** Klopper et al (2012:686) refers to it as the physical-social-psychological characteristics of a work settings in which policies, procedures and systems are designed so that employees are able to meet the organisational objectives and achieve personal satisfaction in their work environment.

**Positive practice environments** are defined as settings that support the provision of quality patient care by ensuring health, safety and personal well-being of staff (Schmidt 2012: 4).

**Practice environment scale of nursing work index** (PES-NWI) is an instrument widely used to measure the nurse practice environment in nursing research internationally (Hinno 2012:8). This instrument is freely available on the internet hence permission from the authors was not sought.

The following variables will be measured: demographics (5 items) and aspects of PE, namely; staffing and resources (5 items); manager's ability, leadership and support (6 items); nurse-physicians relations (3 items); participation in hospital affaires (4 items) and nursing foundations of nursing (4 items).

**Professional nurse** is a person who is qualified and competent to independently practice comprehensive nursing in a manner and to the level prescribed and who can assume responsibility and accountability for such practice (South Africa 2005:25).

**Regional hospital** is classified as a hospital that operates 24 hours providing paediatrics, obstetrics and gynaecology, internal medicine, and has one area of speciality, provides trauma and short term critical care unit and has bed capacity of between 200 and 800 (South Africa 2012).

**Staff nurse** is a person educated to practice basic nursing in the manner and to the level prescribed (South Africa 2005:25).

#### 1.7 CONCEPTUAL FRAMEWORK OF THE STUDY

#### 1.7.1 Research paradigm

According to Polit and Beck (2012:11), a paradigm is a worldview, a general perspective on the complexities of the real world. The research assumed a positivist paradigm as much of the research activity was directed at understanding the phenomenon. Studies conducted by Copanitsanou et al (2017:172) and Rabie, Coetzee and Klopper (2016:30) assumed a positivist paradigm to determine and described the status of PE.

## 1.7.2 Conceptual framework

Framework, according to Polit & Beck (2012: 128) is the overall conceptual underpinnings of the study; however, researchers use theoretical framework and conceptual framework interchangeably. Gray, Grove and Sutherland (2017:38) refers to theoretical framework as an abstract, logical structure of meaning that guides the development of a study and enables the researcher to link the findings to the body of knowledge in nursing.

The conceptual framework of the study is drawn from the new Magnet hospital model, which according to Laschinger and Fida (2015:276), it was developed by the American Nurses Association based on a body of research identifying factors in nursing work environments that support professional nursing practices. In the original model, three core factors, namely: autonomy, control over practice environment and effective nurse's physician relationships were posited to result in positive nurse and patient outcomes. Kelly and Tazbir (2014:309) emphasise that magnet hospitals are known to be representing an example of supportive and collegial work environment for nurse.

Nurses are the largest regulated healthcare provider group in any organisation hence they are included in the study. However, with an ageing workforce, attention to creating conducive work environments that retain new comers to the profession is important for sustaining the future nursing workforce (Laschinger & Fida 2014: 20).

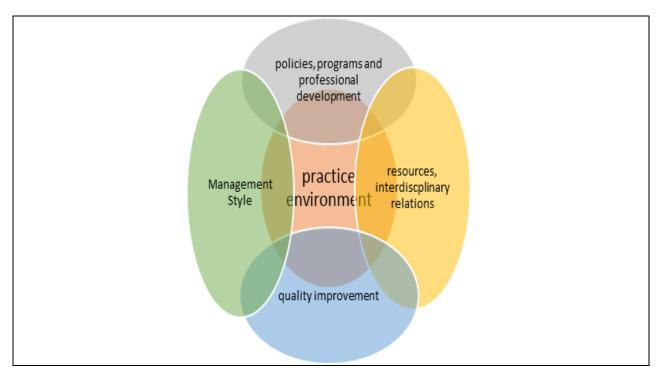


Figure 1.1 Illustration of practice environment

Three core factors, illustrate the practice environment, namely; autonomy, control over practice environment and effective nurse-physician relationships. South African nursing council(SANC) indicate nurses to be qualified and competent to provide nursing services independently with the guidance of the scope of practice (South Africa 2005). They work collaboratively with other healthcare workers especially the physicians, physiotherapist, and dieticians, just to mention the few. The environment where health practitioner's work is controlled so as not to expose the health care providers and the clients to any damage.

In this study, the conceptual framework is applied as nurses are autonomous practitioners, who collaborates with other health care workers in a controlled practice environment, ensuring that patients/ clients receive high quality patient care

## 1.8 RESEARCH DESIGN AND METHOD

#### 1.8.1 Research approach

A quantitative approach guided the study. It is an approach where the researcher follows specific steps when collecting data. The researcher remains objective and

neutral relying extensively on numbers and statistics in the analysis and interpretation of findings that are generalised from the sample to the population (Bless, Higson-Smith & Sithole 2013:16).

## 1.8.2 Research design

Research design is defined in Polit and Beck (2012:58, 226) as "the overall plan for obtaining answers to the research question, referring to it as the architectural backbone of the study". Purposes of descriptive studies are among others to observe, describe and document aspects of a situation as it naturally occurs. A descriptive study design was adapted for the study to describe the phenomena of practice environment of nurses. Nurses will describe the characteristics of their practice environment, as it exists because they have the knowledge and experience of it. They are the best study respondents to do so as they practice in such an environment.

## 1.8.3 Population and sample selection

Polit and Beck (2012:273) refer to population as "the entire aggregation of cases in which the researcher is interested and are not restricted to human subjects to which the researcher would like to generalise". From the population, a sample was selected through a sampling process. Sampling is a process of selecting cases to represent the entire population so that inferences about the population can be made. Whereas Bless et al (2013:162) describe sample as the entire set of objects or people that is the focus of a research project and about which the researcher wants to determine some characteristics. According to Burns and Grove (2009:345), this entire set of individuals or elements must meet the sampling criteria, conform to designated criteria and be accessible as subjects for a study for the findings to be generalised from the sample to the accessible population.

The population for this study is all categories of nurses who are registered with the South African Nursing Council (SANC) and have been working at the hospital for a period of more than two years. Nurses who are on any type of leave and those that have been employed for less than two years were excluded from the study.

## 1.8.4 Sampling methods

Probability sampling method is viewed in Burns and Grove (2009:348) to be increasing representativeness of the target population. Stratified sampling method is a method that is used when the researcher knows that some of the variables in the population are critical to achieving representativeness and will be used to obtain the sample. To obtain the size of the sample in stratum, Polit and Beck (2012:281) suggest the use of the proportionate stratified sampling.

#### 1.9 RESEARCH SETTING

Polit and Beck (2012:50) refers to a research setting as an overall location where the research was conducted. The research site was a Regional Hospital in Gauteng Tshwane Health Sub District 6.

#### 1.10 DATA COLLECTION

#### 1.10.1 Data collection methods

Bless et al (2013:16) indicate that quantitative studies rely on numbers, statistical analysis and interpretation of findings that are generalised from the sample to the population, where data was collected according specific set of steps. The researcher collected primary data. Bless et al (2013:184) state that it is a data collected by the researcher for a study, to explore or describe a situation.

Burns and Grove (2009:395) point a questionnaire as one of the data collection approaches for a quantitative research. It is set of questions on a form, completed by the respondent in respect of a research project (Bless et al 2013:166).

In this study, a phenomenon of practice environment was studied, with the objective that nurses will describe their experience of it. A questionnaire was developed based on the PES-NWI. Hinno (2012:8) states that the PES-NWI is an instrument, which measures the nurse practice environment in nursing research internationally.

## 1.10.2 Reliability

Bless et al (2013:220, 229) state that quantitative data is collected with a standardised instrument to be statistically analysed. An approach used to evaluate the quality of research is determined by its reliability and validity. Reliability denotes the extent to which the observable measures are accurate and stable over repeated observations. It seeks to know the accuracy and consistency of the instrument. Burns and Grove (2009:377) emphasise its importance in selecting scales for use in a study and that it enhances the power of the study to detect significant differences or relationships occurring in the population under study. Further pointing out that, to enhance accuracy of the instrument, its reliability must be tested before using it in any study. Klopper et al (2012:687) indicate the coefficients of reliability of this tool to be varying from 0.71 to 0.84. According to Burns and Grove (2009:377), the coefficient of 0.80 indicates that the instrument is 80% reliable.

## 1.10.3 Validity

Validity is concerned with whether an instrument measures the underlying attribute or not and the meaning of results (Bless et al 2013:229). According to Bless et al (2013:233), construct validity is the extent to which scores on an instrument reflect the desired construct rather than some other construct. The measuring instrument is drawn from the PES-NWI, a tool that is been used to evaluate the practice environment. It covers the content that the researcher intends to measure. Polit and Beck (2012:336) indicate that face validity to be referring to whether the instrument looks like it is measuring the target construct. The instrument has subscales and questions related to the practice environment. The instrument is outlined in a manner that will not intimidate or offend respondents, in terms of time to complete it. It will be delivered to their work environment, respondents be allowed to complete it at their convenient time and will not take thirty minutes to complete.

#### 1.10.4 Data analysis

Burns and Grove (2009:461) describe the process of data analysis as consisting of, preparation for data analysis, description of the sample, testing the reliability of the

measurement. Where before data can be analysed it must be cleaned, missing data be identified, data be transformed, variables be calculated and data be backed-up. Indicating the use of frequencies to describe variables related to the sample, calculation of dispersion and measures of central tendency that are relevant to the sample. The use of variation of data to determine if it is skewed or normally distributed is another form of exploring data that must occur in the process of analysing data.

Data were analysed using the computer program for SPSS IBM version 25 with the assistance of a qualified statistician who checked and corrected the data collection instrument for accuracy of the variables so as not encounter problems during data analysis.

#### 1.11 ETHICAL CONSIDERATION

Polit and Beck (2012:727) refer to research ethics as a system of moral values that is concerned with the degree to which research procedures adhere to professional, legal and social obligations that the researcher has in relation to the study respondents.

According to Burns and Grove (2009:207), institutional review board is a committee with the purpose of ensuring that the investigator conducts his/her research ethically. It promotes the conduct of ethical research by examining the ethical concerns and protects the rights of prospective respondents.

The UNISA Research Ethics Committee HSH/809/2017 approved the protocol (see annexure A), it also received approval by the Gauteng Provincial health Department (see annexure C), the Chief Executive Officer of the institution where the study was conducted (see annexure E).

The researcher adhered to the ethical conduct principles of research i.e. beneficence, respect and justice (Polit & Beck 2012:150).

- There was no harm of any form anticipated to respondents except an awareness for nurses of the kind of PE they need to practice at.
- Respondents right to self-determination and full disclosure was ensured through the informed consent where the researcher fully the nature of the research, right

of respondents to refuse or terminate participation and responsibilities of the researcher.

- Participant's right to fair treatment and their right to privacy was ensured through sampling process in a non-prejudiced manner, access of respondents to the researcher in case they have questions that need clarification by providing contact details of the researcher, anonymity and confidentiality of the research questionnaires.
- Anonymous research questionnaires were distributed to respondents to protect privacy and confidentiality.
- Copies of questionnaires will be kept safe by the researcher for a period of 3years and be destroyed safely after that period.
- To protect anonymity of the research setting, any identifying information related to research setting and respondents will be removed on all hard copies and when disseminating research findings in journal and conferences.
- An electronic copy of the thesis will be stored in UNISA student repository where
  it will only be accessed by researchers and students for research purposes.
- The research setting will be provided with an encrypted soft copy to limit access to unauthorised persons.

#### 1.12 SCOPE OF THE STUDY

The study analysed the characteristics of practice environment of nurses in the regional hospital and identified gaps of it. Areas of the practice environment that need to be enhanced will be highlighted. It is anticipated that when nurses respond and answer the questionnaires findings may help nurse managers of the hospital for the improvement of the hospital working environment, hence recommendations of the study are made for nurse managers to implement.

#### 1.13 STRUCTURE OF THE THESIS

Chapter 1: It introduces the study with the background of the research problem, purpose, objectives of the study and the concepts that were used in the study.

Chapter 2: The chapter addresses the literature review

Chapter 3: The chapter details research methodology for the study.

Chapter 4: The chapter outlines data analysis, results and describe research findings.

Chapter 5: Discusses findings, limitations, make conclusions and recommendations.

## 1.14 CONCLUSION

This chapter gives an overview of the whole study, which describe practice environment (PE) of nurses in a public hospital. The chapters, which form the thesis, were briefly discussed and the in-depth discussion will be presented in the specific chapters of the thesis.

#### **CHAPTER 2**

#### LITERATURE REVIEW

#### 2.1 INTRODUCTION

Literature review is a critical summary on a research topic of interest to the researcher to put a research problem into context (Polit & Beck 2012:732). The chapter provides a comprehensive and critical review of literature that explored the status of practice environment of nurses and experience regarding their practice environment. The initial section of the chapter begins with the public health sector in South Africa, followed by the concept nursing and a nurse, conceptual framework of the study, PE and briefly practice environment scale of nursing working index (PES-NWI). Subsequent sections explore studies and findings of studies conducted on PE of nurses in Europe, Pennsylvania, Korea, Saudi Arabia and South Africa. In conclusion, the PE is summarised and lists out aim and objectives of the study.

#### 2.2 SEARCH STRATEGY

Literature review for this study was supported by selection of databases from EBSCOHost, PubMed, CINAHL, Africa health studies using search terms practice environment, nurses, public hospital, practice environment scale for nursing working index and working conditions. Studies that described practice environment of nurses were selected, and they were only excluded if they were written in any other language except English.

## 2.3 PUBLIC HEALTH SECTOR IN SOUTH AFRICA

The National Health Care Act 61 of 2003 regulates health care in South Africa, which is divided into, public and private (South Africa 2003). Public health care services are categorised into three levels; district health services, which is managed by the district, provincial services manages regional, provincial, tertiary and specialised services and central hospitals which are managed at national level. Public sector provides care to 83% (41.7 million) of the uninsured population whereas the private sector provides 17% (8.3 million) of the population (South Africa 2011c:301).

Kelly and Tazbir (2014:40) indicate that the performance of the health care system is measured against long healthy lives, quality, access, efficiency and equity. In South Africa, these is hampered by a quadruple burden of disease, inconsistent staff patient ratios, lack of equipment, shortage of medicines and other supplies and nursing morale (South Africa 2012/13-2016/17:14).

According to the National Department of Health (South Africa 2012/13-2016/17:9), health care system in South Africa is also predominantly nurse based with nurses making up the largest single group of health care providers. However, the work environment in the public sector is challenged by a burden of disease and shortage. They have insufficient resources to operate health care facilities optimally, deliver health care services efficiently and serve the impoverished population who lack the ability to pay for health care (Coetzee, Klopper, Ellis & Aiken 2013:164). It also faces challenges of burden of disease, poor authority, feeble accountability and low staff morale, human resources, unfavourable conditions such as shortage of equipment, medicines and poor infrastructure which impact on the quality of services provided resulting in its poor performance (South Africa 2011c:301).

#### 2.4 NURSING AND NURSES

The large number of nurses in the health workforce indicates it to be a part of the health care system. Goal of public health sector is to promote health, protect health and prevent illness (South Africa 2014/15-2018/19). The South African Nursing Council (SANC) describe nursing as a caring profession, practiced by a person registered under section 3, which support, cares and treats a health care user to achieve or maintain health and comfort with dignity until death (South Africa 2005).

Recognising nursing as an integral part of the health system and challenges nurses face, National Department of Health in 2011 called a national nursing summit to address them with a vision of it assisting in achieving the mission of the department. Out of the summit nursing education and training, resources in nursing, professional ethos and ethics, governance, leadership, legislation and policy, positive practice environment, compensation, benefits and conditions of employment and nursing human resources for health were identified as challenges facing nursing (South Africa 2012/13-2016/17:4). These challenges mean nurses may not be able to contribute to the department in achieving its goal.

The SANC policy document on nurse's rights, state nurse's rights as a means of ensuring improved service to patient care and safety. These rights include:

- to practice in accordance with the scope of practice,
- a safe working environment which is compatible with efficient patient care and which is equipped with at least the minimum physical, material and personnel requirements, proper orientation and goal-directed in service education in respect of the mode,
- in service education, continued professional education,
- equal and full participation in policy determination, planning and decision making,
- advocacy and protection of patients and personnel,
- conscientious objection that is timeously informed in writing, refusal to carry out task reasonably regarded as outside the scope of practice,
- written policy guidelines and prescriptions concerning management of her/his working environment, refuse to implement a prescription/activities that are not in the interest of the patient,
- Working environment that is free of threats, intimidation and interferences and medical support or system to handle emergencies (South Africa 2005).

The National Department of Health South Africa acknowledges that its worst patient outcomes are related to the least number of nurses per 10 000 populations (South Africa 2012/13-17/17:9). SANC records of nurse patient's ratios support this. By December 2017, one professional nurse provided care to 197 estimated populations nationally, in Gauteng Province, the ratio remained similar with one professional nurse providing care to 191 populations and in Mpumalanga, the ratio widens to one professional nurse providing care to 300 populations (South Africa 2017).

#### 2.5 MAGNET HOSPITAL CONCEPT

Kelly and Tazbir (2014:308) refer to a magnet hospital as a health care organisation that has met rigorous nursing excellence requirement of the American Nursing Credentialing Centre. Nurses in magnet facilities have high levels of job satisfaction as a magnet hospital allows nurses the ability to give quality patient care.

Several researchers on PE of nurses (Fallatah & Laschinger 2016:128; Lambrou, Merkouris, Middleton and Papastavrou 2014:228; Laschinger and Fida 2015:276; Rabie et al 2016:30; Yu Kyung 2013:207) make reference to and link Magnet hospital model to patient quality of care, patient safety and nurse outcomes such as job satisfaction and burnout.

In 1983 hospitals, experienced serious nursing shortages and the American Academy of nursing developed a magnet hospital concept. It appointed a task force to hospitals to identify workplace characteristics that supported professional nursing practices that were successful in recruiting and retaining nurses and a demonstrated evidence of high nurse satisfaction, low turnover and low nurse vacancy rate despite the shortage (Kelly & Tazbir 2014:308; Yu Kyung 2013: 207). According to Fallatah and Laschinger (2016:127), magnet hospitals represent supportive and collegial work environment for nurses and other health care workers with the creation of such environment remaining the responsibility and role of nurse leaders.

#### 2.6 PRACTICE ENVIRONMENT CONCEPT

Several definitions of PE are found in literature and denote that it as seen or experienced and perceived by nurses. Practice environment refers to the organisational characteristics of a work setting that facilitates or constrain professional nursing practice (Lake 2002:178). These characteristics of the nursing practice environment enhance or attenuate a nurse's ability to practice nursing skilfully and to deliver high quality care (Swiger, Patrician, Miltner, Rajud, Breckenridge-Sproat & Loan 2017:76). PE is determined by many factors and includes the physical features, the organizational policies and characteristic behaviour of people at work.

Practice environment is recognised as favourable, positive or negative, with the favourable or positive being preferred (South Africa 2012/13-2016/17:27). Positive practice environment is a cost effective health care setting that supports nursing excellence as well as decent work, have the ability to attract and retain staff and improve patient satisfaction safety and outcomes. It has the same ability and influence as magnet hospital. It is characterised by safety and personal wellbeing of staff, support quality patient care and organisational ambitions (Lambrou et al 2014:298).

According to Klopper et al (2012:686), the synthesis of criteria of a positive/ healthy environment focuses on quality of nursing leadership, collegial relationships, provision of quality care, nurse autonomy and active participation in decision-making and adequate staffing and resources. The National Department of Health in South Africa agrees that leadership of the health system play a role in ensuring that health care environment is optimum for patient care; value and support of its health care workforce (South Africa 2012/13-16/17:57).

It has been linked to patient and nurse outcomes. Unhealthy work environments affect nurse's physical and psychological health through the stress of heavy workloads, long hours low professional status, difficult relations in the workplace, problems carrying out professional roles and a variety of workplace hazards. PPE benefits health service delivery, health worker performance, patient outcomes and innovation. It has been associated with fewer occupational injuries and increased job satisfaction, less attrition, successful Primary Health Care, infant, child and maternal survival, enhanced quality of life and increased life expectancy by department of health in SA (South Africa 2012/13-2016/17:17).

#### 2.6.1 Effects of practice environment

It is said to be having an effect on employees or nurses, patient's outcomes and organisational outcomes as it is a physical and psychosocial characteristics of a work setting (Havens, Warshawsky & Vasey 2012:519; Hayes, Douglas & Bonner 2015:589). South Africa (2012/13-2016/17:27) appreciates that PPE as a cost effective health care setting that support nursing excellence as well as decent work, have power to attract and retain staff and to improve patient satisfaction, safety and outcomes.

Coetzee et al (2013:163) records literature that has established the association between PE, patient to nurse workloads, on nurse reported quality of care, patient safety and outcomes and nurse workforce outcomes. Nurse workforce outcomes, more favourable PE and lower patient to nurse workloads have been shown to be related to greater nurse workforce outcomes.

## 2.6.2 Practice environment scale of nurse work index(PES-NWI)

Practice environment scale of nursing work index (PES-NWI) is an instrument, which measures the nursing practice environment. Lake (2002:177) developed it with the aim of developing a parsimonious, psychometrically sound scale. It has subscales that are empirically derived and provides measures suitable for outcomes research models linking the nursing practice environment to nurse and patient outcomes. It was developed to permit researchers discern the nursing practice environment, nurse and patient outcomes.

The instrument was developed from an earlier survey, which was to identify organisational characteristics that were successful in attracting and retaining nurses (Pallant, Dixon, Sidebotham & Fenwick 2016:24). It include all factors having a bearing on staff nurse job satisfaction and quality nursing care common to Magnet hospitals (Lake 2002:177). The scale is been used in many countries, and has been adapted to different settings to measure nursing practice environment (Klopper et al., 2012; Coetzee et al., 2013; Swiger et al., 2017). Lake (2002:182) recommends it for its high construct validity and Cronbach alpha of above .82.

More details about the scale are in the methodology chapter.

# 2.7 PRACTICE ENVIRONMENT STUDIES CONDUCTED INTERNATIONAL AND NATIONALLY

Practice environment of nurses has been of interest to researchers and studied either alone or in combination with other variables that are influenced directly or indirectly by PE, e.g. job satisfaction, stress, and burnout and patient outcomes.

#### 2.7.1 International studies

Literature on practice environment studies in Korea, Pennsylvania, Saudi Arabia and Europe reveal of PE to be varying from poor, mixed and favourable (Aiken, Sloane, Bruyneel, van den Heede & Sermeus 2013:146; Ambani 2017:79; Havens et al., 2012:520; Yu Kyung 2013:211).

PE studies range from describing it, to associating it to other outcomes such as job satisfaction, burnout and patients outcomes. Composite scores of PE in Korea (3.17), Pennsylvania (2.78) and Saudi Arabia (2.66), all above 2.5 indicate a favourable PE.

Studies reveal that Korea has nurses with an average age of 30.7 years compared Pennsylvania (42 years), with Saudi Arabia having 63.25% are younger than 35years and Europe age range between 35 to 40 years (Aiken et al 2013:145; Ambani 2017:75; Havens et al 2012:521; Yu Kyung 2013:210).

Countries have a similar PE score of nurse participation in hospital affairs in Korea (2.58), Pennsylvania (2.52) and public (2.11) hospital (Ambani 2017:79) where nurses' involvement in the internal governance and participation hospital affairs is low. Management and decision making in this hospitals does not involve nurses where leadership and governance of the hospital is centralised to hospital executive management and communicated to nurses for implementation. According to Numminen, Ruoppa, Leino-Kilpi, Isoaho, Hupli and Meretoja (2016: E2), an bureaucratic environment centralise decision making and does not consider its employees as professional who can be empowered and be part an effective of team work.

Positive practice environments elements such as continued professional development, salaries and workload have an impact on staff, quality health care delivery and the organizational outcomes (South Africa 2012/13-16/17: 28). The European nurse work force education varied in that Germany had 5% nurses holding a degree compared to 95 % of nurses in Norway and Spain (Aiken et al 2013:145). Nurses' level of education in countries is similar in relation to highest level of education where 41.3% in Korea, 46.1% in Pennsylvania and a slight difference of up to 60.45 % in Saud Arabia holding a degree (Ambani 2017:76; Havens et al 2012:521; Yu Kyung 2013:211).

A 33.1% of nurses hold a degree as the highest level of education (Havens et al 2012:520). Retention of nurses is positive where nurses in Pennsylvania has 17 years' experience of service in nursing, 16 years in the current hospital and 12.57 in the current unit. Whereas Korean nurses has a distribution of years of experience ranging from 39.2% for those with 10 years' experience, to 33.6% for those with 5-10 years' experience and the rest was 8.4 years of experience. Saudi Arabia has 38.5% nurses with experienced of more than 10 years.

Their experience and education can be associated with high scores of nursing foundations for quality of care where patient care outcomes are better and related to their professional development and competence. Numminen et al (2016:E2) refer to professional competence as the nurses' capacity to integrate knowledge, skills, attitudes and values in different health care context. Scores of foundations of quality of care are above 2.5, measuring 3.00, 3.41 and 2.82 in Pennsylvania, Korea and Saudi Arabia respectively (Ambani 2017:79; Havens et al 2012:521; Yu Kyung 2013:211).

## 2.7.2 South Africa

Literature search for studies on PE in South Africa produced few results, with four studies linking PE to job satisfaction, patient safety, wellbeing and burnout in different health care settings. The South African health minister has a Negotiated Service Delivery Agreement outputs to strengthen the health system through improving quality of care through infrastructure development (South Africa 2012/13-2016/17:14).

According to Warshawsky et al (2013:317), patient safety and quality of health care outcomes are greatly affected and reliant on hospital environments that support professional practice of nurses. The health department has a responsibility of ensuring optimal work environment and rewarding careers for its workforce (South Africa 2012/13-2016/17:11). However, findings of studies conducted in South Africa reveal varying PE results in based on the type of sector. Seventy-one percent (71.0%) nurses in public hospitals rate their PE as poor (Coetzee et al 2013:168). Variation on rating the PE as poor or favourable continue also according to the clinical areas, as critical care nurses rate their PE as positive and primary health care nurses as favourable (Klopper et al., 2012:691; Rabie et al., 2016:38).

According to Coetzee et al (2013:163), the Organisation for Economic Cooperation and Development commends nursing education in South Africa to be of high standard leading to their recruitment internationally. This is despite a low number of (14%) baccalaureate degree holders compared to (85.7%) with diplomas (Coetzee et al 2013:168).

A challenge of lack of resources and poor infrastructure is common with a low mean score below 2.5 of the staffing and resource adequacy (Coetzee et al., 2013; Klopper et al., 2012; Rabie et al., 2016).

## 2.7.3 Positive practice environments campaign

The World Health Organization (WHO) as an international organisation is responsible for ensuring that all nations take care of its citizens. One of the initiatives is the establishment of the Global Health Workforce Alliance, which initiated a campaign on PPE. The campaign aims to improve the quality of health services by raising awareness, identifying good practice, developing tools for managers and health professionals in the field (Schmidt 2012: 28).

For the past five years, the campaign has been visible in African countries such as Morrocco, Uganda and Zambia. The campaign conducted the following:

- Raised the awareness by interacting with relevant stakeholders about supportive work environments
- Applied the principles of positive practice environments in the health sector workplace design and management practices
- Offered a global platform to share information, good practices and lesson learnt in relation to supportive workplaces (Schmidt 2012:8).

According to the study that was conducted in Morocco, the general conditions of healthcare professionals in health care centres remain below expectations and the lack of financial resources is a constraint in the development of PPE (Semlali 2010: 33). Similarly, Ngulube (2010: 23) concluded that in Zambia there is unhealthy, unproductive work environment, which contributes negatively in the achievement of good health outcomes. Health professionals are dissatisfied with the work environment which leads them resigning from their jobs. Matsiko (2010:12) asserted that the key issues, which affect Uganda health human resources with particular attention to practice environments, include recruitment, retention and productivity of its health workforce.

#### 2.8 CONCLUSION

Studies illustrate variation of PE that ranges from poor to favourable in different countries characterised by lack of resources and poor staffing which has an impact on quality of care given to patients and nurse outcomes such as job satisfaction. Management does not involve nurses in hospital affairs and a need to empower nurses may strengthen retention. PE affects the nurse and the patient directly and indirectly. Nurses are aware of their PE as they can describe it, except the need to be involved in enhancing it is reliant on management. Public hospitals service a large number of populations and nurses perceive their PE as negative in that they may not recommend it to friends and families. Studies conducted emphasise the manager to be key in creating a PPE.

#### **CHAPTER 3**

#### RESEARCH DESIGN AND METHOD

#### 3.1 INTRODUCTION

The chapter describes the design, methodology, data collection methods used, procedures followed by the researcher and ethical considerations. The objective of the study was to analyse the practice environment of nurses with the goal of identifying characteristics that need to be enhanced, to contribute to positive practice environment.

#### 3.2 RESEARCH DESIGN

Research design is described, as the overall plan for obtaining answers to the research questions (Gray et al 2017:52). It directs the researcher regarding how often data will be collected, what types of comparisons if any will be made and where the study will take place.

According to Polit and Beck (2012:223), a non-experimental study is a study where the researcher does not manipulate variables. The purpose of non-experimental studies is to explore and describe phenomena as it naturally occurs (Gray et al 2017:39; Polit & Beck 2012:226). A non-experimental descriptive research design was applied to describe and document aspects of PE as they naturally occur.

#### 3.3 RESEARCH METHOD

Research methods are techniques researchers use to structure a study and to gather and analyze information relevant to the research question (Polit & Beck 2012:12). The section discusses population, sampling process and sample for the study.

Researchers use quantitative or qualitative research methods. Two distinct paradigms are linked to these methods, namely; positivists and constructivist paradigm.

Quantitative method is linked to positivist paradigm which is orderly, systematic in following steps according to a prescribed manner and controlled to minimise biases (Polit & Beck 2012:12). The quantitative positivist paradigm guided the researcher in this study.

## 3.3.1 Research setting

Polit and Beck (2017:4, 267) refers a research setting as a specific location for the research which could be an entire community or an institution where the researcher collect data in one type of setting with the aim to maintain constancy of conditions. The research was conducted in Mamelodi Regional hospital. The research setting has population where sample was selected. It is classified as a regional hospital in terms of the national health regulation 185 (South Africa 2012) with a bed capacity of 400.

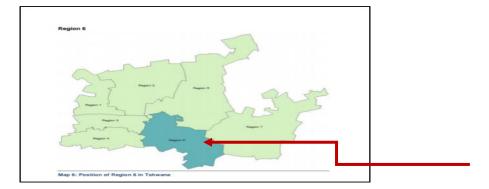


Figure 3.1 Mamelodi hospital in Tshwane

#### 3.3.2 Sampling

## 3.3.2.1 Population

Population is indicated in Polit and Beck (2012:273, 738) as the entire set of individuals or objects having some common characteristics which the researcher is interested in studying. Within the population, there's a target population, which is the aggregate cases the researcher would like to generalise. Polit and Beck (2017:177) point out that the researcher must specify the eligibility criteria, which are characteristics that the researcher specifies to delimit the population.

The population for the study consist of nurses of all categories i.e. professional nurses, enrolled nurses and auxiliary nurses employed permanently in the hospital. Those who were excluded are nurses who were not employed permanently in the hospital and on those any type of leave.

#### 3.3.2.2 **Sampling**

Sampling is a process of selecting a portion of the population to represent the population (Polit & Beck 2017:177). The researcher must identify population to get the sample for the study. A sample is the subset of a population comprising those selected to participate in the study. Probability sampling and non-probability sampling are two sampling designs identified in quantitative research (Polit & Beck 2017:180). Probability sampling involves random selection of elements from the population giving them an equal independent chance of being selected, whilst non-probability sampling elements are selected in a non-random manner and may not have a chance to be included. Probability sampling includes, simple random sampling, stratified sampling, and systematic sampling.

Probability sampling was applied for the study, with random stratified sampling method to obtain the sample. According to Polit and Beck (2017:180), in stratified random sampling the population is first, divided in two or more strata from which elements are randomly selected.

Nurses were stratified according to categories of professional nurses, enrolled nurses and auxiliary nurses to enhance representativeness of all nurse categories (Polit & Beck 2012:275).

## 3.3.2.3 Sample size

Polit and Beck (2017:181) states that there is no simple formula to determine how large a sample should be, but a larger sample is preferred. Bless et al (2013:169) suggest that to get the sample size, each stratum be calculated in proportion to the total population, so that the proportion of each sample is the same.

A statistician was consulted, to calculate the sample size and Cochran's sample size formula was used to estimate the ideal sample size (How to get stratified sample in statistics 2018).

Formula: 
$$n_0 = \frac{Z^2pq}{\varepsilon^2}$$

Where: e is the desired level of precision

 $\ensuremath{p}$  is the (estimated) proportion of the population that has the attribute in question

$$q \text{ is 1-} p$$
 Then, 
$$n_0 = \frac{(1.92)^2 (0.5) (0.5)}{0.05^2}$$

$$n = 384$$

$$n = \frac{Z^2 pq}{1 + \frac{\left(n_0 - 1\right)}{N}}$$

$$n = \frac{384}{1 + \frac{(384 - 1)}{449}}$$

$$n = \frac{384}{1 + \frac{(383)}{449}}$$

= 384/1.85

= 207 sample size

#### 3.3.3 Data collection

### 3.3.3.1 Data collection approach and method

Actual values of variables constitute data, which is described as pieces of information gathered in a study from subjects (Polit & Beck 2017:45). Practice environment is the key variable in this study where the researcher collected data. Data collection in quantitative studies is structured and is operated in a controlled setting (Polit & Beck 2012:293).

Bless et al (2013:16, 184) indicate that quantitative studies rely on numbers, statistical analysis and interpretation of findings that are generalised from the sample to the population, where data is collected according to a very specific set of steps. This data collected by the researcher is to explore or describe a situation. To collect data a measuring instrument must be selected and for this study, a questionnaire was used as it is structured.

#### 3.3.3.2 Data collection instrument

Self-report is one of the data collection methods used by researchers to gather data (Polit & Beck 2017:188). Respondents respond to questions in the questionnaire, where the researcher knows in advance what he/she need to know and has structured it appropriately obtain needed information. Polit and Beck (2012:191) suggest that when data is going to be collected in this manner, a data-collecting instrument may be developed or borrowed.

A questionnaire was used to collect data from respondents. The key variable for the study is PE. To collect data the PES-NWI questionnaire, which is freely available on the internet was modified for this study. In this study, subscales were maintained by the researcher but reduced items that were beyond the scope of the study ending up with 22 items. PES-NWI consists of 31 items and 5 empirically derived subscales namely; nurse participation in hospital affairs, nursing foundations for quality of care, nurse manager ability, leadership and support of nurses; staffing and resource adequacy; and collegial nurse physician relationships (Swiger et al 2017:77).

Additions made to the questionnaire were demographics of age, gender, rank, qualifications and years of service; which respondents had to fill in at the beginning of responding to the questionnaire. Practice environment scale of nursing work index (PES-NWI) is an instrument which has been extensively used by researchers to measure quality of PE of nurses working in a variety of work settings and has been linked with quality of care, nurse wellbeing, job dissatisfaction and burnout (Coetzee et al 2013:163; Swiger et al 2017:77).

Swiger et al (2017:77) recommends it for its low respondent burden, satisfactory psychometric performance, opportunity for comparison across studies and high discriminant ability. Pallant et al (2016: 24) indicate that it was developed with the aim to provide nurses perceptions of the work environment in which they worked with the aim of creating a concise measure for use in research exploring the association between the nursing practice environment and nurse and patient outcomes. The instrument is frequently used to measure nurse's perception of their nursing practice environment and is identified as valid and reliable measure of nursing practice environment. Havens et al (2012:520) indicate that two large organisations that promote quality; Joint Commission and National Quality Forum endorsed it as a gauge of quality of nursing practice environment.

According to Pallant et al (2016:24) the instrument was created using items from an earlier nurse survey nursing working index (NWI) which was conducted to identify organizational characteristics of hospitals that were successful in attracting and retaining nurses in the 1980s when America experienced critical nurse's shortages. The original NWI has 65 items went through a five stage process which included exploratory factor analyses to assess its suitability. Thirty-one (31) items were empirically derived and retained and represented 5 subscales namely; nurse participation in hospital affairs (9 items), nursing foundations for quality of care (10 items), nurse manager ability (5), leadership and support of nurses (5 items), staffing and resource adequacy (4 items) and collegial nurse-physician relations (3 items).

Coetzee et al (2012:165) notes its highly reliability, originally reported to be ranging between 0.64 to 0.72 and studies in South Africa ranged between 0.74 to 0.88 in South African studies. Participant's rated the extent to which they agree that PES-NWI item was present in their current PE from a scale of 1 to 4 (Havens et al 2012:520). Rating of (1) indicates strongly disagreeing, (2) disagree, (3) agree and (4) indicating strongly agreeing. PE were classified as favourable if four or five subscale mean scores were above 2.5; mixed if two or three subscale mean scores are above 2.5 and unfavourable when none or one subscale mean score is above 2.5. Several studies have adjusted the tool for it to be relevant to their nurse populations (Kim, Lee, Kang, Park, Park, Lee, Yi & Jeong 2013:128; Pallant et al 2016:25).

## *3.3.3.3 Pilot study*

According to Polit and Beck (2012:195), a pilot study is a trial run designed to test the methods to be used in a larger study. The pilot study also forms part of reliability of the instrument. Fourteen questionnaires were distributed to respondents in one of the units of the hospital as part of a pilot study. Minor adjustments were effected on the questionnaire following the pilot study.

#### 3.3.3.4 Data collection process

An appointment was sought from the head of nursing and she was briefed about the study and its purpose. She assigned one of the assistant nurse managers (ANM) to assist the researcher. The ANM assisted to distribute and collect pilot study and for the main study. Operational managers were given questionnaires for distribution to their units at a central venue and were able to ask questions related to the study. Data collection was planned for a week, but extended to two weeks because of the poor response rate.

#### 3.3.3.5 Ethical considerations related to respondents

The researcher adhered to the ethical conduct principles of research i.e. beneficence, respect for human dignity and justice as articulated in the Belmont report (Polit & Beck 2012:150).

- There was no harm of any form anticipated to respondents except an awareness for nurses of the kind of PE they need to practice at.
- Respondents right to self-determination and full disclosure was ensured through the informed consent where the researcher fully the nature of the research, right of respondents to refuse or terminate participation and responsibilities of the researcher.
- Information leaflet was attached to the questionnaire to ensure participants selfdetermination of their rights.
- Participant's right to fair treatment and privacy was ensured through sampling
  process in a non-prejudiced manner, access of respondents to the researcher in
  case they have questions that need clarification by providing contact details of
  the researcher, anonymity and confidentiality of the research questionnaires.
- Anonymous research questionnaires were distributed to respondents to protect privacy and confidentiality.
- To protect anonymity of the research setting, research setting will be de-identified when disseminating research findings in journals and conferences.
- An electronic copy of the thesis will be stored in UNISA student repository where
  it will only be accessed by researchers and students for research purposes.
- The research setting will be provided with a soft copy, which they will be advised to encrypt to limit access to unauthorised persons.

#### 3.3.3.6 Ethical considerations related to Institutions

Institutional review board is a committee with the purpose of ensuring that the investigator conducts his/her research ethically, which promotes the conduct of ethical research and protect the rights of respondents and minimise risks and anticipated harm and benefit and also to ensure equitable selection of respondents (Burns & Grove 2009:207).

- The protocol for this study was evaluated and approved by the UNISA Research Ethics Committee HSH/809/2017 (see annexure A).
- The study received approval by the Gauteng Provincial health Department-GP201803-014(see annexure C).

 Acting Chief Executive Officer of the institution Dr Thabala where the study was conducted granted permission, letter dated 12.04.2018 (see annexure E)

## 3.3.4 Data analysis

Polit and Beck (2012:725) refer to data analysis as the systematic organisation and synthesis of research data and may include testing of the hypothesis. It presents a description of the sample and reliability and validity testing of the instruments. Statistical Packages for Social Sciences (SPSS), Version 25 was used to conduct data analysis with assistance of a statistician.

#### 3.4 RELIABILITY AND VALIDITY OF THE STUDY

According to Brink, van der Walt and van Rensburg (2006: 164), reliability and validity are the concepts that measures the trustworthiness of the instrument which furthers ensures the data quality in quantitative research.

## 3.4.1 Reliability

According to Bless et al (2013:220,229), reliability denotes the extent to which observable measures are accurate and stable over repeated observations. It seeks to know the accuracy and consistency of the instrument. The instrument has been used in various nurse practice environment studies and its reliability has been tested. Klopper et al (2012:687) indicate the coefficients of reliability of this tool to be varying from 0.71 to 0.84. According to Burns and Grove (2009:377), the coefficient of 0.80 indicates that an instrument is 80% reliable. Cronbach's alpha for the instrument was calculated to test its reliability.

Bless et al (2013:220, 229) state that quantitative data is collected with a standardised instrument to be statistically analysed. An approach used to evaluate the quality of research is through its reliability and validity. Reliability denotes the extent to which the observable measures are accurate and stable over repeated observations. It seeks to know the accuracy and consistency of the instrument. Burns and Grove (2009:377) emphasise its importance in selecting scales for use in the study and that it enhances

the power of the study to detect significant differences or relationships occurring in the population under study. Further pointing out that, to enhance accuracy of the instrument, its reliability must be tested before using it in any study. Klopper et al (2012:687) indicate the coefficients reliability of this tool to be varying from 0.71 to 0.84. According to Burns and Grove (2009:377), the coefficient of 0.80 indicates that the instrument is 80% reliable. The pilot study was conducted among 14 respondents who were not part of the larger study. The responses were incorporated in the final instrument before data collection was conducted in larger sample.

#### 3.4.2 Validity

Validity is concerned with what does the instrument measures and the meaning of results (Bless et al 2013:229). According to Bless et al (2013:233), construct validity is the extent to which scores on an instrument reflect the desired construct rather than some other construct. The measuring instrument is drawn from the PES-NWI, a tool that is used to evaluate the practice environment. It covers the content that the researcher intends to measure. Polit and Beck (2012:336) indicate that face validity refers to whether the instrument looks like it is measuring the target construct. The instrument has subscales and questions related to the practice environment. The instrument is outlined in a manner that will not intimidate or offend respondents, in terms of time to complete it. It was delivered to their work environment, respondents were allowed to complete it at their convenient time and will not take thirty minutes to complete.

Validity is concerned with what does the instrument measure and the meaning of results (Bless et al 2013:229). The instrument measured PE and the results describe PE of nurses.

#### 3.5 CONCLUSION

The chapter outlined methodology and design used in the study and the next chapter presents findings of the study. This chapter discussed research setting, sampling, population, sampling method, data collection instrument and data collection processes, ethical consideration, data analysis and reliability of the data collection instrument.

#### **CHAPTER 4**

# DATA ANALYSIS, PRESENTATION AND DESCRIPTION OF THE RESEARCH FINDINGS

#### 4.1 INTRODUCTION

The chapter presents data analysis, presentation and description of research findings. The objective of the study was to analyse the practice environment of nurses with the goal of identifying its characteristics that need enhancement to contribute to positive practice environment. Descriptive statistical methods were used, to describe study respondents, variables and Cronbach's alpha to verify the reliability of the instrument. Descriptive statistics describe and synthesize data and are grouped according to the summary functions they perform (Brink et al 2006:172). The study was guided by the following objectives:

- To describe the characterisitcs of practice environment of nurses working in a selected hospital.
- To examine the relationship between variables that contribute to positive practice environment.
- To make recommendations that contribute to positive practice environment.

#### 4.2 DATA MANAGEMENT AND ANALYSIS

Two hundred and seven (207) questionnaires were distributed to respondents as planned through their operational managers for data collection. Hundred and thirty-six (136) questionnaires were returned completed resulting in 66% response rate. Seventy (70) professional nurses, 33 enrolled nurses and 33 auxiliary nurses returned them however; one returned questionnaire was incomplete on the subscales. SPSS version 25-computer program was used to analyse data quantitatively. Data was analysed with the assistance of a statistician.

Table 4.1 Response rate per category (N=136)

| Rank   |                    | Frequency | Percent | Valid<br>Percent | Cumulative Percent |
|--------|--------------------|-----------|---------|------------------|--------------------|
|        | Auxiliary nurse    | 33        | 24.1    | 24.3             | 24.3               |
|        | Enrolled nurse     | 33        | 24.1    | 24.3             | 48.5               |
| Valid  | Professional nurse | 70        | 51.1    | 51.5             | 100.0              |
|        | Total              | 136       | 99.3    | 100.0            |                    |
|        | Missing            | 1         | 0.7     |                  |                    |
|        | 1                  | 137       | 100.0   |                  |                    |
|        | Males              | 13        | 9.6     | 9.6              |                    |
| Gender | Females            | 123       | 90.4    | 90.4             | 100                |
|        |                    | 136       | 100     |                  |                    |

## 4.3 RESEARCH RESULTS

The results are presented as reported from the tables and figures, which were extrapolated from the raw data during data analysis. The mean, standard deviation, frequencies and significance are presented. Where the percentages are very close, the researcher combined "strongly disagree" and "disagree" and "strongly agree" and "agree" to give a clear picture of that particular variable.

## 4.3.1 Sample characteristics

**Table 4.2 Sample Characteristics (N-136)** 

| Demographics   | N   | Minimum | Maximum | Mean     | Std.<br>Deviation |
|----------------|-----|---------|---------|----------|-------------------|
| Age            | 136 | 22      | 63      | 42.63    | 10.293            |
| Qualifications | 136 | 1.00    | 6.00    | 1.9853   | 1.29378           |
| Rank           | 136 | 1.00    | 3.00    | 2.2721   | .82970            |
| Yrs of service | 136 | 1.0000  | 4.0000  | 1.750000 | 1.0381608         |

## 4.3.1.1 Age, gender and rank

Respondents have an average age of 42.63 years, with a minimum of 22 years and maximum of 63 years of age. Males were 13 (9.6%) and females were 123 (90.4%) of the study respondents, males comprise less than 10% of the respondents. Thirty-three (24.1%) respondents were enrolled nurses and auxiliary nurses respectively and 70 (51.5%) were professional nurses. Proportion of lower category nurses, i.e. enrolled nurses and auxiliary nurses is similar (24.1%) even though they have a different scope of practice.

#### 4.3.1.2 Years of service

Average years of service for respondents are 1.75 years. Figure 4.1 below shows that 80 of respondents nurses in the hospital had less than 10 years' experience as nurses with about 20 of them with an experience of more than 10 years, and 20 with more than 20 years and 13 having an experience of more than 30 years or more. The hospital has a large number of inexperienced nurses.

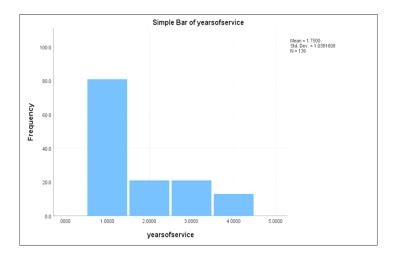


Figure 4.1 Years of service

#### 4.3.1.3 Qualifications

Table 4.3 below shows qualification percentages. The auxiliary nursing assistant (ANA) and the Enrolled Nurses (EN) obtained a certificate on completion of training hence 65 (47.4%) The other (1) is presumed to belong to this category, as the total number of EN

and ENA were 66. Forty (29.2%) diploma, (10.9%) obtained a diploma in nursing, 15(10.9%) degree in nursing, a further 14(10.2%) has post basic diploma in a speciality and only one (0.7%) holds a master degree. Most professional nurses are diploma trained.

**Table 4.3 Qualification scores (N=136)** 

| Qualifica | tions                            | Frequency | Percent | Valid<br>Percent | Cumulative Percent |
|-----------|----------------------------------|-----------|---------|------------------|--------------------|
|           | Certificate in nursing           | 65        | 47.4%   | 47.8             | 47.8               |
|           | Diploma in nursing and midwifery | 40        | 29.2%   | 29.4             | 77.2               |
|           | Degree in nursing                | 15        | 10.9%   | 11.0             | 88.2               |
| Valid     | Master's degree                  | 1         | .7%     | .7               | 89.0               |
|           | Post-basic diploma in speciality | 14        | 10.2%   | 10.3             | 99.3               |
|           | Other                            | 1         | .7%     | .7               | 100.0              |
|           | Total                            | 136       | 99.3%   | 100.0            |                    |
| Missing   | System                           | 1         | .7%     |                  |                    |
| Total     | ı                                | 137       | 100.0   |                  |                    |

#### 4.3.2 Practice environment measures

Respondents scored certain subscales below 50% where staffing and resources, nurse participation in hospital affairs and nurse manager were scored 41%, 43% and 44% respectively. Subscales that were scored above 50% by respondents are nursing foundations of quality care and collegial nurse-physician relations. They obtained 63% and 84% respectively.

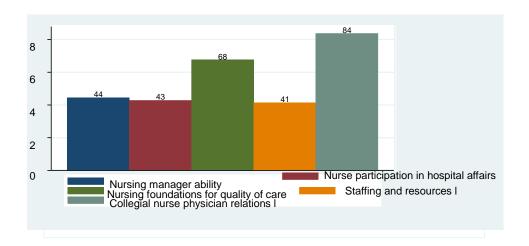


Figure 4.2 overall practice

## 4.3.2.1. Nursing management

Nursing management subscales were all below 2.5 with exception of quality assurance that scored 2.733 and the lowest (2.11) being that of nurses not being praised and recognised for a job well done. Similar scores of 2.13 were obtained for nursing management not listening and not being visible. The overall score for this subscale was 2.27.

Table 4.4 Mean and SD of Nurse Manager Ability, leadership and support (N-135)

| Nursing management                                 | Mean     | Std       | N   |
|--|----------|-----------|-----|
|  |          | deviation |     |
| Head of nursing is a good leader                   | 2.340741 | 1.0233320 | 135 |
| Nursing management support staff                   | 2.214815 | .9493532  | 135 |
| Nursing management listens to staff                | 2.133333 | .9604104  | 135 |
| Nursing management is visible                      | 2.133333 | .9985063  | 135 |
| Quality assurance programme is active              | 2.733333 | .7936314  | 135 |
| There's praise and recognition for a job well done | 2.118519 | .8981893  | 135 |

Table 4.5 Frequencies on nurse manager ability, leadership and support (N135)

| Nursing management                               | SD        | D         | Α         | SA       |
|--|-----------|-----------|-----------|----------|
|  | F (%)     | F (%)     | F (%)     | F (%)    |
| Head of nursing is a good leader                 | 40(29%)   | 27(20%)   | 53(39%)   | 16(17%)  |
| Nursing management support staff                 | 40(29.4%) | 38(27.9%) | 48(35.3%) | 10(7.4%) |
| Nursing management listens to staff              | 45(33%)   | 39(29%)   | 42(31%)   | 10(7.4%) |
| Nursing management is visible                    | 45(33%)   | 44(32%)   | 32(23.5%) | 15(11%)  |
| Quality assurance programme is active            | 10(7.4%)  | 35(25.7%) | 72(52.9%) | 19(14%)  |
| There's praise and recognition for job well done | 40(29.4%) | 49(36%)   | 39(28.7%) | 8(5.9%)  |

In line with the previous standard deviation, the frequencies demonstrated that the head of nursing is a good leader 53(39%), also support staff 48 (35,3%), quality assurance programme is active 72(52,9%) but the respondents disagreed that the nurse manager listen to staff 45(33%) and also praise and recognize the job well done 49(36%).

## 4.3.2.2. Nurse participation

Nurse participation mean scores were all below 2.5 with the high score of the staff development programme being active and the lowest being that of staff participation at 2.06. Staff members were not part of decision-making committees.

Table 4.6: Mean and SD on Nurse participation in hospital affairs (N=135)

| Participation in hospital affairs           | Mean     | Std deviation | N   |
|---|----------|---------------|-----|
| Staff development is active                 | 2.407407 | .8490231      | 135 |
| There are career development opportunities  | 2.311111 | .8764469      | 135 |
| There are career development advancement    | 2.259259 | .8721475      | 135 |
| I am part of the decision making committees | 2.066667 | .9320176      | 135 |

Table 4.7: Frequencies on Nurse participation in hospital affairs (N=135)

| Participation in hospital affairs           | SD        | D         | Α         | SA       |
|---|-----------|-----------|-----------|----------|
|   | F (%)     | F (%)     | F (%)     | F (%)    |
| Staff development is active                 | 25(18.4%) | 40(29.4%) | 63(46.3%) | 8(5.9%)  |
| There are career development opportunities  | 28(20.6%) | 49(36%)   | 49(36%)   | 10(7.4%) |
| There are career development advancement    | 31(22.8%) | 48(35.3%) | 49(36%)   | 8(5.9%)  |
| I am part of the decision making committees | 46(33.8%) | 45(33.1%) | 36(26.5%) | 9(6.6 %) |

When looking into participation in hospital affairs the frequencies coincided with the mean and standard deviation. The percentages were combined in terms of strongly disagreed and disagreed and again with strongly agree to agree. In all variables that staff members verbalized that strongly disagreed that they were part of decision making 91(66.9%). Respondents also disagreed that career development opportunities 77(56,6%) and career development advancement 79 (58.1%) was available. There was a minor difference of only 6 (4.4%) respondents who agreed that staff development is active.

## 4.3.2.3. *Nursing foundations*

Scores for nursing foundations were all above 2.5 except for policies that were not communicated to staff. New nurses were orientated scoring highest score followed by nursing care plans being written and up to date, and mission and vision being clear and visible. The mean and standard deviation is in line with the frequency table as the majority of respondents agreed as listed in table 4.9

Table 4.8: Mean and SD on nursing foundations of quality (N=135)

| Foundations of quality              | Mean     | Std deviation | N   |
|-------------------------------------|----------|---------------|-----|
| Nursing care plans are written      | 2.985185 | .8284600      | 135 |
| New nurses are orientated           | 3.118519 | .8108578      | 135 |
| Vision and mission is visible       | 2.844444 | .8882875      | 135 |
| Policies are communicated to nurses | 2.429630 | .9965668      | 135 |

Table 4.9: Frequencies on nursing foundations of quality (N=135)

| Foundations of quality         | SD        | D         | Α         | SA        |
|--------------------------------|-----------|-----------|-----------|-----------|
|                                | F (%)     | F (%)     | F (%)     | F (%)     |
| Nursing care plans are written | 5(3.7%)   | 32(23.5%) | 58(42.6%) | 41(30.1%) |
| New nurses are orientated      | 7(5.1%)   | 16(11.8%) | 66(48.5%) | 46(33.8%) |
| Vision and mission is visible  | 11(8.1%)  | 32(23.5%) | 59(43.4%) | 34(25%)   |
| Policies are communicated to   | 30(22.1%) | 37(27.2%) | 48(35.3%) | 21(15.4%) |
| nurses                         |           |           |           |           |

# 4.3.2.4 Staffing and resources

The results show the lowest mean (1.51) for enough nurses followed by 1.933 of adequate essential equipment and the highest score (2.82) of delegation ensuring skill mix. The results assert that staff and resource shortages are the real impediment in the execution of quality care.

Table 4.10: Mean and SD on staffing and resources (N=135)

| Staffing and resources                 | Mean     | Std deviation | N   |
|--|----------|---------------|-----|
| There are enough nurses to get work    | 1.518519 | .7516336      | 135 |
| done                                   |          |               |     |
| Nurses are clinically competent        | 2.748148 | .8614334      | 135 |
| Delegation ensures that there is skill | 2.822222 | .7417875      | 135 |
| mix                                    |          |               |     |
| There is adequate essential equipment  | 1.933333 | .8741734      | 135 |
| Protective security measures are in    | 2.244444 | .9016293      | 135 |
| place                                  |          |               |     |

Table 4.11 Frequencies on staffing and resources

| Staffing and resources                     | SD        | D         | Α         | SA        |
|--|-----------|-----------|-----------|-----------|
|  | F (%)     | F (%)     | F (%)     | F (%)     |
| There are enough nurses to get work done   | 83(61%)   | 40(29.4%) | 9(6.6%)   | 4(2.9%)   |
| Nurses are clinically competent            | 14(10.3%) | 29(21.3%) | 70(51.5%) | 23(16.9%) |
| Delegation ensures that there is skill mix | 5(3.7%)   | 36(53.7%) | 73(53.7%) | 22(16.2%) |
| There is adequate essential equipment      | 50(36.8%) | 53(39%)   | 26(19.1%) | 7(5.1%)   |
| Protective security measures are in place  | 46(33.8%) | 45(33.1)  | 36(26.8%) | 9(6.6%)   |

Staffing and resources is one of the crucial factors in ensuring efficient patient care, the frequency is in line with the mean and standard deviation as the majority 83 (61%) of respondents alluded that there were not enough nurses to get the work done despite having competent nurses 70 (51.5%). There was no adequate essential equipment as shared by the respondents who strongly disagreed 50 (36.8%) and disagreed 53(39%) compared to those who agreed 26(19.1%) and strongly agreed 7(5.1%) as indicated in table 4.11

## 4.3.2.5. Nurse-physician relations

The subscale for nurse physician relations scored means above 2.5 with the highest of nurse and doctors working relations followed by that of teamwork among nurses and collaboration between nurses and doctors.

Table 4.12: Mean and SD on nurse physician relations (N=135)

| Nurse-physician relations                           | Mean     | Std deviation | N   |
|---|----------|---------------|-----|
| Teamwork among nurses                               | 2.911111 | .8505193      | 135 |
| There's collaboration between nurses and doctors    | 2.888889 | .8255859      | 135 |
| Nurses and doctors have a good working relationship | 2.962963 | .8232390      | 135 |

Table 4.13: Frequencies on nurse physician relations (N=135)

| Nurse-physician relations                           | SD       | D         | Α         | SA        |
|---|----------|-----------|-----------|-----------|
|   | F (%)    | F (%)     | F (%)     | F (%)     |
| Teamwork among nurses                               | 9(6.6.%) | 28(20.6%) | 64(47.1%) | 35(25.7%) |
| There's collaboration between nurses and doctors    | 8(5.9%)  | 30(22.1%) | 66(48.5%) | 32(23.5%) |
| Nurses and doctors have a good working relationship | 9(6.6%)  | 21(15.4%) | 71(52.2%) | 35(25,7%) |

There was unanimous agreement on the nurse –physician relations as the majority of respondents agreed that there was collaboration and a good working relationship among nurses and doctors.

## 4.4 OVERALL MEAN SCORE

The overall mean for the PE was 2.494. nursing management and leadership scored 2.27, staff development score was 2.25, nursing foundations of nursing was a high

score of 2.8, staffing and resources was the lowest with a score of 2.24 and nurse physician relation being the highest with a score of 2.91. In general, the PE in the public hospital is poor because of the low mean score.

The highest mean score of 3.1 found from the subscale measure of nursing foundations where new nurses are oriented whereas the lowest score of 1.5 is that of staffing and resources where there is inadequate nurses to get the job done.

#### 4.5 RELIABILITY OF THE MEASURING INSTRUMENT

Polit and Beck (2012:333) point out that internal consistency reliability is the most widely used reliability approach and the best means of assessing source of measurement error in psychosocial instrument. It is an index of internal consistency that estimates the extent to which different subscale part of an instrument are reliably measuring the critical attribute. To evaluate internal consistency, Cronbach's Alpha is the most widely used method. According to Burns and Grove (2009:377), the coefficient alpha of 0.80 indicates that the instrument is 80% reliable. Cronbach's alpha was used to test the reliability of the data collection instrument and was .891, indicating that the instrument was 89.1% reliable. Table 4.14 and table 4.15 gives a summary of the Cronbach's alpha when items were calculated individually and also when they were done as a collective.

Table 4.14: Chronbachs Alpha per variable

| Variables  | Cronbach's Alpha |
|--|------------------|
| Head of Nursing is a good leader                   | .885             |
| Nursing Management Support staff                   | .882             |
| Nursing Management Listens To Staff                | .882             |
| Nursing Management Is Visible                      | .883             |
| Quality assurance programme is active              | .885             |
| There's praise and recognition for a job well done | .882             |
| Staff development is active                        | .886             |
| There are career development opportunities         | .883             |
| There are career development advancement           | .881             |
| I am part of the decision making committees        | .887             |
| Nursing care plans are written                     | .892             |
| New nurses are orientated                          | .884             |
| Vision and mission is visible                      | .884             |
| Policies are communicated to nurses                | .882             |
| There are enough nurses to get work done           | .890             |
| Nurses are clinically competent                    | .888             |
| Delegation ensures that there is skill mix         | .886             |
| There is adequate essential equipment              | .886             |
| Protective security measures are in place          | .886             |
| Team work among nurses                             | .888             |
| There's collaboration between nurses and doctors   | .886             |
| Nurses & doctors have a good working relationship  | .886             |

Table 4.15: Reliability of the instrument

| Reliability statistics |                           |            |  |  |
|------------------------|---------------------------|------------|--|--|
| Cronbach's Alpha       | Cronbach's Alpha based on | N of items |  |  |
|                        | standardised items        |            |  |  |
| .891                   | .893                      | 22         |  |  |

## 4.6 STATISTICAL SIGNIFICANCE OF THE RESULTS

Statistical significance plays a pivotal role in statistical hypothesis testing. It is used to determine whether the null hypothesis should be rejected or retained. In statistical hypothesis testing, a result has statistical significance when it is very unlikely to have occurred given the null hypothesis. A study's defined significance level, is the probability of the study rejecting the null hypothesis given that it were true (Brink et al, 2006: 82).

The p value guided by the confidence level of 95% and the margin of error of 5%. Most of the paired variable demonstrated statistical significance (p=0.000) as indicated in tables 4.16 and 4.17. Pairing staff development and competency of nurses was not statistically significance (p=0.861) and between nursing care plan and the visibility of the vision and mission (p=0.100).

Therefore, the null hypothesis which states that practice environment of nurses at the public hospital is negative is rejected.

**Table 4.16: Paired Sample Correlation** 

| Paired Samples Correlations |  |     |             |      |  |
|-----------------------------|--|-----|-------------|------|--|
|                             |  | N   | Correlation | Sig. |  |
| Pair 1                      | Nurse manager & Nurses and doctors have a good working relationship                    |     | .230        | .007 |  |
| Pair 2                      | Staff development is active & Nurses are clinically competent                          | 136 | 015         | .861 |  |
| Pair 3                      | Nursing care plans are written & Vision and mission is visible                         | 136 | .349        | .000 |  |
| Pair 4                      | There are enough nurses to get work done & I am part of the decision-making committees |     | .242        | .005 |  |
| Pair 5                      | Team work among nurses & nurse manager   | 136 | .176        | .041 |  |

**Table 4.17: Paired sample test** 

| Paired Differences |  |      |           |            |            |            |        |         |     |
|--------------------|--|------|-----------|------------|------------|------------|--------|---------|-----|
|                    |  |      |           |            | 95%        | Confidence |        |         |     |
|                    |  |      |           |            | Interval   | of the     |        |         |     |
|                    |  |      | Std.      | Std. Error | Difference | )          |        | Sig.    | (2- |
|                    |  | Mean | Deviation | Mean       | Lower      | Upper      | t      | tailed) |     |
|                    | Nurse manager - Nurses and doctors have a good working relationship                    |      | 1.15901   | .09938     | 83626      | 44315      | -6.437 | .000    |     |
|                    | Staff development is active-Nurses are clinically competent                            |      | 1.22038   | .10465     | 55990      | 14598      | -3.373 | .001    |     |
|                    | Nursing care plans<br>are written - Vision<br>and mission is<br>visible                |      | .98261    | .08426     | 02693      | .30634     | 1.658  | .100    |     |
|                    | There are enough nurses to get work done - I am part of the decision making committees |      | 1.04610   | .08970     | 72152      | 36671      | -6.066 | .000    |     |
|                    | Team work among<br>nurses – nurse<br>manager   |      | 1.12556   | .09652     | .61794     | .99970     | 8.380  | .000    |     |

# 4.7 CONCLUSION

Data collected from 135 respondents was analysed and findings of PE of nurses presented in this chapter. The next chapter outlines discussion of findings and recommendations by the researcher.

## **CHAPTER 5**

# DISCUSSION OF FINDINGS, LIMITATIONS, CONCLUSIONS AND RECOMMENDATIONS

#### 5.1 INTRODUCTION

The chapter discusses research findings as presented in the previous chapter. It will outline limitations, conclusions and recommendations by the researcher. A descriptive study with the aim to analyse the practice environment of nurses was conducted in a regional hospital. The ultimate goal was to identify its characteristics guided by the following objectives that were achieved:

- To describe the practice environment of nurses working in a selected hospital
- To examine the relationship between variables that contributes to positive practice environment.
- To make recommendations that contribute to positive practice environment

#### 5.2 DISCUSSION OF FINDINGS

## 5.2.1 Sample characteristics

The respondents' has an average age of 42.63 years. It is a concern for the department of health that its nurse population is aging; however evidence to determine aging nurse population is insufficient. Results are similar to the study in Pennsylvania which revealed a nurse population with an average age of 42.2%, whilst in Korea nurses are significantly younger with and average age of 30.7 compared to Europe which had age ranging between 35-40 years (Aiken et al., 2013:145; Havens et al., 2012:519; Yu Kyung 2013:210).

In the study by Coetzee et al, (2013:168) male nurses nationally comprise 4.3% compared to 95.7% female nurses. Private sector has 3.3% male population compared to 96.7% females whereas in the public sector comprise 6.1% compared to 93.9%

female nurses. In this study, less than 10% of respondents were males compared to 90.6% of female respondents.

SANC has a large number of professional nurses (14 2091) compared to enrolled nurses (74 556) and enrolled nursing auxiliary nurses (70 430) on the register (South Africa 2005). The study reflects the same picture with more professional nurses than lower category nurses do.

Large number (80) of nurse respondents has 2 to 10 years' experience whilst the rest (53) has 20 years and above experience, they may be nearing their retirement age. The number does not indicate which category of nurses belongs to the 80 when the average age is 42.63 years. Similar findings are revealed in a study conducted by Coetzee et al (2013:168) 42.5% nurses in South Africa has an experience of less than 10 years' experience and a 26.6% has an experience of between 10 and 20 years.

Table 4.3 shows 29.2% nurses with a diploma qualification compared to 10.9% B Cur degree and 0.7% holds a master degree holders. Professional nurses train to obtain a diploma or a degree in South Africa and enrolled nurses and auxiliary nurses obtain a certificate in nursing. Coetzee et al (2016:168) highlighted that here is a low number (14.3%) nationally in South Africa of baccalaureate degree holders compared to 85.7% of those with diploma. These low numbers of baccalaureate holders are because South Africa is producing 80% diploma trained and 20% degree trained nurses (South Africa 2012/13-16/17:31). This picture is hoped to change with the implementation of the new qualifications framework. A significant difference compared to Korea where nurses with diplomas and degrees were 47.95 and 41.3% respectively and a 10.8% holding a Master or PHD degree (Yu Kyung 2013:211).

#### 5.3 PRACTICE ENVIRONMENT MEASURES

Copanitsanou et al (2017:172) indicate that in a safe working environment exist factors such as good professional relations, a supportive management style, a balanced work schedule and concordance between increases in nurse's work load and nurse's skill mix, adequate time to meet patient's needs, professional autonomy, and adequacy in resources and opportunities for professional advancement. Warshwasky et al, (2013:

317) notes that nurse managers are responsible for creating professional practice environment.

Fallatah and Laschinger (2016:126) highlights that magnet hospital leaders are known to be playing a role in sustaining supportive professional PE by applying authentic leadership. It is a pattern of transparent and ethical leader behaviour that encourages openness in sharing information needed to make decisions while accepting input from followers (Fallatah and Laschinger 2016:126).

Staffing and resources are the most critical factors that can contribute positively to positive patient environment (Schmidt 2012:8). Staffing and resources, nurse participation in hospital affairs and nurse manager scores 41 %( Mean - 2.24), 43% 9 (Mean - 2.25) and 44 %( Mean - 2.27) respectively are below 50% (2.5), while high scores were found in the foundations of nursing subscale (2.8) and nurse physician relation being the highest with a score of 2.91. Havens et al (2012:522) note that, PE is classified as favourable, mixed or unfavourable. It is favourable when it has four or five subscale median scores above 2.5, mixed when two to three subscale median score above 2.5 and unfavourable when none or one subscale median score is above 2.5.

#### 5.3.1 Nurse Manager Ability, leadership and support of nurses

Nursing management variables for the subscale includes; visibility, support, listening to staff by the nurse manager, QA, praising, and recognising staff for a job well done. They were all below 2.5 with exception of quality assurance that scored 2.733 and the lowest (2.11) being that of nurses not being praised and recognised for a job well done. According to Fallatah and Laschinger (2016:126), nursing leaders within Magnet Hospitals play a role in sustaining supportive professional PE through visibility and accessibility. They are authentic leaders, who build positive workplaces where followers engagement is fostered through self-awareness (presenting themselves truly), balanced processing (consider different point of views before making decisions), rational transparency (act in accordance with internal moral and ethical values) and internalized moral perspectives (have insight about self and influence others) (Laschinger & Fida 2015:277).

Whilst Kelly and Tazbir (2014:15) indicate that, they spend a significant amount of time, interacting with others to ensure that quality of care. However, in a study by Warshawsky et al (2013: 320) nurse mangers expressed a concern of being consistently away from the unit, which contributed to them being unable to develop their staff.

The nursing strategy also emphasises that nursing managers are critical in implementing health care reforms (South Africa 2012/13-16/17:23) but are having their challenges that include lack of formal authority and support.

#### 5.3.2 Nurse participation in hospital affairs

Variables of this subscale include staff development that is active, career development opportunities and being part of decision-making committees. The overall mean score for the subscale was 2.25 indicating that staff was not part of decision-making committees. Nurse participation scores were all below 2.5 with the high score of the staff development programme being active (2.4) and the lowest being that of staff participation (2.06).

One of the organizational empowerment structures that play an important role in employee effectiveness is access to opportunity for mobility and growth. It entails access to challenges and professional development opportunities to expand knowledge and skills (Laschinger and Fida 2015:277). The skills development act encourages employers to use the workplace as an active learning environment by employers, to improve delivery of social services and improve productivity in the workplace (South Africa 1998).

Certain situations may call for group decision-making, making the decisions to be acceptable by all members (Kelly & Tazbir 2014: 124). Hence, authentic leaders will apply balanced processing, where the leader collect and analyse all relevant information before making decision (Fallatah & Laschinger 2016:126). Results of the subscale were different from a study by Havens et al (2012: 521), with a mean of 2.52 and Yu Kyung (2013: 211) with a mean of 2.58.

#### 5.3.3 Foundations of quality nursing

Variables for this subscale are written nursing care plans, orientation, mission and vision, and communication of policies. Scores for the subscale were all above 2.5 with the exception of policy communication that was 2.4. The highest was that of orientation of nurses (3.1), followed by written nursing care plans (2.9). Yu Kyung (2013:211) revealed a high mean (3.23) on nursing care plans.

The SANC regulation outlines that the scope of registered nurses, enrolled nurses and auxiliary nurses includes prescribing provision and execution of nursing regimen to meet the health needs of a patient and caring of a patient and execution of nursing care plan for a patient for enrolled nurses and auxiliary nurses (South Africa 2005). Nurses are adhering to the scope by ensuring that nursing care plans are written and up to date. Implementation of nursing care plans demonstrates competencies possessed by nurses to provide quality patient care.

According to Laschinger and Fida, (2015:277) authentic leaders do not only share information and reveal their thought and emotions but provide knowledge of organizational goals and policies, as well as job related technical knowledge and expertise. Policy communication had a lowest mean score (2.4) in this subscale. Rispel and Bruce (2015:120) reports a disjuncture between nursing managers and frontline nurses. This is because; nurses only knew occupation specific dispensation policy among the four key health workforce policies. This was related to inadequate feedback and deliberate exclusion from the policy table

## 5.3.4 Resources and staffing

Variables for this subscale include nurse's clinical competencies, skill mix during delegation of duties, adequate essential equipment and enough nurses to get the work done and protective security measures. Proper training ensures clinical competencies. The results show the subscale of staffing and resources with a lowest mean (1.51) for enough nurses followed by 1.933 of adequate essential equipment followed by with the highest score (2.82) of delegation ensuring skill mix.

The National Department of Health agrees that health care worker numbers and quality of patient care and improved health outcomes are associated (South Africa 2011b: 13). Rabie et al (2016:38) found similar low score of this subscales were staffing and

resources score was 2.33 and nurse participation was 2.43, with the exception of 2.64 score for nurse manager ability and leadership.

Nurse managers use different types of resources such as human resources and equipment to ensure care of patients by distributing them to different units (Kelly & Tazbir 2014:16). In this subscale, there was no enough staff and essential equipment to ensure care. Laschinger and Fida (2015:277) indicate adequate staffing and access to materials money, supplies and equipment as important for accomplishing satisfactory patient care.

Rispel and Bruce (2015:118) indicates that absence of national norms and standards makes it difficult to determine the real shortage and the number of nurses required of all categories. According to Kelly & Tazbir (2014: 278) to have norms and standards for staffing, a staffing model is required to guide the amount and types of staff required for provision of care.

#### 5.3.5 Nurse physician relations

Working relation and teamwork exists in the work environment. Kelly and Tazbir (2014: 156) indicate that the role of nurse leaders in ensuring team work through developing knowledge, skills and attitudes of a team work and collaboration to empower nurses instead of disempowering them. The subscale for nurse physician relations scored means above 2.5 with the highest (2.96) of nurse and doctors working relations followed by that of teamwork (2.91) among nurses and collaboration (2.88) between nurses and doctors. The overall subscale score was 2.91 similar to the Havens et al (2012:521) findings where the score was highest among the subscales.

#### 5.4 CONCLUSIONS ON PRACTICE ENVIRONMENT

Copanitsanou et al (2017:172) indicate that in a safe working environment exist factors such as good professional relations, a supportive management style, a balanced work schedule and concordance between increases in nurse's work load and nurse's skill mix, adequate time to meet patient's needs, professional autonomy, and adequacy in resources and opportunities for professional advancement. The PE in this hospital is

poor characterised by lack of nurse participation in hospital affairs, non-supportive management, poor communication of policies and lack of essential equipment and safety.

#### 5.5 RECOMMENDATIONS

The hospital should strive towards improving the PE to a favourable one by:

- Consider implementing authentic leadership style to improve visibility, access and communication in order to create a sustainable supportive practice environment.
- Create an environment that promotes lifelong learning by an active staff development; the low number of nurses with speciality training needs to improve by approving nurses for study leave.
- Involve nurses in decision-making committees, by creating unit-based committee champions.
- Improve staffing by developing and motivate for staffing norms that can be a benchmark for the department.
- Provide for essential equipment.

#### 5.6 RECOMMENDATIONS FOR FURTHER RESEARCH

The researcher recommends a larger scale study by other researchers to validate the PE characteristics in other provinces and hospitals of the same level and other health care workers. With regard to the aging population, to increase the body of evidence that focuses on the age of nurses and their categories. Further research to include both qualitative and quantitative approaches, this will validate the findings to get a better picture of PE.

#### 5.7 LIMITATIONS OF THE STUDY

Out of the desired sample size of 207, only 135 nurses responded to questionnaires. Findings may not be generalised to other hospitals in the province but are significant to the hospital for improving its PE.

# 5.8 CONTRIBUTIONS OF THE STUDY

The study revealed the type of practice environment in a public hospital, which could affect nurses and patient outcomes.

It points out recommendations and provide an opportunity to enhance PE the in relation to nursing management, level of nurse participation in hospital affairs, inactive staff development, nursing foundations of quality care and the level of nurse physician relations in this hospital.

## 5.9 CONCLUDING REMARKS

Findings of this study reveal a PE that is mixed and may proceed to be unfavourable if recommendation are not implemented. An unfavourable PE has an effect on nurses and patient outcomes. Nursing management is key and central to creation of a favourable practice environment for it to benefit nurses and patient outcomes.

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#### **ANNEXURES**

#### **ANNEXURE A**

#### **Ethical Clearance Certificate**



#### RESEARCH ETHICS COMMITTEE: DEPARTMENT OF HEALTH STUDIES REC-012714-039 (NHERC)

6 December 2017

Dear Miss Mmatimeng Catherine Motaung

Decision: Ethics Approval

HSHDC/809/2017 Miss Mmatimeng Catherine Motaung

Student No.:4686-247-1 Supervisor: Prof ZZ Nkosi Qualification: PhD Joint Supervisor:

Name: Miss Mmatimeng Catherine Motaung

Proposal: Analysis of practice environment of nurses working in a public hospital

Qualification: MPCHS94

Thank you for the application for research ethics approval from the Research Ethics Committee: Department of Health Studies, for the above mentioned research. Final approval is granted from 6 December 2017 to 6 December 2019

The application was reviewed in compliance with the Unisa Policy on Research Ethics by the Research Ethics Committee: Department of Health Studies on. 6 December 2017

The proposed research may now commence with the proviso that:

- The researcher/s will ensure that the research project adheres to the values and principles expressed in the UNISA Policy on Research Ethics.
- 2) Any adverse circumstance arising in the undertaking of the research project that is relevant to the ethicality of the study, as well as changes in the methodology, should be communicated in writing to the Research Ethics Review Committee, Department of Health Studies. An amended application could be requested if there are substantial changes from the existing proposal, especially if those changes affect any of the study-related risks for the research participants.



University of South Africa Frailer Street, Mucideneut, Ridge, City of Tilhvane PO Box 392 UNISA 0003 South Africa Telephone: +27 12 429 3111 Facsimile: +27 12 429 4150

- The researcher will ensure that the research project adheres to any applicable national legislation, professional codes of conduct, institutional guidelines and scientific standards relevant to the specific field of study.
- 4) [Stipulate any reporting requirements if applicable].

#### Note:

The reference numbers [top middle and right corner of this communiqué] should be clearly indicated on all forms of communication [e.g. Webmail, E-mail messages, letters] with the intended research participants, as well as with the Research Ethics Committee: Department of Health Studies.

Kind regards,

Roof J. U. Rum

Prof JE Maritz CHAIRPERSON maritje@unisa.ac.za Prof MM Moleki
ACADEMIC CHAIRPERSON
molekmm@unisa.ac.za

Frof A Phillips

DEAN COLLEGE OF HUMAN SCIENCES

Approval template 2014

University of South Africa Prefler Street: Muchtieneuk Ridge, City of Tritwane Po Box 392 UNISA 0003 South Africa Telephone: +27 12 409 3111 floormile: +27 13 419 4150 **ANNEXURE B** 

LETTER OF REQUEST TO THE DEPARTMENT OF HEALTH, GAUTENG

52 Sister Baumgarten Dr

Danville X12

Pretoria West

0183

05 March 2018

The Department of Health Ethics Committee

Gauteng Department of Health

Private Bag X085

Marshalltown

2107

Dear Sir/Madam

REQUEST TO CONDUCT RESEARCH IN MAMELODI HOSPITAL: ANALYSIS OF

PRACTCE ENVIRONMENT OF NURSES

I hereby request permission to conduct research to analyse the practice environment of

nurses in the abovementioned hospital.

I am Operational Manager and have registered with University of South Africa for

Master's Degree of Public Health, under the supervision of Professor ZZ Nkosi.

The findings of the study may assist managers to close the gaps relating to the practice

environment of nurses. Attached is the research proposal, clearance certificate from

UNISA Department of Health Studies, Research Ethic Review Committee and consent

form.

Yours faithfully

**Mmatimeng Catherine Motaung** 

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# ANNEXURE C PERMISSION FROM THE DEPARTMENT OF HEALTH, GAUTENG



ANNEXURE D

LETTER OF REQUEST TO THE HOSPITAL CEO

52 Sister Baumgarten Drive

Danville X12

Pretoria West

0183

04 March 18

Chief Executive Officer

Mamelodi Regional Hospital

19472 Cnr Serapeng and Tsamaya Road

Mamelodi East

0122

Dear Sir/Madam

REQUEST TO CONDUCT RESEARCH IN MAMELODI HOSPITAL: ANALYSIS OF PRACTCE ENVIRONMENT OF NURSES

I hereby request permission to conduct research to analyse the practice environment of nurses in your hospital.

I am an Operational manager at Kalafong Provincial Tertiary hospital and have registered with University of South Africa (UNISA) for Master's Degree of Public Health, under the supervision of Professor ZZ Nkosi.

The findings of the study may assist managers to close the gaps relating to the practice environment of nurses. Attached is the research proposal, clearance certificate from UNISA, Department of Health Studies Research Ethics Review Committee and consent form.

Yours faithfully

**Mmatimeng Catherine Motaung** 

## ANNEXURE E PERMISSION FROM THE HOSPITAL CEO



### **MAMELODI HOSPITAL**

Private Bag x 0032 P.O. Rethabile 0122 Tel no. +27 12 841 8300/8301

#### DECLERATION OF INTENT FROM THE CLINICAL MANAGER

I do give permission to: Catherine Motaung

To do his research on: <u>Analysis of the practice environment of nurses in Public hospital</u> <u>GP 201803-014</u>

Other Comments or Conditions prescribed by the Clinical Manager:

1. Results of the research outcome to be made available to the hospital.

Signature:

Clinical Manager

Date: 12/04/2018

#### **ANNEXURE F**

#### PARTICIPANT'S INFORMATION LEAFLET

Study tittle: Analysis of the practice environment of nurses in a regional hospital Dear Participant

My name is Mmatimeng Catherine Motaung, I am currently studying Masters of Public Health with University of South Africa (UNISA) under the supervision of Prof ZZ Nkosi. The study has been approved by the UNISA Research Ethics Committee, Department of Health Studies, REC-012714-039 (NHREC).

I am conducting a study to analyse practice environment of nurses in this hospital with the purpose to identifying characteristics that need to be enhanced to contribute to positive practice environment.

You have been selected to be part of the study because the researcher believes you are the right person with experience and information required for this study.

Before you start responding to the questionnaire, you are requested to carefully read the information provided in this leaflet and sign the informed consent provided.

The information leaflet is intended to inform you so that you make an informed decision before taking part in the study.

Being part of the study is voluntary and you are under no obligation to consent to participation. You are also free to change your mind and withdraw any time. There are no consequences if you decide not to take part in the study or withdraw.

The questionnaire consists of 27 questions and it is estimated that it may take you a maximum of forty (30) minutes to complete it.

There are no foreseeable physical, psychological and economic risks involved in this study, however if you feel distressed after the study you are free to contact the researcher on the contact details provided.

There are no direct benefits to you from this study and results of the study will be communicated to management where areas of practice environment that need to be addressed and enhanced will be highlighted. Responding and answering the questionnaires will raise awareness of the kind of practice environment. It is the researcher's belief that responding to the questionnaire will empower you regarding the type of practice environment you are supposed to practice in and can negotiate for such an environment.

Any information obtained about this study will be kept confidential as the respondents are anonymous and not identified. Data obtained from the study will be used to write research report, journal articles, conference presentation and dissertations. Privacy of respondents and of the institution will be protected and no identifiable information will be used in such reports.

If you have any questions or concerns about the study and the way it has been conducted, you are free to contact the researcher and the UNISA Research Ethics Committee, Department of Health Studies.

Researcher: MC Motaung

Contact details: 0834311861

ANNEXURE G

**CONSENT FORM** 

Title of the study: Analysis of the practice environment of nurses in a public hospital

**Researcher:** Mmatimeng Catherine Motaung

**Dear Participant** 

I am a Masters of Public Health student at the University of South Africa (UNISA)

conducting a study to describe and explore the practice environment of nurses in a

public hospital.

The study has been approved by the Department of Health Studies University Research

Ethics Committee. The provincial department of health and hospital CEO of the

institution has granted me the permission to conduct the study.

You have been identified as the participant and are invited to participate in the research

because the researcher believes you are the relevant person to provide information

required for the research.

The study will analyse the characteristics of the practice environment and its results be

used to assist management to identify and address gaps in practice environment.

There are no financial costs to be incurred by the respondents in this study. There are

also no anticipated physical, emotional and psychological risks for this study. However,

you are free to discuss with the researcher any difficult feelings you may experience for

assistance.

To gather information from you, you are requested to respond to a questionnaire that

will last for a maximum of an hour. Information shared with the researcher will be

confidential and attempts will be made not to identify the research findings to

respondents.

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There are no compensations for participating in the study and your participation is voluntary. You may withdraw at any time without explaining reasons to the researcher and there are no penalties for withdrawing.

Questions relating to your participation in the research, you may contact the researcher,

Mmatimeng Catherine Motaung by calling, 0834311861.

By signing below, you are indicating that you have read and understood the contents of the consent and therefore agreeing to participate in the research study.

| Respondents name:        |         |
|--------------------------|---------|
| Participant's signature: | .Date:  |
| Researcher:              |         |
| Researcher's signature:  | . Date: |

### **ANNEXURE H QUESTIONNAIRE**

#### DATA COLLECTION QUESTIONAIRE

Dear participant

Thank you for signing the consent form, kindly proceed to the questionnaire below which will not take you more than 30 minutes to complete.

| Please |                | priate colu | mn with an X or | tick in the s | pace          |  |
|--------|----------------|-------------|-----------------|---------------|---------------|--|
| Sectio | n A: Demogra   | aphics      |                 |               |               |  |
| Age    |                |             |                 |               |               |  |
| Gende  | er             |             |                 |               |               |  |
|        | Male           |             | Female          |               |               |  |
| Rank   |                |             |                 |               |               |  |
|        | Auxiliary nurs | se          | Staff Nurse     | Profe<br>Nurs | essional<br>e |  |
|        |                |             |                 |               |               |  |
|        |                |             |                 |               |               |  |

#### Qualifications

| Certificate in nursing | Diploma in<br>Nursing/Midwifery |  | Post Basic<br>Diploma in<br>speciality<br>area, e.g.<br>Trauma, | Other, please specify |
|------------------------|---------------------------------|--|---|-----------------------|
|                        |                                 |  |   |                       |

#### Years of service in nursing

| 2-10 11-19years years |  | 20-29years | 30 years plus |  |
|-----------------------|--|------------|---------------|--|
|                       |  |            |               |  |

#### **SECTION B: Practice Environment**

Please complete the section below

Instructions

- Use an X for your response in the appropriate column
   Note that the following represents:

Strongly Disagree-SD=1

Disagree-D=2

Agree-A=3

Strongly Agree-SA =4

| SD=1  | D=2 | A=3              | SA=4                       |  |  |  |
|---|-----|------------------|----------------------------|--|--|--|
| Nurse Manager Ability, Leadership and Support of Nurses |     |                  |                            |  |  |  |
|   |     |                  |                            |  |  |  |
|   |     |                  |                            |  |  |  |
|   |     |                  |                            |  |  |  |
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|   |     |                  |                            |  |  |  |
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|   |     |                  |                            |  |  |  |
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|   |     |                  |                            |  |  |  |
| Affairs   |     |                  | '                          |  |  |  |
|   |     |                  |                            |  |  |  |
|   |     |                  |                            |  |  |  |
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|   |     |                  |                            |  |  |  |
|   |     |                  |                            |  |  |  |
|   |     |                  |                            |  |  |  |
|   |     | ship and Support | ship and Support of Nurses |  |  |  |

| 3. Nursing Foundations for Quality of Care                               |   |  |  |  |  |  |
|--|---|--|--|--|--|--|
|  | , |  |  |  |  |  |
| 3.1 Nursing care plans are written and                                   |   |  |  |  |  |  |
| up to date   |   |  |  |  |  |  |
| 3.2 New nurses are orientated  |   |  |  |  |  |  |
| 3.3 Vision and mission of the hospital                                   |   |  |  |  |  |  |
| is clear   |   |  |  |  |  |  |
| 3.4 Policies are communicated to   |   |  |  |  |  |  |
| nurses   |   |  |  |  |  |  |
| 4. Staffing and Resources  |   |  |  |  |  |  |
| 4.4 There are analysh nurses to get                                      | I |  |  |  |  |  |
| 4.1 There are enough nurses to get work done                             |   |  |  |  |  |  |
|  |   |  |  |  |  |  |
| 4.2 Nurses are clinically competent 4.3 Delegation ensures that there is |   |  |  |  |  |  |
| skill mix  |   |  |  |  |  |  |
| 4.4 There is adequate essential  |   |  |  |  |  |  |
| equipment to render quality care   |   |  |  |  |  |  |
| 4.5 Protective security measures are in                                  |   |  |  |  |  |  |
| place  |   |  |  |  |  |  |
| 5. Collegial nurse physician relations                                   |   |  |  |  |  |  |
|  |   |  |  |  |  |  |
| 5.1 Team work among nurses exists  |   |  |  |  |  |  |
| 5.2 There is collaboration between                                       |   |  |  |  |  |  |
| nurses and doctors   |   |  |  |  |  |  |
| 5.3 Nurses and doctors have a good                                       |   |  |  |  |  |  |
| working relationship   |   |  |  |  |  |  |

Thank you.

## ANNEXURE I TECHNICAL EDITING



To Whom It May Concern

## Re: Technical Editing

This letter serves to inform you that the Master thesis for Ms Mmatimeng Catherine Motaung, title: **ANALYSIS OF PRACTICE ENVIRONMENT OF NURSES IN PUBLIC HEALTH**, was technically edited and formatted.

Regard

Rinnie Matlou



# ANNEXURE J TURNITIN REPORT

