The impact of workplace relationships on nurse-reported quality of care and patient safety in the North West Province

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PLAGIARISM DECLARATION

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DEDICATION

To my late grandfather, my grams and my mom…

PREFACE

Study outline:

This study was written in article format according to the North-West University (NWU) Manual for Higher Degree Studies (NWU, 2020:2). This dissertation includes a separate manuscript that was written in accordance with the journal guidelines; the *Journal of Clinical Nursing* where the manuscript will be submitted for consideration of publication after the examination process. This format has led to unavoidable repetition in the manuscript. The following structure was followed:

CHAPTER 1: Introduction

CHAPTER 2: Literature review

CHAPTER 3: The impact of workplace relationships on nurse-reported quality of care and patient safety

CHAPTER 4: Evaluation of the study, limitations and recommendations for nursing practice, research, education, and policy

The researcher, *O.K.N Tlhako* with student number 25034715 and ORCID number 7146-1435 conceptualised, conducted and wrote the dissertation with the guidance and expert supervision of Professor S.K. Coetzee, co-supervised by Doctor O.J. Ajanaku. This study has conformed to ethical standards and the researcher ensured that accurate research methods were applied in the study. The researcher employed the NWU Harvard referencing style, guided by the North-West University Referencing Guide (2020).

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ABSTRACT

Aim and objectives: This study aims to investigate the impact of workplace relationships on nurse-reported quality of care and patient safety.

Background: There is a direct link between workplace relationships between nurses and physicians, their managers and nurse colleagues, and improved patient outcomes. However, there is a dearth of literature on this in developing countries.

Design: This study applied a cross-sectional survey design.

Method: A multilevel sampling method was applied. Purposive sampling was applied to the selection of the province, health sector and hospitals (n=3). All-inclusive sampling was applied to in-patient units of the selected hospitals and nursing staff in those units (n=236). Data was collected in April 2021 using validated instruments.

Findings: Nurse managers' ability, leadership, and support were not experienced as positively contributing to the practice environment and had most impact on quality of care and patient safety. Collegial nurse physician relationships were experienced as contributing positively to the practice environment, and had most impact on adverse events, namely medication errors, patient falls after admission and healthcare-associated infections. Increased exposure to COVID-19 patients resulted in more positive perceptions of nurses regarding collegial nurse-physician relationships. The most common perpetrators of workplace violence (WPV) were supervisors/managers, followed by nursing colleagues. On average participants experience more personal WPV than physical WPV. Personal WPV had more effect on quality of care and patient safety, and adverse events than physical WPV.

Conclusions: Positive workplace relationships or collegiality, especially nurse-manager relationships, appear to have the most impact on nurse-perceived quality of care and patient safety, followed by nurse-physician relationships, and then workplace violence.

Relevance to clinical practice: The focus of education interventions should be on developing leadership, and recruiting and retaining relationship-focused leaders, as leaders have the greatest impact on nurse-reported quality of care and patient safety.

Keywords: Collegial relationships, interprofessional collaboration, nurse-manager, nurse-nurse, nurse-physician, patient safety, quality of care, South Africa, workplace relationships, workplace violence.

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LIST OF ABBREVIATIONS

ANA	American Nurses Association
CEO	Chief Executive Officer
CSNS	Colleague Solidarity of Nurses Scale
COVID-19	Coronavirus disease 2019
COHSASA	Council for Health Service Accreditation of Southern Africa
CRM	Crew resource management
DoH	Department of Health
HNHN	Healthy Nurse, Healthy Nation
ICN	International Council of Nurses
IOM	Institute of Medicine
LME	Leader-member exchange
N	Population
n	Sample
NWU-HREC	North-West University Health Research Ethics Committee
NWP	North-West Province
NAQ-R	Negative Acts Questionnaire – Revised
NNCS	Nurse-Nurse Collaboration Scale
OMR	Optical mark recognition
PES-NWI-R	Practice Environment Scale of Nurses Work Index – Revised
RN4CAST	Registered Nurse Forecast
SANOPSys	South African Nurse, Organisation, Patient and System outcomes

SANC	South African Nursing Council
SARChI	South African Research Chairs Initiative
SBAR	Situation, Background, Assessment, and Recommendation
SEIPS	Systems Engineering Initiative for Patient Safety
SOPS	Survey on Patient Safety Culture
SPSS	Statistical Package for the Social Sciences
TeamSTEPPS	Team Strategies and Tools to Enhance Performance and Patient Safety
WHO	World Health Organization
WPV	Workplace violence

CHAPTER 1
INTRODUCTION AND BACKGROUND TO THE STUDY

1.1 INTRODUCTION

This study is part of the South African Nurse, Organisation, Patient and System outcomes (SANOPSys) research programme, which focuses on the quadruple aims of healthcare (Institute of Care Improvement, 2017):

1. Improve the patient's experience of care (Patient),
2. Reduce per capita cost of healthcare (Organisation),
3. Improve the health of populations (Systems), and
4. Improve nurses' and multidisciplinary team members' wellbeing (Nurse).

The focus of this study resides in aim one (1) (Improve the patient's experience of care) and aim four (4) (Improve nurses' and multidisciplinary team members' wellbeing). This study forms part of a larger study titled: Nurse outcomes, patient safety and quality of care in the public and private hospitals of South Africa (SA) (NWU-00033-19-A1). The project is part of the Albertina Sisulu National Research Foundation (NRF), South African Research Chairs Initiative (SARChI) in Nursing Science at North-West University (NWU). This study has ethical clearance as a sub-study of the larger study and is titled: The impact of workplace relationships on nurse-reported quality of care and patient safety in the North West Province and has ethical clearance as a sub-study (NWU-00270-21-A1).

1.2 BACKGROUND TO THE STUDY

Workplace relationships are unique interpersonal relationships or a recurring connection between two people at work with important implications for the individuals in those relationships and the organisations within which the relationships exist and develop (Sias, 2005:377; Hanafin *et al*., 2022:394). Colbert *et al.* (2016:732) further explain that workplace relationships service a broad range of functions, including task assistance, career advancement and emotional support. There are different types of workplace relationships, including supervisor-subordinate, peer-co-worker, workplace friendships, romantic relationships, and customer relationships, which are multifaceted and can be either positive or negative. Workplace relationships function as decision-making, influence-sharing, and

instrumental and emotional support systems. As such, the quality of these relationships has important consequences for employees, customers, and the organisation.

This study focuses specifically on workplace relationships in terms of nurse-physician, nurse-manager and nurse-to-nurse workplace relationships and will focus on both positive workplace relationships or collegiality, as well as negative workplace relationships or workplace violence (WPV). It will also focus on how workplace relationships impact on quality of care and patient safety.

1.2.1 Collegial workplace relationships: Nurse-physician relationship

Collegial workplace relationships or collegiality can be defined as a positive interpersonal working relationship (Menard, 2014:6). This is a multifaceted idea that includes self-assurance and trust, group efforts to achieve goals, open communication, mutual assistance, mutual support, innovation, freedom from threat, friendliness, and enjoyment (Menard, 2014:6). Employees are more informed and less unclear about tasks and goals when workplace interactions are of a higher calibre, which improves perceived performance (Tran *et al.*, 2018:2). Tran *et al.* (2018:2) further emphasised how healthy workplace relationships have received a lot of interest lately, since they are associated with benefit to employees and achieving the goals of the organisation.

Decades of research on nurse-physician workplace relationships showed that the main facilitators and barriers influencing the relationships included: (1) communication and collaboration; (2) roles and responsibilities; (3) hierarchy and education, and (4) liability (McInnes *et al.,* 2015:1973; Wynn & Holden, 2020:01). Specifically, communication and collaboration between the two (2) professions have been deemed most critical to improved patient and nurse outcomes, a positive practice environment and decreased cost of healthcare (Clausen *et al.*, 2017:2156; Goda *et al.*, 2018:14; Boev & Xia, 2015:67).

In systematic reviews exploring nurses' and physicians' perceptions of nurse-physician collaboration, it was found that nurses had a more positive attitude toward collaboration than physicians did (Tang *et al.*, 2013:291; House *et al.*, 2017:165). In general, nurses wanted equity in the (1) decision-making process, (2) coordination of patient care, and (3) development of the patient care plan. In contrast, physicians considered themselves primary decision-makers and ultimately responsible for patient care (Tang *et al.*, 2013; House *et al.*, 2017:165. Murata (2014:45) emphasizes how nurses tend to perceive patients as a whole and take into account their sentiments and emotions, in contrast to doctors who base their care on clinical conditions and medical indications as evaluated by the many devices and machines

that monitor a patient's state. Seamless collaboration between nurses and doctors is thus necessary for effective, efficient, and holistic healthcare delivery.

Positive relationships between nurses and physicians are associated with improved nurse-perceived patient safety and quality of care (Wynn & Holden, 2020:1; ; Norful *et al.*, 2018:256; Laschinger, 2014:285; Estabrooks *et al.*, 2007:74); Laschinger, 2014:285; Norful *et al.*, 2018:256), and better patient outcomes (Manojlovich & DeCicco, 2007:540; Shen *et al.*, 2011:350, Goda *et al*., 2018:14; Hanrahan *et al*., 2010:198; Tervo-Heikkinen *et al*., 2008). Specific patient outcomes include; less nurse-reported incidence of medication errors (Fasolino *et al.*, 2012:9 & Manojlovich & DeCicco, 2007:540)), ventilator-associated pneumonia, and catheter-associated sepsis (Manojlovich & DeCicco, 2007:540), reduced rates of morbidity and mortality, avoidable medical errors (Rosenstein, 2002: page numbers are available; Rosenstein & O'Daniel, 2006; Smith, 2012: 172; Goda *et al.*, 2018:14), compromise in patient care or safety (Rosenstein & O'Daniel, 2006), and increased adherence to recommended care guidelines, increased patient access to care and continuity of care (Norful *et al*., 2018:250; Wynn & Holden, 2020:1).

The above studies were all conducted in developed countries, such as the United States of America (USA) and Canada. Unlike their other international counterparts, nurses' perceptions of nurse-physician communication were rated lower than those of physicians in Ethiopia (Hailu *et al.*, 2016:2). Similarly, a qualitative study conducted in two (2) hospitals in two (2) other East African countries found that poor teamwork, and weak communication and coordination between professions, teams, and units negatively impacted patient safety (Aveling *et al.*, 2015:2). In a South-West Nigerian study Falana *et al.* (2016:171) found that although collaboration is very important for quality patient care, effective collaboration is inhibited by the conflict and acrimony which have existed between these professionals for ages. This is concurrent with the findings of other international studies.

1.2.2 Collegial workplace relationships: Nurse-manager relationship

Nurse management, leadership, and support of nurses are highly correlated with nurse outcomes, perceptions of the practice environment (Cummings *et al.*, 2018:20; Cummings *et al.*, 2010), quality of care and patient safety (Wong *et al.*, 2013:709; Wong & Cummings, 2007:508) and nurse and patient satisfaction (McCay et al., 2018:361). AL-Dossary *et al.* (2016:256) emphasises the importance of a positive relationship between nurses and their managers, as this serves to achieve safe care and optimal patient outcomes. The impact of nurse managers on the quality of care and patient safety is either through direct or indirect means.

An indirect impact of nurse managers is through outcomes such as staff satisfaction with job factors, staff health and wellbeing, staff productivity and effectivity; and processes such as staff's relationships with work, their colleagues, and the organisation (Cummings *et al.*, 2018:20; Cummings *et al.*, 2010:363). In a systematic review conducted by (Wong *et al.* (2013:710), an indirect association of leadership with quality of care and patient safety was found in patient mortality (Houser, 2003; Capuano *et al.*, 2005:229), complications of immobility (Anderson *et al.*, 2003:12), medication errors (Houser, 2003; Capuano *et al.*, 2005:229; Paquet *et al.*, 2013:78; Vogus & Sutcliffe, 2007:3418), patient falls (Houser, 2003; Capuano *et al.*, 2005; Taylor *et al.*, 2012), pressure ulcers (Taylor *et al.*, 2012), hospital-acquired infections (Houser, 2003; Capuano *et al.*, 2005) and length of hospital stay (Paquet *et al.*, 2013). Direct impact refers to impact on quality of care and patient safety, that is caused immediately and obviously by the nurse manager. A direct impact of nurse managers' leadership on quality of care and patient safety was found in relation to patient satisfaction (Doran *et al.*, 2006; Kroposki & Alexander, 2006; Havig *et al.*, 2011), patient mortality (Cummings *et al.*, 2010), restraint use (Anderson *et al.*, 2003; Castle & Decker, 2011), fractures (Anderson *et al.*, 2003), catheter use (Castle & Decker, 2011) and inadequate pain management (Castle & Decker, 2011).

Furthermore, several studies in South Africa have linked leadership to service delivery (Govender *et al.*, 2018:157) the practice environment (Klopper *et al.*, 2012; Coetzee *et al.*, 2013) and nurse outcomes (Sojane *et al.*, 2016:2), but few have looked at the direct impact of leadership, management, and support of nurses on quality of care and patient safety.

1.2.3 Collegial workplace relationships: Nurse-nurse relationships

Minimal information on the connection between nurse-nurse relationships and nurse, patient and organisational outcomes were found. A few studies showed an association between nurse-nurse relationships and job satisfaction (Ylitormanen *et al.*, 2022; Masum *et al.*, 2016) patient safety perceptions (Özgönül *et al.*, 2022:), missed nursing care (Hassona & El-Aziz, 2017), and organisational climate, organisational commitment, supportive climate and innovative climate (Kılıç & Altuntaş, 2019:363). Interestingly, however, there was no association between nurse-nurse collaboration and medical errors (Lee & Hwang, 2019). It is clear that this topic has not been greatly explored in research, and that findings are diverse.

It is, however, expected from colleagues that they share authority, power, and responsibility to achieve positive outcomes and common goals (Gianakos, 1997; Sepasi *et al.*, 2016). These are strengthened through the following intra-professional collaborative practice standards: 1) the establishment of a supportive learning environment, 2) conflict management, and 3)

collaborative practice (Registered Nurses' Association of Ontario, 2016). These studies show that strong organizational leadership is necessary for the development of staff leadership, particularly effective communication strategies, which are crucial (Mabona *et al.,* 2022:2). In addition to having a large amount of professional autonomy and control over their working environment, nurses must actively engage in decision-making processes involving patient care (Mabona *et al.,* 2022:2). Teamwork, support, and care were also discovered to be favourably connected with job satisfaction by Lin & Hsu (2020). Ylitormanen *et al.* (2022:07) support the above by emphasising the experiences of nurses regarding nurse-nurse collaboration and how it is necessary in order to promote relationships within the profession, collaboration, quality of care, and job satisfaction. Ylitormanen *et al.* (2022:07) further found that collaboration and interaction skills development among nurses is imperative, as a positive work environment fosters open communication and constructive criticism, and teamwork which improves job satisfaction and, as a result, the standard of patient care and patient safety.

It is clear from the above discussion that positive collegial relationships or collegiality impact on nurse, patient and organisation outcomes. However, the literature also abounds on workplace violence (WPV) and its impact.

1.2.4 Workplace violence

The World Health Organization (WHO) defines WPV workplace violence as: “Incidents where staff is abused, threatened or assaulted in circumstances related to their work, including commuting to and from work, involving an explicit or implicit challenge to their safety, well-being or health” (WHO, 2002:4).

The two (2) dimensions of WPV include horizontal and vertical violence. While horizontal violence only happens between healthcare staff or patients themselves, vertical violence involves both healthcare workers and patients (Bernardes *et al.,* 2020:251). Research has revealed a more comprehensive understanding of lateral violence, also known as horizontal violence (Cantey, 2012:3). A pattern of aggressive behavior, such as bullying and intimidation, between nurses who are at the same rank level in the hierarchy is known as horizontal violence (Hinchberger, 2009). Essentially, one nurse is perpetuating violence against another nurse who is a peer, which is known as nurse-to-nurse violence. In South Korea, 82% of nurses indicated being exposed to some form of horizontal violence (Park *et al.*, 2015:90), while in Cape Town 44% of nurses working in public hospitals had experienced horizontal violence in their work environment (Rust, 2018:1).

Vertical violence is a pattern of behavior that is directed at someone who has a position at a lower or higher level of the hierarchy, however it is most frequently used against subordinates. Several studies have identified nurse managers and senior staff members (Allen *et al*., 2015; Ostrofsky, 2012), as well as physicians (Oludare & Kotronoulas, 2022) as perpetrators of WPV. Nursing staff frequently work under a variety of authorities and must deal with contentious demands from doctors and managers, respectively, only to find that conflicts and increased pressure are the result (Waschgler *et al.*, 2013:2390). According to the American Nurses Association (ANA) 2019–2020 and Healthy Nurse, Healthy Nation (HNHN) Survey, nearly a quarter (23%) of nurses said they have experienced bullying from those in authority (or vertical violence) (Grenny *et al.*, 2020). Grenny *et al.* (2020) further explain that when stress increases, as it has during the COVID-19 pandemic, those with greater perceived power often express more aggression, and those who perceive themselves as less powerful often believe that their only option is to submit and abide.

The two (2) forms of WPV are physical and psychological abuse. Physical WPV refers to the use of physical force against a person, including shoving, biting, pinching, shooting, kicking, slapping, stabbing, and sexual assault, regardless of whether an injury was caused (Abbas & Selim, 2011:1050). These authors go on to define psychological abuse as the use of personally offensive words, such as generally abusive spoken obscenities and foul language, or as an indication of a lack of respect for a person's dignity and worth manifested in abusive, humiliating, intimidating, ridiculing, and insulting behaviours (Abbas & Selim, 2011:1050). Khoshknab *et al.* (2015:01) are of the view that the phenomenon of physical and psychological violence is common, but psychological violence occurs more than other types. According to a recent systematic review (Mobaraki *et al.,* 2020), the most prevalent forms of WPV are, in order of prevalence from most common to least, verbal, physical, psychological, and horizontal violence. A substantial amount of research has been done concerning WPV and its effect on the nurse, but less is known about its eroding effect on quality of care and patient safety (Park *et al.*, 2015:93).

In a systematic review conducted by Lanctôt and Guay (2014:494), the outcomes of WPV included seven categories of consequences, namely: (1) physical, (2) psychological, (3) emotional, (4) work functioning, (5) relationship with patients/quality of care, (6) social/general, and (7) financial stress. Furthermore, Lanctôt and Guay (2014:494) found that psychological (e.g. posttraumatic stress, depression) and emotional (e.g. anger, fear) consequences and impacts on work functioning (e.g. sick leave, job satisfaction) are the most frequent and important effects of WPV. This is similar to the findings of a more recent systematic review (Mobaraki *et al*., 2020), that found the most common consequences of WPV to be diminished

physical and emotional wellbeing, linked to an increase in job dissatisfaction, burnout, absenteeism, and resignation from work.

Lanctôt and Guay (2014:498), found that among the selected articles in their review, only 10 addressed issues related to relationships with clients or quality of care (Arnetz & Arnetz, 2001; Early & Williams, 2002; Eker *et al*., 2012; Gates *et al*., 2011; Lawoko *et al*., 2004; McKenna *et al*., 2003; Needham *et al*., 2005a; Roche *et al*., 2010; Ünsal Atan *et al*., 2012). The percentage of WPV victims who said they were afraid of their patients ranged from 4.3% to 73%. Six (6) studies found that the standard of patient care had decreased (Arnetz & Arnetz, 2001; Early & Williams, 2002; Eker *et al.,* 2012; Gates *et al*., 2011; Lawoko *et al.,* 2004; McKenna *et al.,* 2003; Roche *et al.,* 2010). However, one (1) study discovered that being a WPV victim had no impact on the standard of nursing care (Early & Williams, 2002). According to Eker *et al.* (2012), 50.8% of WPV victims modified their behavior at work. Fifteen per cent of WPV victims reported that they no longer enjoyed dealing with patients (Arnetz & Arnetz, 2001). The amount of time nurses spent with patients, the activities they completed, and their interest in patients all appeared to be impacted by WPV exposure (Eker *et al*., 2012). After examining the effect of WPV on patient safety on a global scale, it was found that there was a positive correlation between WPV and patient falls, as well as between WPV and medication errors (Vessey *et al.*, 2010:146).

With most of the abovementioned studies confirming the profound and multiple effects of WPV on nurses (physical, psychological, emotional, work functioning, social and financial), less is known about the effect of WPV on quality of care and patient relationships, and there are limited studies on patient safety.

1.3 PROBLEM STATEMENT

A large of international studies show a direct link between collegial workplace relationships between nurses and physicians, their managers and nurse colleagues, and improved nurse, patient, and organisational outcomes. Specifically with regard to patient outcomes, collegial workplace relationships improved nurse-reported patient safety and quality of care (Fasolino *et al.*, 2012; (Manojlovich & DeCicco, 2007:540; Özgönül *et al.*, 2021), ventilator-associated pneumonia, and catheter-associated sepsis (Manojlovich & DeCicco, 2007:540), and reduced rates of morbidity and mortality (Rosenstein & O'Daniel, 2006; Cummings *et al.*, 2010; Smith, 2012; Goda *et al.,* 2018:14), avoidable medical errors (Rosenstein & O'Daniel, 2006; Smith, 2012; Goda *et al.*, 2018:14), and compromised patient care or safety (Rosenstein & O'Daniel, 2006), increased adherence to recommended care guidelines, increased patient access to

care and continuity of care (Norful *et al.*, 2018; Wynn & Holden, 2020:1), increased patient satisfaction (Doran *et al*., 2006; Kroposki & Alexander, 2006; Havig *et al.*, 2011), decreased restraint use (Anderson *et al.*, 2003, Castle & Decker, 2011), fractures (Anderson *et al.*, 2003), and catheter use (Castle & Decker, 2011), and improved pain management (Castle & Decker, 2011), with less missed nursing care (Hassona & El-Aziz, 2017). However, there is a dearth of such literature in developing countries. Furthermore, it is well documented that hospital environments are often plagued by horizontal and vertical WPV, in the form of physical and psychological abuse, which disrupts collegial workplace relationships and healthcare delivery (Sahay *et al.*, 2015:23). Although much is published on the effect of WPV on the nurse, less is known about the effect on quality of care and patient safety (Allen *et al.*, 2015:382; Elmblad, 2013:444; Lanctôt, & Guay., 2014:494; Vessey *et al.*, 2010:3), especially in the African context.

1.4 RESEARCH AIM AND OBJECTIVES

1.4.1 Research questions

1. What are nurses' perceptions of workplace relationships with physicians, their nurse managers, and colleagues?
2. What is the status of nurse-reported quality of care and patient safety?
3. What is the impact of workplace relationships on nurse-reported quality of care and patient safety?

1.4.2 Research aim

This study aimed to investigate the impact of workplace relationships on nurse-reported quality of care and patient safety.

1.4.3 Research objectives

1. To describe nurses' perceptions of workplace relationships with physicians, their nurse managers, and colleagues.
2. To describe the status of nurse-reported quality of care and patient safety.
3. To determine the impact of workplace relationships on nurse-reported quality of care and patient safety.

1.5 PARADIGMATIC PERSPECTIVE

Paradigms are preferred ways of understanding reality, values associated with areas of research, building knowledge, and gathering information about the world (Tracy, 2013:38). In this study the researcher subscribes to the theoretical framework of Donabedian's (2005) structure, process and outcome model and Battles' (2006) quality and safety by design, as modified by Tvedt *et al.* (2012). According to Hanks (2017:68) a theoretical framework is a guide that assists to frame and organise a problem, phenomenon, or question.

1.5.1 Methodological assumptions

In this model, the focus is on achieving good nurse-reported patient outcomes (inner circle), which is influenced by the hospital structure (outer circle) and work environment processes (middle circle). This study focused on good nurse-reported patient outcomes in terms of quality of care and patient safety (which includes self-care ability and low frequency of adverse events), as impacted by the process of the practice environment, with a specific focus on workplace relationships (inclusive of physicians, nurse managers and nurse colleagues).

1.5.2 Conceptual definitions

Workplace relationships

Workplace relationships are unique interpersonal relationships or a recurring connection between two (2) people at work with important implications for the individuals in those relationships and the organisations within which the relationships exist and develop (Sias, 2005:377). This study focuses specifically on workplace relationships in terms of nurse-physician, nurse-manager and nurse-to-nurse workplace relationships and will focus on both positive workplace relationships or collegiality, as well as negative workplace relationships or workplace violence (WPV).

Quality of care

The Institute of Medicine (IOM) (2001) describes quality of care as: "doing the right thing, at the right time, in the right way, for the right person, and having the best possible results". Pronovast & Vohr(2011:348) define quality measurement as the "lenses through which we quantitatively determine quality". Nursing metrics, according to Foulkes (2011:40), are means to evaluate the caliber of nursing care by maintaining a close eye on patient outcomes and their experience. In this study, quality of care was measured according to the theoretical

framework of Tvedt *et al.* (2012), which included nurses' reports of the quality of care in their units; recommendation of the unit to friends and family; hospital management's ability to resolve problems related to the quality of care; and patient and caregivers' readiness after discharge.

Patient safety

According to the WHO (2011), patient safety is the prohibition of mistakes and unfavorable medical outcomes. Additionally, Scott *et al*. (2003:13) assert that the goal of patient safety necessitates error-free treatment or perfect care. In this study, patient safety was measured according to the theoretical framework of Tvedt *et al.* (2012), which included nurses' reports of patient safety and patient safety culture in their units, as well as the occurrence of a variety of adverse events.

Registered Nurse

A person who is authorized to practice nursing or midwifery under section 31(1) of the Nursing Act, No. 33 of 2005 (South African Nursing Council [SANC], 2019).

Community Service Nurse

A citizen of South Africa planning to register as a registered nurse for the first time is required to complete one year of compensated community service at a public health facility (SANC, 2019).

Enrolled nurse

A person who has received the necessary training to practice basic nursing in the manner and to the required degree is an enrolled nurse (also known as a general nurse nowadays) (SANC, 2019).

Enrolled nurse assistant

A person with basic nursing education and possesses the foundational knowledge and abilities needed to carry out the nursing duties allocated to them (SANC, 2019).

Physician

A certified medical professional who has completed medical school or received their medical license from the respective board (Medical Dictionary, 2011).

Nurse manager

The person designated by the organization as a nurse manager or supervisor is one who is viewed by the nurses as having 24-hour managerial responsibility, jurisdiction, and liability for all nurses (Wong *et al*., 2013:709). In this study the nurse manager will be the unit managers of each ward in the selected hospital.

Workplace violence

WPV refers to any physical assault, belligerent behavior, or verbal abuse that takes place in the workplace. Workplace violence includes not only physical assault but also psychological assault, abuse, bullying, sexual and racial harassment (Sharma & Sharma, 2016:1167).

Nurse colleague

Nurse colleagues refer to other nurses, including professional nurses and midwives, community service nurses, enrolled nurses and midwives, and enrolled auxiliary nurses (Haddad & Geiger, 2022; *Nursing Act*, No. 33 of 2005).

Collegial relations

Collegial workplace relationships or collegiality can be defined as a positive interpersonal working relationship (Menard, 2014:06). This is multifaceted and includes self-assurance and trust, group efforts to achieve goals, open communication, mutual assistance, mutual support, innovation, freedom from threat, friendliness, and enjoyment (Menard, 2014:6).

1.6 STUDY DESIGN

The research design in this study is a cross-sectional survey design. Burns and Grove (2010) claim that cross-sectional designs are used to look at groups of subjects at the same time who are at different developmental stages in order to infer trends across time. In this study, data was collected at one point in time from all categories of nurses regarding their perceptions of workplace relationships and its impact on nurse-reported quality of care and patient safety in the North West Province (NWP). Descriptive, and contextual strategies were also used.

With descriptive research, the researcher can respond to the when, what, where, and how inquiries associated with a particular issue and wants to methodically describe an event or occurrence. Before the why questions can be answered, these actions are crucial (McCombes, 2019). The phenomenon of interest is the relationship between the different variables, namely workplace relationships, quality of care, and patient safety in public hospitals

in the NWP. Secondly, this study is contextual in nature because it focused on public hospitals in the NWP.

1.7 STUDY CONTEXT

The larger study was focused in all nine (9) provinces of South Africa (KwaZulu-Natal, Western Cape, Eastern Cape, Northern Cape, North West, Limpopo, Gauteng, Limpopo, and Free State) in the public sector. Four (4) hospital tiers, namely central, tertiary, regional, and district hospitals make up the public sector. These facilities provide a variety of healthcare services, from preventative to curative. District hospitals receive referrals from clinics and community health centres and offer generalist assistance to them. General practitioners or primary healthcare nurses are responsible for providing medical care. Where healthcare customers need the experience of teams led by resident specialists, a regional hospital accepts referrals from and offers specialized support to a district hospital. Any institution offering tertiary health education in the province is a tertiary institution. These hospitals comprise of referral units with a very high level of specialization, which combined create a setting for multispecialty clinical services, innovation, and research. Provincial Tertiary Hospitals refer patients to these hospitals. In this sub-study only data from NWP was used, which included the largest tertiary hospital, the closest surrounding regional hospital, and the nearest district hospital in the public sector. There is no central hospital in this province.

The NWP is bounded by Botswana to the North and North-West, Limpopo Province to the North-East, Gauteng Province to the East, Free State Province to the South-East, and Northern Cape Province to the South-West. The provincial capital is Mafikeng, and the province is divided into four (4) districts: Dr Ruth Segomotsi Mompati District, Dr Kenneth Kaunda District, Ngaka Modiri Molema District, and Bojanala Platinum District. The North West Provincial Government has 23 public hospitals.

1.8 POPULATION AND SAMPLING

A sample is a particular chosen group from which you gather data, whereas a population is an entire group from which you aim to draw conclusions. The sample size is always smaller than the total population size (Bhandari, 2020). According to Burns and Grove (2010), a population is made up of all the things or people that the researcher has an interest in. The population of this study consisted of all nurses (professional nurses and midwives, community service nurses, enrolled nurses, and enrolled auxiliary nurses) working in the selected public hospitals in the NWP.

The study sample is a subset of the population selected for the study to learn more about the phenomenon being investigated or explicated. (Brink *et al.*, 2012:132; Grove *et al.,* 2020).

1.8.1 Sampling technique

For the overall study, a multi-level sampling technique was applied in the selection of the provinces, hospitals, units, and nursing personnel.

Province: South Africa has nine (9) provinces, as mentioned earlier. The overall study applied an all-inclusive sampling of the provinces (N=9), but this sub-study only utilised the NWP (purposive sampling).

Sectors: South Africa has a private and a public health sector. In this study, the public health sector was purposively selected.

Hospitals: In the public sector, data was collected from the largest tertiary hospital in the NWP, as well as the closest regional and district hospital. There is no central hospital in this province.

Units: An all-inclusive sampling method of in-patient units (including theatre and emergency departments) of the selected hospitals was applied.

Nursing personnel: An all-inclusive sampling of professional nurses and midwives, community service nurses, enrolled nurses and midwives, and enrolled auxiliary nurses of the above-mentioned selected units was applied.

1.8.2 Sampling size

All-inclusive sampling of all categories of nurses from all units from all selected hospitals was applied (n=236).

1.8.3 Inclusion criteria

Inclusion criteria refer to the relevance of the participants to the research, participants' prior knowledge, ability to participate in the research and ability to reflect on the research study (Botma *et al.,* 2010:200). Nurses who have worked in the selected hospitals for at least three (3) months or more were included, as nurses with experience of less than three months would not be able to objectively assess workplace relationships, quality of care and patient safety of the specific unit.

1.8.4 Exclusion criteria

Exclusion criteria refer to those characteristics that disqualify prospective subjects from inclusion in the study (Losch, 2008:15). Student nurses were excluded, as they rotate between units and hospitals, and therefore would not be able to objectively assess workplace relationships, quality of care and patient safety in a specific unit or hospital.

1.9 RECRUITMENT OF PARTICIPANTS

This study received ethical approval from the North-West University Health Research Ethics Committee (NWU-HREC) (NWU-000270-21-A1) as a sub-study of the larger study (Addendum B). The larger study obtained ethical approval from the NWU-HREC (NWU-00033-19-A1) on 22 March 2020 (Addendum A), the NWP Department of Health (DoH) (Addendum C) and goodwill consent from the three (3) participating hospitals (Addendum D). The ethical considerations of the study adhere to the principals of ethics as stipulated by the DoH ethics in health research document (DoH, 2015).

After goodwill permission had been received from the CEOs/hospital managers (gatekeepers) of the selected hospitals (n=3), the researcher was referred to the nursing service managers (mediators). The researcher was in contact with the mediators via email and telephone, to elaborate on the study in detail, and educated the mediators on their role in the study. To accommodate each institution's individual needs, input from the mediator was sought and welcomed. Furthermore, it was expected of the mediators that they select an independent person to assist with data collection, informing them about the research project and what it entailed. If the hospital was not in a position to appoint such an independent person, then the principal investigator employed a research assistant who met these requirements. The chosen independent person was prohibited from being associated with the study or to be in a position of authority.

The researcher arranged to meet the independent person at a convenient time for training on the research project, recruitment of participants, signing of informed consent forms, and distribution of the surveys. It was expected of the independent person to sign a confidentiality agreement found in addendum... The researcher explained the project to possible participants in each of the units of the selected hospitals, in the presence of the independent person. The independent person then explained the process of informed consent. The informed consent form was handed out to the potential participants in written form and the participants had the consent form for a minimum of 24 hours, to allow them adequate time to make an informed decision on their willingness to participate.

1.10 PROCESS OF OBTAINING INFORMED CONSENT

After the researcher had explained the research project, and the independent person had explained the informed consent process, the informed consent forms were provided to possible participants. The informed consent forms were left with the potential participants for a period for a minimum of 24 hours. After this period, the researcher and the independent person returned to the unit, and willing participants were asked to complete the informed consent form. The informed consent form was completed in the presence of the researcher and the independent person in a private office, where all COVID-19 protocols were in place: hand hygiene, social distancing and always wearing a mask. All stationery items, like pens, were disinfected before and after use. The forms were sealed in a DL envelope and remained with the independent person. The independent person provided the willing participants with a survey, NWU-branded pen, and sachet of coffee. All these tokens were placed in an unsealed C4 envelope, along with a separate leaflet explaining entry into a lucky draw (Addendum L). The participants had 2 (2) days to complete the survey, at any time and place that was convenient to them. Even after accepting to complete the survey, the participants were able to withdraw from the study without penalty at any time if they wished to do so.

1.11 DATA COLLECTION

The methodical gathering of information that is pertinent to the study's specific aims, questions, or hypotheses is known as data collection. According to Burns and Grove (2016:695), quantitative studies typically collect data using numerical methods. Following is a discussion of how the data for this study were gathered.

1.11.1 Data collection tool

Table 1.1: Data collection instruments and tools

Construct measured and instrument	Subscales: # of items and scale range	Previous reliability and validity
Practice Environment Scale of the Nurse Work Index (PES-NWI) evaluates the organisational characteristics of a work setting that facilitate or constrain professional nursing practice (Lake, 2002). Sample Item: "Adequate support services allow nurses to spend time with patients ."	Nurse Manager Ability, Leadership and Support of Nurses: 6 Collegial Nurse-Physician Relations: 6 **Overall: 12** (1) Strongly Disagree to (4) Strongly Agree	A meta-analysis of 51 studies representing a total of 80,563 subjects was conducted. Scores on the PES-NWI are valid and reliable for measuring the nursing practice environment across samples in the United States and non-US countries (Zangaro & Jones, 2019).
<u>Workplace Relationships</u> **Negative Acts Questionnaire (NAQ-R)** is a measure of perceived bullying and victimisation at work (Einarsen *et al*., 2009). Sample Item: "Being shouted at or being the target of spontaneous anger (or rage)." Question about the source of bullying: "Which persons most often perform these acts of WPV towards you?"	Physically intimidating bullying: 3 Person-related bullying: 12 (1) Never to (5) Daily Source of workplace violence: 1 (1) Physicians to (5) Supervisors	**Cronbach's alpha reliability** Physically Intimidating bullying: α = 0.83 Person-related bullying: α = 0.96 **Validity** Confirmatory factor analysis supported a three-factor structure. This instrument has demonstrated good construct validity (Einarsen & Hoel, 2001).

Construct measured and instrument	Subscales: # of items and scale range	Previous reliability and validity
<u>Quality of Care</u> **RN4CAST** Four questions measuring quality of care.	**1. In general, how would you describe the quality of nursing care delivered to patients in your work setting?** Excellent, Good, Fair, Poor **2. Would you recommend where you work to your family and friends needing healthcare?** Definitely yes, Probably yes, Probably no, Definitely no **3. How sure are you that management will act to resolve problems in patient care that nurses identify?** Very confident, Confident, somewhat confident, Not at all confident **4. How confident are you that your patients and their caregivers can manage their care after discharge?** Very confident, Confident, Somewhat confident, Not at all confident	Used as single items in RN4CAST studies in Europe (Sermeus *et al*., 2011), North America (Aiken *et al*., 2013), Asia (Liu *et al*., 2012), and South Africa (Coetzee *et al*., 2013).

Construct measured and instrument	Subscales: # of items and scale range	Previous reliability and validity
Patient Safety **RN4CAST** Two questions measuring patient safety. Sample item: “Please give your current practice setting an overall grade on patient safety.” 8 items from the Agency for Healthcare Research and Quality (AHRQ) Survey on Patient Safety Culture (SOPS) Hospital Survey. Sample item: “Relies too much on temporary, float or agency staff.”	Patient safety: 2 Patient safety culture: 8 (1) Excellent to (5) Failing 1) Strongly agree to (5) Strongly disagree	Used as single items in RN4CAST studies in Europe (Sermeus *et al*., 2011), North America (Aiken *et al*., 2013), Asia (Liu *et al*., 2012) and South Africa (Coetzee *et al*., 2013).
Adverse events **RN4CAST** 7 questions from original RN4CAST study	1. Medication errors 2. Patient falls with injury after admission 3. Healthcare-associated infection 4. Treatments/procedures resulting in unintended injury 5. Work-related physical injuries to nurses 6. Complaints from patients or their families 7. Verbal abuse from patients or their families 8. Physical abuse from patients or their families 9. Needlestick injuries to nurses (0) Never to (5) Daily.	Used as single items in RN4CAST studies in Europe (Sermeus *et al*., 2011), North America (Aiken *et al*., 2013), Asia (Liu *et al*., 2012) and South Africa (Coetzee *et al*., 2013).

Construct measured and instrument	Subscales: # of items and scale range	Previous reliability and validity
DEMOGRAPHICS		
<u>Demographics</u> 8 questions	1. What is your gender? 2. What is your age? 3. What is your nurse category? 4. Specialty area of your current unit? 5. Do you have a Bachelor's degree in Nursing? 6. What is your current employment status? 7. How many years have you worked as a registered nurse? 8. Do you have specialty training in nursing?	

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1.11.2 Data analysis

The paper-based surveys were completed in optical mark recognition (OMR) format, so that they could be scanned using an OMR scanner. This ensures that data was captured correctly and expediently. The captured data was then exported to a Microsoft Excel Spreadsheet, where the hospitals and units were coded to ensure anonymity of the data, before sending it to the statistician for analysis. The data used in this study referred only to the relevant province and included only variables applicable to this study namely: personal demographics, workplace relationships, quality of care, patient safety and adverse events.

Data were analysed using the computer software program SPSS version 27 (SPSS Inc., 2021). Descriptive statistics were used to present the demographic data of the participants. Confirmatory and exploratory factor analysis, and Cronbach's alpha were conducted to ensure the validity and reliability of the scales. In the calculation of the factor scores (dependent variables), missing data was handled by mean replacement. The correlations between workplace relationships, quality of care, patient safety and adverse events were conducted using Spearman's rank order correlations. The magnitude of correlations is regarded as the effect size, where 0.1 is considered as small, 0.3 as medium and 0.5 as large. Independent t-tests, ANOVA and Spearman's rank order correlations were conducted to determine the association between participant demographics, workplace relationships, quality of care and patient safety. Cohen's d effect sizes were used to determine the importance of the differences in means, where 0.2 is considered as small, 0.5 as medium and 0.8 as large.

1.12 RIGOUR / VALIDITY AND RELIABILITY

The degree to which a measurement accurately captures an actual value is referred to as validity. It also indicates whether the study's conclusions are tenable considering its design and interpretation (Botma *et al.,* 2010:174). It is possible to prevent inaccurate interpretations by adding validity to the study. According to Botma *et al.* (2010:174), it is critical to maximise the study's evidence, because validity can be threatened at any stage of the research design and execution. By recognising internal threats and sources of errors, threats to validity can be avoided.

Validity can be divided into two (2) types – external and internal validity:

1. External validity refers to the extent to which a study's conclusions can be applied to other segments of a community. The participants should be chosen at random from the public in order to be as representative as possible in order to attain external validity

(Taylor *et al.,* 2012:177). This study involved only hospitals from one province in South Africa and is therefore not generalisable beyond this context; however all-inclusive sampling was applied to units and participants within the selected hospitals.

2. Research that measures what it is intended to measure and whose results can therefore be attributed to the manipulation of the independent variable is said to have internal validity (Taylor *et al.,* 2012:178).The instruments selected are valid and reliable, and have been used in the South African context before (see Table 1.1).

The consistency, stability, and repeatability of the informants' statements, as well as the researcher's capacity to gather and record information effectively, are all factors that contribute to reliability (Brink *et al*., 2006:118). Botma *et al.* (2010:177) describe reliability as an important aspect that represents the consistency of the measure achieved. Data was collected using valid and reliable instruments that have undergone extensive evaluation. The instruments have been pre-tested in the larger study (nurse outcomes, patient safety and quality of care in the public and private hospitals of South Africa) and a previous national study conducted in South Africa (RN4CAST). Thus, the instruments were deemed appropriate to use in the South African setting, confirmed through exploratory and confirmatory factor analysis. Regarding statistical conclusions or inferential validity, a statistician was appointed to assist with data analysis.

1.13 ETHICAL CONSIDERATIONS

Ethical considerations for this study were in line with the ethical principles as stipulated by the DoH's ethics in health research guidelines (DoH, 2015). Most of the ethical issues were addressed under the relevant sections in the proposal; remaining ethical aspects that were addressed at a later stage were the risks and benefits, and data management and storage.

1.14 RISK AND BENEFITS

1.14.1 Anticipated benefits

While benefits are a financial advantage that the research will generate for the participant, risks are harm that could occur or happen to participants while the research is happening (Botma *et al*. 2016:122). Consequently, this study's objective was to maximize the potential advantages and reduce the potential hazards for participants..

Table 1.2: Direct and indirect benefits

Direct benefits for participants	Indirect benefits for society at large or for the researchers/institution
Participants will have the opportunity to enter a lucky draw. The lucky draw will include the following prizes: x1 Samsung Galaxy Note 10.1, x1 (R1 000) Dis-Chem voucher, x1 (R500) Dis-Chem voucher, x2 (R250) Dis-Chem vouchers, and x10 (R100) Dis-Chem vouchers. (This	
Each participant received an NWU-branded pen and a sachet of coffee as tokens of appreciation.	**Research on workplace relationships in developing countries is scarce, especially with regard to the influence on quality of care and patient safety, so this research will add valuable information and interventions focused on developing countries.**

1.14.2 Risk/ benefit ratio analysis

By stressing both the direct and indirect advantages, as well as risks and precautions, and comparing the benefits to the relative risk to the participant, a ratio can be considered as desirable when the potential risk is outweighed by the benefit (Grove *et al*., 2015:120; DoH, 2015:16)

Table 1.3: Risk/benefit ratio analysis

Risks	Precautions
Risk of possible anxiety or psychological distress while completing the survey.	➢ Participants may realise they are experiencing WPV while completing the survey. ➢ Should the participant experience any anxiety or psychological distress, the researcher should be made aware, as the participant is entitled to be referred to the hospital wellness centre or psychiatric nurse specialist. There was no such incident in this study.
Risk of possible exhaustion/tiredness while completing the survey.	✓ The questionnaire will be completed within 2 days by the participant at a time and venue that is suitable to them. ✓ Topics are applicable and oriented to the identified participants. ✓ The surveys are kept brief (should be no longer than 30-45 minutes). ✓ The survey consists only of validated and reliable instruments.
Risk of probable COVID-19 infection by the participant/researcher or contaminated objects and surfaces, during data collection.	○ Each participant is to perform hand hygiene before and after completing the informed consent form. ○ Pen utilised to sign informed consent form to be disinfected after each use, as well as surface area. ○ Social distancing of 1.5m will be maintained. ○ Everyone will always wear a mask as per COVID-19 protocol. ○ Informed consent forms and surveys will be stored in a plastic bag and be without human contact for 3 days.

1.15 DATA MANAGEMENT PLAN

Data captured from the surveys will be captured by OMR scanning for analysis. This data was exported to Microsoft Excel, where the principal investigator anonymised hospital and unit data. This code is known only to the principal investigator. The data was then sent to the statistician for analysis. The codes and data are stored separately on the password-protected computer of the principal investigator. Only relevant data, as applies to these research objectives, was provided to the researcher. Hard copies of the survey and informed consent forms are stored separately and will be saved for five years in the office of the principal investigator; thereafter they will be destroyed according to the NWU policy.

1.16 RESEARCH REPORT STRUCTURE (ARTICLE FORMAT)

Chapter 1: Overview of the study

Chapter 2: Literature review

Chapter 3: Article – The impact of workplace relationships on nurse-reported quality of care and patient safety in the North West Province

Chapter 4: Evaluation of the study and recommendations for nursing practice, research, education, and policy

1.17 SUMMARY

Chapter 1 has outlined the setting for the reader and provided an overview of the entire study. Furthermore, the background and problem statement were discussed, the research question, aims and objectives were identified, the research design, method and analysis were described, and the applicable trustworthiness and ethical considerations were highlighted. Chapter 2 follows with a comprehensive review of the literature related to the concepts introduced in Chapter 1.

CHAPTER 2:
LITERATURE REVIEW

2.1 INTRODUCTION

The purpose of this literature review is to explore and discuss the current evidence base and knowledge related to the impact of workplace relationships on nurse-perceived quality of care and patient safety. As highlighted in Chapter 1, on an international platform there is provision of substantial evidence relating to this study (Lanctôt, & Guay, 2014:494); however, there have been few studies on this phenomenon in developing countries, especially with regard to exploring the impact of positive and negative workplace relationships on nurse-perceived quality of care and patient safety.

This discussion will assist in establishing the boundaries of the knowledge within which this study was contained and to which it can contribute, thus providing a scientific background to the nature of this study (Al-Ghabeesh & Qattom, 2019:07; Omar *et al.,* 2019:02; Norful *et al.*, 2018).

2.2 SCOPE OF THE LITERATURE REVIEW

To achieve the aim of the study the researcher conducted a search of peer-reviewed studies and publications related to the impact of workplace relationships on nurse-perceived quality of care and patient safety. The researcher worked in conjunction with a subject librarian who conducted a search with the North-West University Library 'one-search' function, which includes the following databases: Academic Search Premier, Access Engineering, Africa-Wide Information, Applied Science & Technology Source, American Chemical Society, ArchiveGrid, Art & Architecture Complete, Artstor, ATLA Religion Database with ATLASerials, Audiobook Collection (EBSCOhost), Britannica Online, Business Source Premier, CAB Abstracts, Cambridge Journals Online, CINAHL with Full Text, Cochrane Library, Communication & Mass Media Complete, Directory of Open Access Journals, eBook Collection (EBSCOhost), ebrary, EconLit, Emerald Online, Environment Complete, ERIC, GreenFILE, Grove Music Online, Health Source – Consumer Edition, Health Source: Nursing/Academic Edition, HeinOnline, Hospitality & Tourism Index Complete, IEEE Xplore, INIS, International Index to Music Periodicals (IIMP), International Pharmaceutical Abstracts, IoP Science Xtra, JCR, J-STAGE, JSTOR, Library Catalogue, Library, Information Science & Technology Abstracts, Literary Reference Center, MasterFILE Premier, MathSciNet, MEDLINE, MLA Directory of Periodicals, MLA International Bibliography, Newspaper Source,

North-West Institutional Repository (Boloka), OAIster, OAPEN Library, Ovid Nursing Collection, Oxford English Dictionary, Oxford Reference Online, Philosopher's Index, ProQuest Theses & Dissertations Full Text, PsycArticles, PsycInfo, Regional Business News, RILM Abstracts of Music Literature, Royal Society of Chemistry, SAePublications, SAGE journals online, SCIELO, ScienceDirect, Scopus, SMART Imagebase, SocINDEX with Full Text, SPORTDiscus with Full Text, Springerlink journals, Taylor & Francis journals, Teacher Reference Center, Waters & Oceans Worldwide, and Wiley online journals.

The search string used included: (workplace relationships OR workplace violence OR collegiality) AND (patient safety OR patient outcomes OR quality of care OR Adverse events)

2.3 THEORETICAL FRAMEWORK

This study will be guided by a modification of Battles' model by Tvedt *et al.* (2012:3).

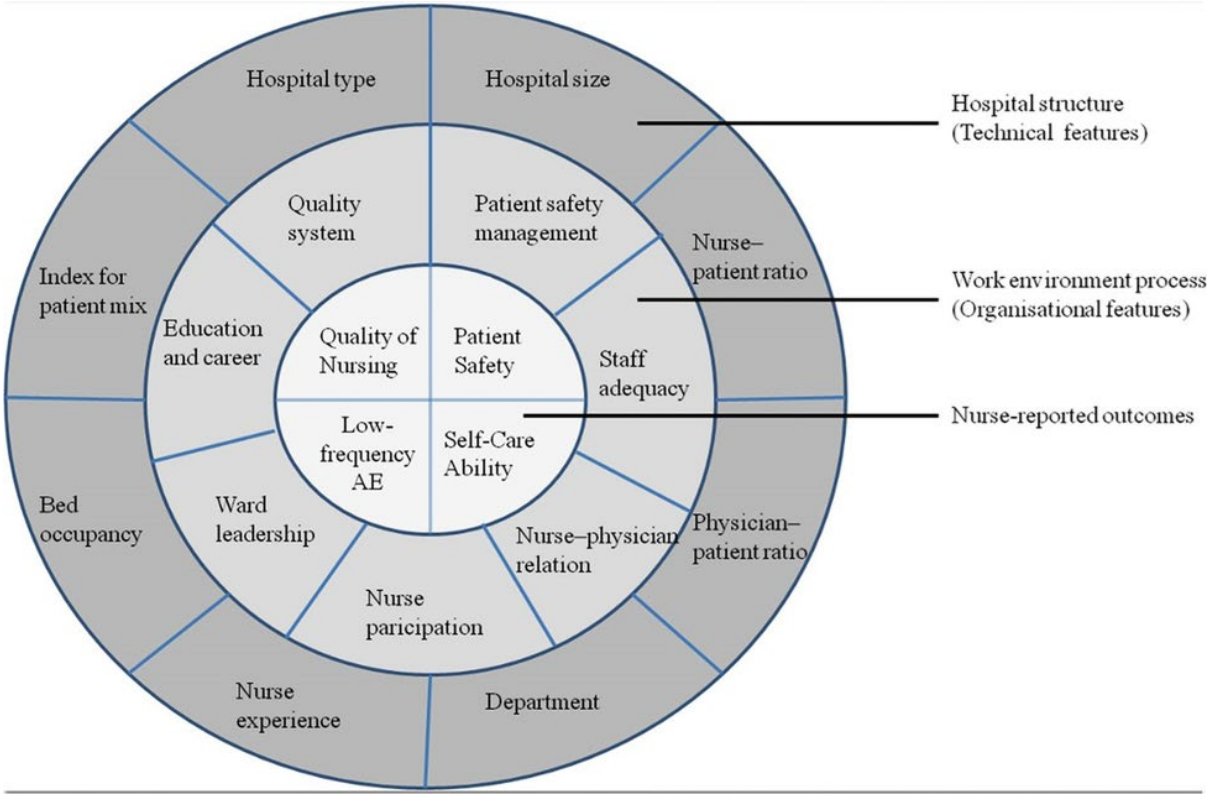

Figure 2.1 Modification of Battles' model (Tvedt *et al.*, 2012:3).

In this model, the focus is on achieving good nurse-reported patient outcomes (inner circle), which is influenced by the hospital structure (outer circle) and practice environment processes (middle circle). This specific study focused on good nurse-reported patient outcomes, with regard to quality of care (which includes self-care ability) and patient safety (which includes a low frequency of adverse events). Donabedian is often referred to as the father of quality of care (Cohen, 1984:129), and the IOM (2001) describes quality of care as "doing the right thing, at the right time, in the right way, for the right person, and having the best possible results". Pronovast *et al.* (2011:348) define quality measurement as the "lenses through which we quantitatively determine quality". According to Foulkes (2011:40) nursing metrics are methods of assessing the quality of nursing care by observing patient outcomes and the experience of the patient. In this study, quality of care was measured according to the theoretical framework of Tvedt *et al.* (2012), which included nurses' reports of the quality of care in their units; recommendation of the unit to friends and family; hospital management's ability to resolve problems related to the quality of care; and patients' and caregivers' readiness for discharge or self-care ability. According to the WHO (2021), the ability of people, families, and communities to support health, prevent disease, maintain health, and deal with illness and disability with or without the assistance of a healthcare provider is referred to as self-care ability. The WHO (2011) defines patient safety as the avoidance of mistakes and unfavorable medical outcomes. Additionally, Scott *et al.* (2003:13) assert that the goal of patient safety necessitates error-free treatment or care. In this study, patient safety was measured according to the theoretical framework of Tvedt *et al*. (2012), which included nurses' reports of patient safety and patient safety culture in their units, as well as the occurrence of a variety of adverse events.

Schwendimann *et al.* (2018:11) further described the two most frequent classes of adverse events as postoperative infections and pressure ulcers. Lastly, in their systematic review they attribute the frequency of these adverse events to cost-cutting efforts which eventually compromise patient safety.

This study will focus on only one aspect of the work environment processes (middle circle), namely workplace relationships (inclusive of physicians, nurse managers and nurse colleagues). In the following section workplace relationships will be discussed, with a focus on collegial or positive workplace relationships, as well as WPV or negative workplace relationships, and its impact on nurse-reported quality of care and patient safety.

2.4 WORKPLACE RELATIONSHIPS

Workplace relationships are defined as the information exchange between individuals or groups who want to complete a common goal (Ferris *et al.*, 2009:1379). Workplace relationships function as decision-making, influence-sharing, and instrumental and emotional support systems (Kram & Isabella, 1985; Rawlins, 1994). Methot *et al.* (2017) discuss different types of workplace relationships, based on the approach/avoidance (positivity/negativity) of the persons involved (see Figure 2.2).

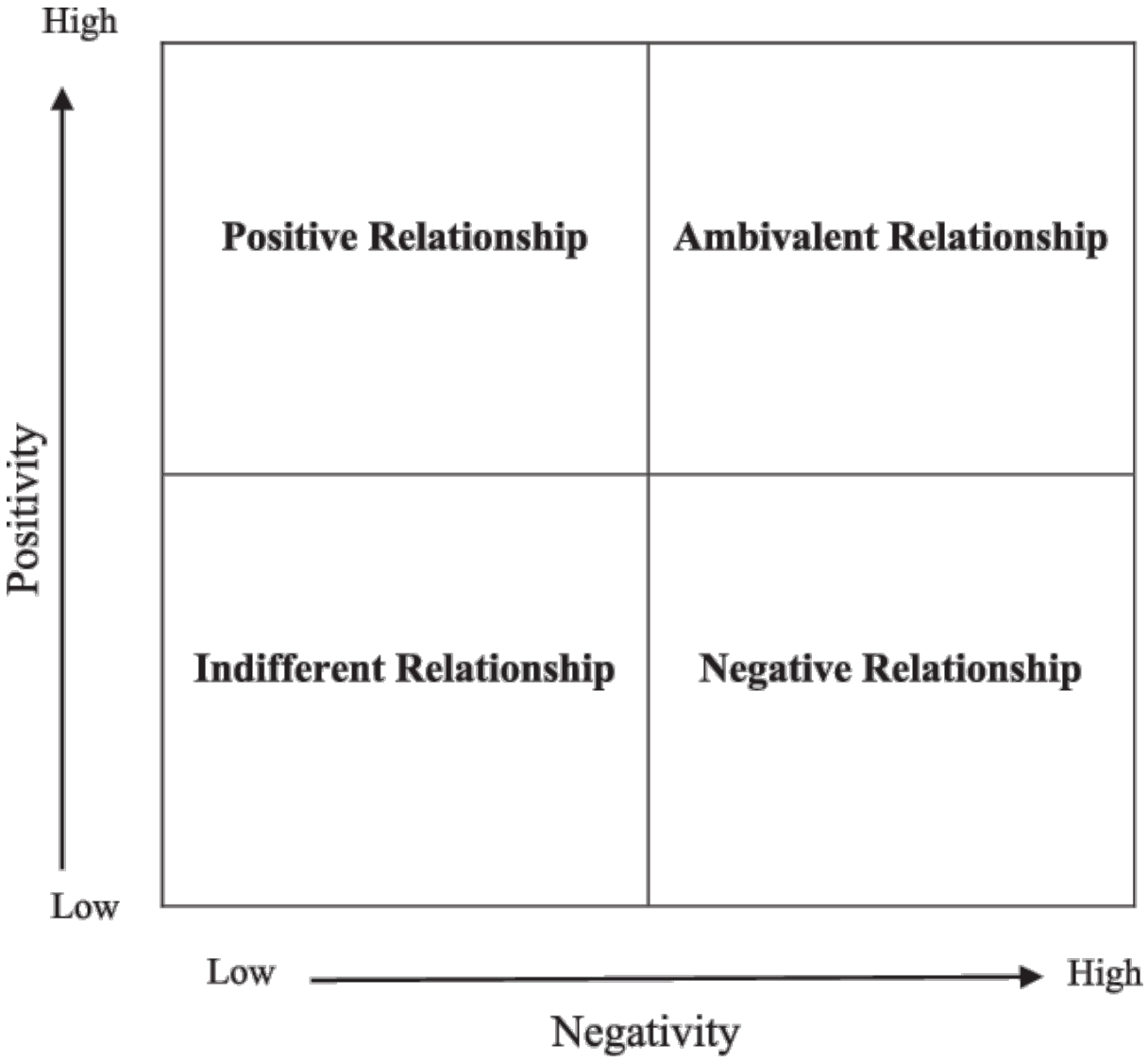

Figure 2.2 Methot's framework of interpersonal workplace relationships (2017:4).

Positive relationships relate to emotions in the high approach/low-avoidance quadrant (high positivity/low negativity). For example, the expression of happiness signals a desire to engage (Methot *et al.*, 2017:08), and the expression of sadness stimulates a call for support and connection (Methot *et al.*, 2017:08; Casciaro *et al*., 2014; Clark & Taraban, 1991); thus, both reactions are associated with positive relationships (Methot *et al.*, 2017:8; Davidson, 1992). Feelings associated with positive relationships include compassion, gratitude, guilt, happiness, love, and sadness.

In contrast, negative relationships are associated with emotions in the high avoidance/low approach quadrant (low positivity/high negativity), for example, expressing contempt might trigger disgust, envy, and shame from colleagues, eventually perpetuating negative relationships (Methot *et al*., 2017:08; De Tormes Eby & Allen, 2012; Galinsky & Schweitzer, 2015; Dutton & Heaphy, 2003). Feelings related to negative relationships are characterised by contempt, disgust, envy, shame, and loneliness.

Furthermore, indifferent relationships are defined by low approach/low avoidance (low positivity/low negativity) emotions and can either be a result of a relationship's overall lack of emotions (i.e., affective neutrality) or involve a single discrete emotion that expresses neither a desire to approach nor to avoid (Methot *et al.,* 2017:8). For example, surprise conveys information about unexpected events but does not indicate either approach or avoidance (Methot *et al.,* 2017:6-8; Baek *et al.,* 2010). Ambivalent interactions are noticeably understudied in comparison to the extensive research on solely positive or negative relationships, particularly in business settings (Methot *et al.,* 2017:6-8; Baek *et al.,* 2010). Indifferent relationships are characterized by feelings of boredom, tranquillity, and surprise. The high approach/high avoidance (high positivity/high negativity) emotions are also linked to ambivalent relationships. This can happen when two opposing, distinct emotions that signal both approach and avoidance are experienced simultaneously (tensions between cooperation and competition, for instance, may cause conflicting emotions like happiness and envy), or it can happen as a result of emotions that by their very nature signal both approach and avoidance (e.g., organisational change events that trigger bitter-sweetness or nostalgia). When these feelings are expressed, they frequently take the shape of tension (Methot *et al.,* 2017:09; Rothman, 2011), which can cause viewers to perceive emotional ambivalence (Rothman & Wiesenfeld, 2007) and eventually create ambiguous relationships. Feelings associated with ambivalent/hesitant relationships include mixed/blended emotions, nostalgia, happiness, envy, and misplacement. In this study the focus is only on positive (collegial workplace relationships or collegiality) and negative (WPV) workplace relationships.

The term ‘workplace relationship’ often refers to any interpersonal interactions that people have while performing their employment, including relationships between supervisors and subordinates, peers and co-workers, friends at work, romantic relationships, and customer relationships, which are multifaceted, and can be either positive or negative (Sias, 2008:18). This study will focus on peer-co-worker relationships, specifically nurse-physician and nurse-nurse relationships and supervisor-subordinate relationships or nurse-manager relationships.

Collegial workplace relationships or collegiality can be defined as a positive interpersonal working relationship (Menard, 2014:6). Collegial workplace relationships provide a framework within which professionals are expected to hold each other accountable for the care that is given, and for its congruence with local and national standards (Padgett, 2013:1). Collegiality is therefore the first line of professional self-regulation (Padgett, 2013:1). Furthermore, Cowin and Eagar (2013:115) found that improving collegiality demonstrates an increase in professionalism, work satisfaction, and staff retention. Noguchi-Watanabe *et al.* (2016:08) associated nurse retention with positive nurse collegiality such as protected autonomy, which includes mindful monitoring, semi-independent responsibility, help as needed, and collegial empathy and validation of their practice.

Negative workplace relationships include WPV. The WHO (2002:4) defines WPV as: “Incidents where staff is abused, threatened or assaulted in circumstances related to their work, including commuting to and from work, involving an explicit or implicit challenge to their safety, well-being or health”. WPV affects the professional perspective of nurses, undermines recruitment as well as retention efforts, and threatens patient care (Norris, 2018:23). The interactions between people in negative relationships are characterized by conflict, criticism, jealousy, rejection, and interference, all of which are generally bad for relationships (Labianca *et al.,* 2000 & Brass, 2000). These people also have an ongoing and recurring set of negative feelings and intentions toward one another (Brooks & Dunkel Schetter, 2011). These relationship are often relentless (Labianca et al., & Brass, 2000), have a negative outlook (Hess *et al.,* 2006), and are more prone to degenerate when confronted with challenging circumstances (Dutton & Heaphy, 2003).

Researchers emphasise that workplace relationships are not only vital to the wellbeing of the employee, but also to their work performance, which has a direct impact on the organisation and patient outcomes (Sias, 2008:18; Tran *et al.*, 2018). This will be discussed in the section that follows.

2.5 NURSE-PHYSICIAN WORKPLACE RELATIONSHIPS

Nurses and physicians are the most important healthcare professionals in the care of patients, and although their tasks are separate and distinct, they need to work together to provide comprehensive, efficient and high-quality care; therefore, a collegial workplace relationship is of the utmost importance. Collegial nurse-physician workplace relationships are defined as collaboration between physicians and nurses, through joint decision-making, in which nurses and physicians have a shared objective and responsibility in patient care (Elsous *et al.,* 2017:2; Boev & Xia, 2015:67).

Decades of research on nurse-physician workplace relationships shows that the main antecedents influencing workplace relationships include communication (McInnes *et al.*, 2015:1; Wynn & Holden, 2020:01; Lachman, 2015:40; Maniou, 2012:242; Leonard *et al.*, 2004:90), collaboration (McInnes *et al.*, 2015:01; Wynn & Holden, 2020:1; Lachman, 2015:40; Maniou, 2012:242; Leonard *et al*., 2004:90); respect (Lachman, 2015:40; Maniou, 2012:242), roles and responsibility (McInnes *et al.*, 2015:1; Wynn & Holden, 2020:1; Johnson & Kring, 2012:346), hierarchy, education, and liability (McInnes *et al.*, 2015:1; Wynn & Holden, 2020:1). Specifically, collaboration and communication between the two (2) professions have been deemed most critical to improved patient and nurse outcomes, a positive practice environment and decreased cost of healthcare (Clausen *et al.*, 2017; Goda *et al.*, 2018:14; Boev & Xia, 2015:67).

Regarding collaboration, a systematic review explored nurses' and physicians' perceptions of nurse-physician collaboration and found that they held different views regarding what constitutes effective collaboration. Nurses were most positive in their assessment thereof in comparison to physicians, and nurses placed a higher value on collaboration than physicians did (House & Havens, 2017; Tang *et al.*, 2013). Both parties, felt that collaboration is embodied by shared decision-making, teamwork, and communication (House & Havens, 2017), although they differed vastly in their views of these aspects. Physicians felt that they were the primary decision-makers, and ultimately responsible for patient care; thus, collaboration to them means they were the controlling partner, nurses are there to assist and answer questions, although nurses' input is considered extremely valuable. In contrast, nurses felt that collaboration is shared decision-making, two-way knowledge exchange and active listening on the part of the physician (House & Havens, 2017). Another study confirmed nurses' perceptions of collaboration with physicians as highly correlated with their perceived respect from physicians, followed by effective communication and their willingness to collaborate (Matziou *et al*., 2014:526).

The PES-NWI-R was used to measure nurse collegial relationships (Lake, 2002). Lake (2002) defines nurse collegial relationships as positive working relationships between nurses and physicians, which is measured using the following items: Physicians and nurses have good working relationships, Physicians value nurses' observations and judgements, Physicians recognise nurses' contributions to patient care, A lot of team work between nurses and physicians, Physicians respect nurses as professional, Collaboration between nurses and physicians, and Physicians hold nurses in high esteem. Therefore, this instrument will adequately measure nurse-physician collaboration in this study.

2.5.1 Nurse physician workplace relationships: Patient outcomes

Collegial nurse-physician workplace relationships have positive effects on quality of care and patient safety, including nurse-perceived patient safety and quality of care (Wynn & Holden, 2020:1; Norful *et al.*, 2018; Ma & Hommel, 2015; Laschinger, 2014:285; Stimpfel *et al.*, 2014; Estabrooks *et al.,* 2007:74), patient satisfaction (Larrabee *et al.*, 2004), and better patient outcomes (Manojlovich & DeCicco, 2007:540; Shen *et al.*, 2011:350, Goda *et al.*, 2018:14; Hanrahan *et al.*, 2010; Tervo-Heikkinen *et al.*, 2008; Malidou *et al.*, 2011).

Specific patient outcomes include shorter length of stay (Tschannen & Kalisch, 2009), less nurse-reported incidence of medication errors (Manojlovich & DeCicco, 2007:540; Fasolino *et al.*, 2012), less hospital-acquired infections (Boev & Xia, 2015; Manojlovich & DeCicco, 2007:540), reduced rates of morbidity and mortality, and avoidable medical errors (Rosenstein & O'Daniel, 2006; Smith, 2012; Goda *et al.*, 2018:14; Riga *et al.*, 2015), and compromise in patient care or safety (Rosenstein & O'Daniel, 2006), and increased adherence to recommended care guidelines, increased patient access to care and continuity of care (Norful *et al.*, 2018; Wynn & Holden, 2020:1).

Conversely, negative workplace relationships have been linked to compromised patient safety and increased healthcare costs (Fassier & Azoulay, 2010:654), and medical errors (Joint Commission, 2010; Mansk-Nankervis *et al.*, 2014; Sofield & Salmond, 2003:274), especially medication errors (Boev & Xia, 2015:67; Thompson *et al.*, 2018:342). Poor patient outcomes have also been directly linked to negative workplace relationships (Rosenstein & O'Daniel, 2006:96), especially patient falls (Napolitano & Saini, 2014; Stalpers *et al.*, 2015), pressure ulcers (Stalpers *et al.*, 2015) and catheter-associated urinary tract infections (Fei *et al.*, 2019; Boev & Kiss, 2017). Negative workplace relationships also affect nurse outcomes regarding lack of autonomy and job dissatisfaction (Saber, 2014:402; Zhang *et al.*, 2016:284), organisational commitment (Yilmaz *et al.*, 2021:1-7) and intent to leave the job or profession (Zhang *et al.*, 2016:284; Thomson, 2007:87), as well as physician outcomes such as job

dissatisfaction (Rosenstein, 2002:26, 2005:54). These in turn have a direct impact on patient quality of care and patient safety.

Although this topic has been explored somewhat in Africa, with recent studies in Botswana (Sabone *et al.*, 2020:207), Ethiopia (Jemal *et al.*, 2021:2315; Weldetsadik *et al.* 2019;131) and Nigeria (Folorunso & Folorunso, 2020:776), all point to poor nurse-physician collaboration, showing that physician-nurse collaboration is problematic in developing countries, while studies in South Africa are dated (Coetzee *et al.*, 2013). Sabone *et al*. (2020:208) emphasise the need to explore the ethical challenges of interdisciplinary collaboration in clinical practice and education in an African context, as there is minimal literature available on this.

2.6 NURSE-MANGER WORKPLACE RELATIONSHIPS

Within specific healthcare work contexts, the nurse manager or supervisor is the individual who is seen by the nurses and appointed by the organisation as having 24-hour supervisory duty, authority, and accountability for all nurses (Wong *et al.,* 2013:709). The most widely acknowledged theory explaining the dynamics of supervisor-subordinate relationships is the leader-member exchange (LME) (Scandura & Graen, 1984:428). Scandura and Graen (1984:428) go on to say that managers should promote constructive contacts between themselves and each of their staff by using various levels/categories of dialogue. In general, the quality of these partnerships varies, and healthy working relationships depend on respect, obligation, mutual trust, (Matta *et al*., 2015:58; Tran *et al.*, 2018:3) and internal motivation between colleagues (Callier *et al.,* 2017:57). A good exchange of resources and information between participants is referred to as a high-quality or positive LME. It follows that high-quality LME employees are likely to receive more support and attention from their leaders than those in a low-quality LME due to more frequent communication. Tran *et al.* (2018:03) explain low-quality LME relationships as those which feature leaders who make members perform more routine tasks without support such as performance appraisal. The LME theory applies to this study with the purpose of highlighting the importance of positive nurse-manager relationships.

Broadly speaking, leadership styles are divided into two (2) main types: task-focused leadership styles and relationship-focused leadership styles, with the latter having the most impact on nurse, patient, and organisation outcomes. Relationship-focused leadership styles are defined by Cowden *et al.* (2011:3326) as being centred on relationships and people, with a particular emphasis on transformative, socio-relational, emotionally intelligent, resonant, and considerate partnerships. Task-focused leadership styles are defined as approaches concentrated on task fulfilment, deadlines, and directions, with a transactional, instrumental,

initiating structure, management by exception, passive avoidant management, and laissez-faire (Cowden *et al.*, 2011:3326).

Several systematic reviews discuss factors contributing to nurse leadership, namely: 1) behaviours and practices of individual leaders, 2) traits and characteristics of individual leaders, 3) influences of context and practice settings, and 4) leader participation in educational activities (Cummings *et al.*, 2008). Cummings *et al.* (2021) additionally included 5) experience and education, 6) relationship with work, and 7) role in the practice setting with these factors.

Some of the antecedents of positive nurse-manager relationships include a period of personnel orientation (Hutton & Gates, 2006:173), lowered levels of interactional justice from management (Almost *et al.*, 2010:988), being given too much responsibility without appropriate support (McKenna *et al.,* 2003:93), and the complexity of work (Almost *et al*., 2010:988). The capacity of leaders to foster a safe workplace is dictated by their awareness of patient care needs, their level of relationship skills, and their ability to recognize and implement effective safety procedures, according to Wong *et al.* (2013:720).

Okello and Gilson (2015:13) identified poor supervision as a cause of stressful relationships between health workers and their supervisors within the workplace, and as demotivating. For example, managers are more likely to receive benefits from successful job performance than subordinate employees are. Similarly, senior and junior staff are likely to have different access to personnel policies like performance review procedures, awards and incentives, and training opportunities (Aquino, 2000:176). As a first step in keeping qualified nurses, management should concentrate on enhancing working connections, according to Brunetto *et al.* (2012:448).

Other factors igniting the negative nurse-leader relationship includes an absence of authentic leadership (Estes & Wang, 2008:235), and relinquishment of autonomy (Budin *et al.*, 2013:312). According to Rodwell *et al.* (2017:190), The nature of a nurse's connection with their supervisor affects their work dispositions and productivity, as well as whether or not they intend to leave. According to Vera *et al*. (2016:1145), nurses will feel even more secure and supported in their decisions and job autonomy if they receive strong social support from their supervisors and co-workers. This will also have a stronger relationship with their work engagement than in situations with low social support from the supervisor and co-workers.

In this study, nurse leadership will also be measured by the PES-NWI (Lake, 2002). According to Lake (2002) and Bell (2021), nurse leadership, management and support of nurses is

characterized as the capacity to encourage, influence, and inspire nursing staff and other healthcare professionals to collaborate in order to realize their fullest potential and organizational objectives. This will include the following items: a supervisory staff that is supportive of nurses, a nurse manager who is a good manager and leader, praise and recognition for a job well done, and a manager who backs up the nursing staff in decision making, even if the conflict is with a physician.

2.6.1 Consequences of nurse-manager workplace relationships

It is well established that relationship-focused leadership styles have an impact on nurse, patient, and organisational outcomes. Nurse outcomes include job satisfaction, relationship with work, health, and wellbeing. Organisation outcomes include productivity and effectiveness and the practice environment (Cowden *et al.*, 2011; Cummings *et al.*, 2005; Wong & Cummings, 2007). Finally patient outcomes, which is the focus of this study, include: patient satisfaction, patient mortality, patient safety (restraint use, complications of immobility, fractures, medication errors, patient falls, catheter use, pressure ulcers, inadequate pain management, hospital-acquired infections) and patient healthcare utilisation (Wong *et al.*, 2013; Wong & Cummings, 2007). Patient safety will be discussed in more detail, as it is directly and indirectly affected by the consequences of nurse-manager workplace relationships.

Labrague (2021:856) supports the magnitude of literature suggesting that increased nurse managers' perceptions of toxic leadership behaviors were strongly linked to an increase in adverse events, such as verbal abuse and complaints from patients and/or their families, medication administration errors, patient falls, healthcare associated infections, and a decline in the standard of care. When leaders blame and shame, they are not accepting that to ‘err is human’, and that kind of neurotic approach and toxic mentoring towards nurses has detrimental effects on patient safety (Jacobsen, 2016:38). More recent studies (Nurmeksela *et al*., 2021:3; Akbiyik *et al*., 2020:11) have demonstrated that strong nurse-manager relationships improve patient outcomes by decreasing medication errors, fostering a culture of patient safety, and improving the quality of care. These findings support the notion that nurse manager workplace relationships have a positive effect on patient outcomes.

Recent studies in South Africa include that by Koelble and Siddle (2014:1118), who described the healthcare system in South Africa as ruined and in serious need of repair. In a recent local study, Maphumulo and Bhengu (2021:2) identify seven (7) managerial issues as follows: prolonged waiting time because of shortage of human resources, adverse events, poor hygiene and poor infection control measures, increased litigation because of avoidable errors, shortage of resources in medicine and equipment, and poor recordkeeping. Mutshatshi *et al.*

(2018:1) vehemently back up the above by expressing how sub-standard documentation of nursing actions is associated with prolonged hospital stay of the patients and increased patient mortality. Poor record-keeping not only compromises patient care but also leaves nurses more exposed to legal claims resulting from the communication breakdown caused by incomplete or inadequate data (Marinic, 2015; Mutshatshi *et al*., 2018:2). According to Khani *et al.* (2016), key factors influencing nursing records in hospitals included weariness, high patient volume, lack of ongoing monitoring and evaluation, and lack of an incentive system for staff. Finally, Haskins *et al.* (2014:37) discovered in a study from KwaZulu-Natal that some nurses admitted actively disliking nursing as a result of staff shortages and the resulting increased workload, absenteeism, the complexity of patients' disease profiles, a lack of equipment, poor communication, and a lack of management support.

2.7 NURSE-NURSE WORKPLACE RELATIONSHIPS

Nurse colleagues are equal-status employees who operate at the same level in the hierarchy, report to the same supervisor, and lack formal power over one another (Sherony & Green, 2002; Sias, 2008). Peer relationships, which are defined as equal ties between peers in the organization with similar position, are a necessary component of high-quality workplace relationships (Reitz *et al.,* 2014:279). These relationships make a significant contribution to a peaceful and productive work environment, for numerous reasons. Co-workers may have a thorough understanding of the working conditions and experiences, as well as insight into organisational information that cannot be obtained by external employees, making the nurse-peer relationship a primary source of emotional support, career development, and instrumental support (Sias, 2005:277).

Employee relationships are characterized as non-exclusive voluntary workplace alliances that include shared interests and beliefs, as well as mutual trust and commitment (Ogweyo, 2013:8). Since they enable employees to encourage and assist one another in completing their professional tasks, reduce workplace stress, improve communication and cooperate better, collegial relationships are regarded as important for both people and organizations. Nurses are not good at supporting each other in the acute care nurse work environment (Sias, 2008), and their workplace culture is rife with intimidation, favouritism, and inequalities (Huntington *et al.*, 2011:1414). Some prominent antecedents of poor nurse-colleague workplace relationships include the absence of a resonant leadership style (Laschinger, 2014:13), lowered levels of interactional justice from management (Almost *et al.,* 2010:988), being given too much responsibility without appropriate support (McKenna *et al*., 2003:93), complexity of work (Almost *et al*., 2010:988) and day/night shift working (Budin *et al*., 2013:311). Heath *et al.* (2004:524) demonstrated that the lack of effective communication,

collaboration, and decision-making adversely affected the quality of workplace relationships, especially nurse-peer relations.

2.7.1 Consequences of nurse-nurse workplace relationships

The abovementioned is amplified by loss of productivity (Berry *et al.,* 2012:83), decreased commitment to the patient (Ekici & Breder, 2014:29), poor-quality patient care (Lee *et al.*, 2014:106), altered patient safety (Longo & Hain, 2014:193), and under-performance (Vessey *et al.*, 2010:303). Not addressing these negative workplace relationship issues may result in increasing nurse intention to leave the workforce (Huntington *et al.*, 2011:1416).

Negative or unsatisfying working relationships are a big reason why nurses leave their jobs (Tourangeau *et al.,* 2010:22). Incivility and bullying in the workplace have also contributed to low job satisfaction and low retention rates for nurses (Laschinger *et al.,* 2009; Leiter *et al.,* 2010; Simons & Mawn, 2010). The likelihood that an employee will report wanting to leave their job is much higher for those who have experienced bullying or have been exposed to it at work (Berthelsen *et al.,* 2011) compared to those who do not record any exposure to bullying (Berthelsen *et al.,* 2011).

The best outcomes for patients, nurses, and organisations come from effective nursing teamwork (Ibraheem *et al.*, 2020:99). Improved nursing performance and better patient care are directly tied to effective nurse collaboration (Ibraheem *et al.*, 2020:99). In-house nursing collaboration has been found to improve nursing outcomes such as better work conditions, more job satisfaction, higher retention rates, and higher productivity (Ibraheem *et al.*, 2020:99).

Improvements in patient safety, patient satisfaction, and patient care as well as reductions in error rates, patient mortality, patient length of stay, and staff turnover rates are all positive consequences of intra-professional collaboration (Ibraheem *et al.*, 2020:99; Ma *et al.*, 2015). For nurses, teamwork leads to job satisfaction (Careau *et al.*, 2016). In contrast, the incapacity to operate independently as a result of excessive collaboration is a negative consequence of intra-professional collaboration (Ibraheem *et al.*, 2020:101). The workflow can be hampered if everyone has to agree on every choice; thus, to minimise unnecessary collaboration, it is critical to know when to stop seeking consensus on every clinical decision (Ibraheem *et al.*, 2020:101; Cross *et al*., 2016).

Patients at a private general hospital in Gauteng, South Africa, expressed their displeasure with nurses who appeared to act insensitively toward their emotional needs, leading to poor nurse-patient relationships that were covered in the media (Van den Heever *et al.*, 2014:2).

Forging a connection with a patient requires knowledge, aptitude, and attitude (Van den Heever *et al.*, 2014:02). Furthermore, Van den Heever *et al.* (2014:03) claim that nursing staff and care providers not only lack relationship-building skills among each other, but also receive inadequate training and supervision, which ultimately hinders patient outcomes. Johnson and Benham-Hutchins (2020) justify the above by stating that bullying among nurses is surprisingly prevalent, but is not a given. This is frequently a learned trait that starts in nursing school and may continue as nurses imitate the intimidating behaviour of their managers (Johnson & Benham-Hutchins, 2020). However, with competent leadership, nurses are less likely to internalise the damaging message that bullying leads to professional success (Johnson & Benham-Hutchins, 2020).

2.8 INTERVENTIONS TO IMPROVE WORKPLACE RELATIONSHIPS

This section focuses specifically on evidence in the form of systematic reviews of how workplace relationships, both (collegial) can be improved and negative (WPV) can be eradicated.

The healthcare sector, where the patient-healthcare provider relationship is the most frequent issue, is the most crucial sector for reducing WPV (Hartley *et al*, 2019:19). According to Somani *et al.* (2021:293), nurses who participate in violence prevention training courses report having more confidence and better communication skills. However, Somani *et al.* (2021:294) claim, as studies have shown, that training interventions are unsuccessful at reducing the prevalence of WPV on their own, and systems for reporting incidents formally can have a huge impact. Any organisation aiming to reduce or prevent WPV faces a substantial challenge from underreporting, which makes it difficult to identify high-risk environments and develop policies and procedures in response to them (Somani *et al.*, 2021:294). Wassell (2009:1054) concludes that such interventions ought to emphasise doable methods to implement measures to enhance and not impede the mission of healthcare providers

The outcomes of the intervention studies by Cummings *et al.* (2021:9) show that focused leadership development interventions are a successful strategy for enhancing nursing leadership. In addition, Cutlife and Creary (2015) present a convincing case for why simply conferring a senior or management title upon a nurse does not automatically make them a nursing leader, even though the literature frequently refers to those in executive management positions as nursing leaders. Instead of presuming that nurse managers or directors of nursing always use leadership techniques, future studies on leadership could benefit from sampling from a variety of nursing professions (Cutlife & Creary, 2015; Cummings *et al.,* 2021:09-10). Cummings *et al.* (2021:10) indicate that interventions have changed significantly, from being

predominantly one-time, workshop-based programmes to including continuous opportunities for mentoring and coaching, and such interventions were helpful in fostering nurse leadership. However, these studies, do not offer fresh insights into the elements of leadership interventions that are most helpful in leadership development, despite the overall strong beneficial effects of leadership development interventions.

Collegial or interprofessional relationships have been thoroughly investigated, and a systematic review has identified the following interventions: quality audits and group problem-solving, social processes like open communication and helpful colleagues, team attitudes such as feeling like a team player and team structure like the size of a team and having a collaboration champion or facilitator are all things to consider (Mulvale *et al.*, 2016:1-13). There was fewer policy (e.g. governance), organisational (e.g. information systems, organisational culture), and individual (e.g. belief in interprofessional collaboration care and personal flexibility) level factors found (Mulvale *et al.*, 2016:1-13). Mulvale *et al.* (2016:1-13) highlight the significance of having a shared vision and goals as a team, formal quality processes, information systems, and professionals feeling like they are a part of the team.

Several authors have attempted to define the necessary facilitators for collaboration among healthcare workers to take place (Schot *et al.*, 2020:333). Despite the lack of evidence, Schot *et al.* (2020:332) maintain that there is a considerable amount of evidence for professionals actively contributing to interprofessional collaboration, that they do so in three (3) main ways: by bridging professional, social, physical, and task-related gaps; by negotiating overlaps in responsibilities and tasks; and by providing areas in which to do so. These interventions include the value of appropriate organisational arrangements, such as clear common rules and appropriate information formats, as well as time, space, and resources for professionals to bond and discuss difficulties that emerge. Furthermore, several authors advocate for an open and welcoming professional culture, as well as a readiness to collaborate and communicate openly (Schot *et al.*, 2020:332). To comprehend the dynamics and evolution of interprofessional collaboration, a greater grasp of their collaborative activity is required (Schot *et al.*, 2020:332).

A significant area of vulnerability for the quality and safety of treatment is frequently described as a lack of collaboration. According to Buljac-Samardzic *et al*. (2020:30), numerous studies have demonstrated a positive impact of team interventions on performance outcomes (such as effectiveness, patient safety, and efficiency) in a variety of healthcare settings, which has led to a strong belief that team interventions can improve the effectiveness of healthcare teams (e.g. in operating theatres, intensive care units, or nursing homes).Buljac-Samardzic *et al.* (2020:1) split the abovementioned into three (3) major interventions: 1). Training, which can

be separated into training based on predetermined principles (such as CRM: crew resource management and TeamSTEPPS: (Team Strategies and Tools to Enhance Performance and Patient Safety), training based on a specific method (such as simulation), or generic team training; 2. Tools, which refers to tools that help structure, promote, or provoke teamwork (e.g. SBAR: Situation, Background, Assessment, and Recommendation, (de)briefing checklists, and rounds); and 3. Organisational (re)design, which entails (re)designing structures to promote teamwork and team procedures.

2.9 SUMMARY

The purpose of this literature review was to provide background information on each variable in its respective scientific field and to comprehend each variable from a theoretical standpoint. It was necessary to describe each variable separately in order to achieve the study's goals and objectives. This chapter was guided by the theoretical framework established in Chapter 1, which was also elaborated upon, with a more focused attention on the modification of Battles' model. Each variable's current state of knowledge was also compiled. Additionally, relevant literature is being reviewed in relation to the model tested. This gave the reader the opportunity to appraise the current study's input to the body of knowledge in science.

CHAPTER 3:
THE IMPACT OF WORKPLACE RELATIONSHIPS ON NURSE-REPORTED QUALITY OF CARE AND PATIENT SAFETY IN THE NORTH-WEST PROVINCE

3.1 INTRODUCTION

This chapter acts as the study's article manuscript, which complies with the North-West University Manual for Higher Degree Studies' requirement for submitting a dissertation in article style (NWU, 2020:27). This paper manuscript has been finished in accordance with the specifications of the prospective journal, the Clinical Journal of Nursing, in which the study will be published. There may be some redundancy between these chapters and the article text because this article covers some information that was provided in the study's first and second chapters.

The outline of this chapter is as follows:

PREAMBLE I Article author guidelines: *Journal of Clinical Nursing.*

PREAMBLE II Cover letter to the Editor of the *Journal of Clinical Nursing*.

PREAMBLE III Article manuscript for submission to the *Journal of Clinical Nursing*.

REFERENCES List of references for the article manuscript for submission.

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1. A brief informative **title** (maximum 20 words) containing as many of the *keywords* for your submission as possible.

1. Do not use country names or abbreviations in the title.

b. Craft your title with great thought and care for readability and maximum search discoverability(see *Wiley's best practice SEO tips)*.

c. All submissions describing randomised clinical controlled trials are to include 'randomised controlled trial' in the title. Also make non-randomized and other types of studies that evaluate interventions clear in the title:

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"**Audiovisual and printed technology to prevent childhood diarrhea: Clinical Trial**"

2. A **short running title** of less than 40 characters.
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8. The number of **References** for Clinical Trials, Empirical Research Mixed Methods, Empirical Research Qualitative, Empirical Research Qualitative, or Feasibility submissions permitted are shown in the *Article Type* chart as 25 or less. If more than 25 references are included address why in the cover letter.
9. **Conflict of Interest Statement**
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OR

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If you cannot state either "b" or "c" above have this done and submit your paper at a later time.

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   The Journal uses a double-blind peer review process. ensure that all identifying information such as author names and affiliations, acknowledgements or explicit mentions of author institution in the text are on the title page and not in the main text le. **It is not possible to anonymize trial registration entries. Reviewers will be able to view who conducted the trial when making essential checks of the registration entry.**

For all article types except Brief Reports, Commentary, Letter to the Editor, and Editorial the main text le to include the following information and/or headers:

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   INCLUDE THE FOLLOWING HEADERS IN ABSTRACTS:

Aim(s) (of the paper, simply state **'To...'**)

Design

Keywords (You will be able to choose keywords when you begin the submission process and you can select up to ten).

Methods

Data Sources (Include search dates) ****for reviews only***

Results Conclusion Implications for the profession and/or patient care Impact (Addressing:)

- What problem did the study address?
- What were the main findings?
- Where and on whom will the research have an impact?

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Include a statement at the end of the abstract titled "No Patient or Public Contribution". Your paper will be unsubmitted and returned to you if this section is not included.

What does this paper contribute to the wider global clinical community?: Include one to three bullet points.

Trial and Protocol Registration: Include the following here for papers that require **trial and protocol registration**:

- Include the name of the name of the trial register, the clinical trial registration number, and a link to the trial at the registration website.
-

If there is a protocol that does not require registration, it must still be made accessible at: Open Science Framework (https://osf.io/) " or "Figshare (https:// gshare.com/). Include the name of the website, the protocol number, and a link to the registration site.

- If the trial is not registered, or was registered retrospectively, explain the reasons why.

SPECIAL GUIDELINES FOR QUANTITATIVE INVERVENTION EVALUATIONS

1. GENERAL INFORMATION

- Interventions involved in a submission requires use of the *EQUATOR network* or *JBI* checklists and registry.
- It is recommended that authors read the following editorials before submitting a manuscript evaluating an intervention (**Noyes 2018**, **Noyes 2021**). Also read the following information for guidance depending on the article type you are submitting.

1. *Clinical Trials*
   The **ICMJE** defines a clinical trial as any research project that prospectively assigns people or a group of people to an intervention, with or without concurrent comparison or control groups, to study the relationship between a health-related intervention and a health outcome. Health-related interventions are those used to modify a biomedical or health-related outcome; examples include drugs, surgical procedures, devices, behavioral treatments, educational programs, dietary interventions, quality improvement interventions, and process-of-care changes. Health outcomes are any biomedical or health-related measures obtained in patients or participants, including pharmacokinetic measures and adverse events. Trials may be randomized or non-randomized.
2. *Clinical Trial Registration*
   The Journal has signed up to the **All Trials Agreement**and requires that clinical trials are prospectively registered in a publicly accessible database such as: **http://clinicaltrials.gov/** and include clinical trial registration numbers in the title page for all papers that report their results. The journal requires that clinical trials, including feasibility and pilot studies are registered before the first site or participant is recruited* in a publicly accessible database such as
   http://clinicaltrials.gov/ and include clinical trial registration numbers in the *abstract* for all papers that report the protocol and their results.

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We also encourage the appropriate registration of all intervention studies including observational quasiexperimental clinical studies and studies that do not include clinical outcomes. Before preparing your paper, we recommend you read **Which studies should be registered on a clinical trials registry?** and **The Trials and Tribulations of Trial Registration and Reporting: Why are some nursing trials still slipping through the net?**

The following is essential; read and follow this carefully and completely:

1. Authors must include a statement in the *abstract* if their trial is not eligible for trial registration and why. If the study is not appropriate for registration in a trials registry then use another suitable study registration site, for example, the **Center for Open Science.**

   ii. If the trial is eligible for trial registration, the trial must be registered prospectively before the first participant is recruited and authors are asked to include the name of the trial register and the clinical trial registration number in the *abstract*.

   iii. To check if your trial is eligible for registration, see these resources: **Which studies should be registered on a clinical trials registry?** and **The Trials and Tribulations of Trial Registration and Reporting: Why are some nursing trials still slipping through the net?**

1. *Feasibility and Pilot Studies*

The UK National Institutes for Health Research defines **feasibility** and **pilot studies** as follows:

A **feasibility study** asks whether something can be done, should we proceed with it, and if so, how. A feasibility study may or may not involve recruitment of sites and/or participants depending on the feasibility questions asked and the design.

- A **pilot study** asks the same questions and also has a specific design feature. In a pilot study a future study, or part of a future study, is conducted on a smaller scale. Pilot studies/trials will include recruitment of sites and/or participants depending on the design.

- As a subset of feasibility research, **pilot studies** may or may not be randomised. In a **randomised pilot** the future RCT design is first conducted on a smaller scale. This is intended to check that the study processes (e.g. recruitment, randomisation, treatment, follow-up assessments) all run smoothly. In some cases, this will be the first phase of the main study, and data from the pilot phase may contribute to the final analysis; this is referred to as an **internal** A **non-randomised pilot** has similar aims but without randomisation of participants (**Eldridge et al 2016**).

1. It is the author's responsibility to ensure that an accurate and appropriately reported manuscript is submitted.
   b. Submit a manuscript that meets all the requirements as outlined in the appropriate **CONSORT** guideline and **TIDier** checklist for the replication of interventions.
   c. Transparently report all the information required for peer review of the protocol or trial in the manuscript as indicated in throughout these guidelines.
   d. All submissions describing randomised clinical controlled trials are to include 'randomised controlled trial' in the title. Make non-randomized and other types of studies that evaluate interventions clear in the title.

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Systematic reviews are valued submissions to the Journal. Follow these guidelines to ensure that the topic is appropriate, the methods are well described and applied, reporting guidelines are adhered to, and the findings are credible. Evaluate your submission as follows:

- The search is contemporary for the question.
- Cross check reporting against the relevant reporting guideline and provide substantial methodological information.
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Systematic reviews and meta-analyses of interventions

- Registered in *PROSPERO* or other recognized registry such as *JBI* if reporting a health outcome. Systematic
- reviews and meta-analyses of interventions must conform to PRISMA reporting guidelines.
  Ensure that Item 20 of PRISMA (reporting outcomes and estimates of precision such as confidence intervals for all
- outcomes of interest) is not omitted.
  Consider that PRISMA is a reporting guideline and not a methods manual. Authors must cite a review design and
- an appropriate methods manual or citation (and not just cite the PRISMA reporting guideline). Where?
- Unless conducting a systematic review of systematic reviews, do not include systematic reviews in reviews. Unpick systematic reviews, and screen primary studies screened for inclusion in the review.
- Quantitative reviews must critically appraise included studies; it is an essential requirement.
- The Journal will carefully consider how a specific methodological limitation may impact the findings. The *Cochrane risk of bias tool* is the recommended tool for trials of interventions. The EPOC group provides guidance on its application and reporting.

- If applicable, report the assessment of each domain of quality for each tool and each study in *supporting information*
- If conducting a review without a meta-analysis do not use the terms 'qualitative synthesis' or 'narrative synthesis' to avoid confusion with qualitative synthesis methods of the same name. The preferred term is: 'Synthesis without meta-analysis'. Also check that the PRISMA ow diagram does not mention 'qualitative synthesis'.
- Use the new Synthesis without meta-analysis (SWiM) reporting guidelines and not the standard PRISMA checklist If following Cochrane methods apply GRADE and produce a summary of findings table. Reviews must
- include a PRISMA ow diagram.
-

Systematic reviews and meta-analyses of tools and instruments.

Must follow **COSMIN guidelines and standards**: **CO**nsensus-based **S**tandards for the selection of health **M**easurement **IN**struments.

Tables and Figures

Adhere to the guidelines for tables and figures in the *Article Types* chart.

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State the study design clearly, for example, randomized controlled trial, intervention study (randomized or non-randomized), quasi-experimental study, systematic review, cross-sectional study, case-control study, ecological study, descriptive study, etc.

Describe in detail the design for the study being reported and you state clearly which parts of the study are exploratory or confirmatory. Recognize that hypothesis generating and hypothesis testing are different and be clear on which you are doing.

IF APPLICABLE, AS SEPARATE DOCUMENTS:

- Trial Report
- Protocol
- Trial registration documentation
- Any relevant checklist, including completed *CONSORT* checklist, *EQUATOR network* or *JBI* checklists and registry.

It is not possible to anonymize the trial registration entry. Reviewers will be able to view who conducted the trial when making essential checks of the registration entry.

TABLES (each table complete with title and table notes).

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Review the **basic figure requirements** for manuscripts for peer review, as well as the more detailed post-acceptance figure requirements.

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Links to useful resources:

Literature Reviews

Moher D, Liberati A, Tetzla J, Altman DG, **The PRISMA Group (2009) Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA Statement**. PLoS Med 6(7)

EQUATOR CHECKLISTS

Centre for Reviews and Dissemination

Cochrane Collaboration

The Evidence for Policy and Practice Information and Co-ordinating Centre (EPPI-Centre) Joanna Briggs Institute

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3.3 PREAMBLE II COVER LETTER TO THE EDITOR OF THE JOURNAL OF CLINICAL NURSING

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Editor-in-Chief: Journal of Clinical Nursing

To whom it may concern

Herewith I would like to submit the manuscript: —The impact of workplace relationships on nurse-reported quality of care and patient safety in the North-West Province.

I confirm that this work is original, has not been published, and is not currently under consideration for publication elsewhere. No conflict of interest is present in this study. Ethical clearance was granted by the North-West University (Potchefstroom Campus) (NWU-00033-19-A1) and the North-West Department of Health. All authors meet the criteria for authorship, have approved the final article and all those entitled to authorship are listed as authors.

This work is based on the research supported in part by the National Research Foundation of South Africa (Grant Number 123541). The Chairholder and postgraduate student acknowledge that opinions, findings and conclusions or recommendations expressed in any publication generated by NRF-supported research is that of the author(s) alone, and that the NRF accepts no liability whatsoever in this regard.

Should you have any further inquiries, please do not hesitate to contact me.

Kind regards

Naledi Tlhako

3.4 PREAMBLE III ARTICLE MANUSCRIPT FOR SUBMISSION

Title page

Title: The impact of workplace relationships on nurse-reported quality of care and patient safety in the North West Province

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ABSTRACT

Aim and objectives: To investigate the impact of workplace relationships on nurse-reported quality of care and patient safety.

Background: There is a direct link between workplace relationships between nurses and physicians, their managers and nurse colleagues, and improved patient outcomes. However, there is a dearth of literature on this in developing countries.

Design: This study applied a cross-sectional survey design.

Method: A multiphase sampling method was applied. Purposive sampling was used to select the province, health sector and hospitals (n=3). All-inclusive sampling was applied to in-patient units of the selected hospitals and nursing staff in those units (n=236). Data was collected in April 2021, using validated instruments.

Findings: Nurse manager ability, leadership and support were not experienced as positively contributing to the practice environment and had the most impact on quality of care and patient safety. Collegial nurse physician relationships were experienced as contributing positively to the practice environment, and had the most impact on adverse events, namely medication errors, patient falls after admission and healthcare-associated infections. Increased exposure to COVID-19 patients resulted in more positive perceptions of nurses regarding collegial nurse-physician relationships. The most common perpetrators of workplace violence were supervisors/managers, followed by nursing colleagues. On average participants experience more personal workplace violence than physical workplace violence. Personal workplace violence had more effect on quality of care, patient safety, and adverse events than physical workplace violence.

Conclusion: Positive workplace relationships or collegiality, especially nurse-manager relationships, appear to have the most impact on nurse-perceived quality of care and patient safety, followed by nurse-physician relationships, and then workplace violence.

Relevance to clinical practice: The focus of education interventions should be on developing leadership, and recruiting and retaining relationship-focused leaders, since leaders have the greatest impact on nurse-reported quality of care and patient safety.

Keywords: Collegial relationships, interprofessional collaboration, nurse-manager, nurse-nurse, nurse-physician, patient safety, quality of care, South Africa, workplace relationships, workplace violence

'What does this paper contribute to the wider global clinical community?'

- Positive workplace relationships or collegiality seemed to have a greater impact on nurse-perceived quality of care and patient safety than workplace violence.
- Of all relationships, nurse-managers/supervisors' relationships had the greatest impact on nurse-perceived quality of care and patient safety.
- Nurses' perceptions of the nurse-physician relationship improved as their nursing exposure to COVID-19 patients increased.

INTRODUCTION

Workplace relationships are distinct types of interpersonal relationships that have significant effects on both the people involved and the organizations in which they are formed (Sias, 2005, p. 377). Colbert et al. (2016) go on to describe how relationships in the workplace serve a variety of purposes, such as task assistance, career advancement, and emotional support. This study focuses specifically on workplace relationships in terms of nurse-physician, nurse-manager and nurse-to-nurse workplace relationships and will focus on both positive workplace relationships or collegiality, as well as negative workplace relationships or workplace violence (WPV). Positive workplace relationships or collegiality can be defined as a positive interpersonal working relationship (Menard, 2014, p. 6). This is a multifaceted idea that includes self-assurance and trust, group efforts to achieve goals, open communication, mutual assistance, mutual support, innovation, freedom from threat, friendliness, and enjoyment (Menard, 2014, p. 6). The World Health Organization (WHO, 2002, p. 4) defines WPV as: “Incidents where staff is abused, threatened or assaulted in circumstances related to their work, including commuting to and from work, involving an explicit or implicit challenge to their safety, wellbeing or health”.

BACKGROUND

NURSE-PHYSICIAN RELATIONSHIPS

Decades of research on nurse-physician workplace relationships showed that the main facilitators and barriers influencing the relationships included: (1) communication and collaboration; (2) roles and responsibilities; (3) hierarchy and education; and (4) liability (McInnes et al., 2015, p. 1; Wynn & Holden, 2020, p. 1). Specifically, communication and collaboration between the two professions have been deemed most critical to improved patient and nurse outcomes, a positive practice environment and decreased cost of healthcare (Clausen et al., 2017; Goda et al., 2018, p. 14; Boev & Xia, 2015, p. 67).

Positive relationships between nurses and physicians are associated with improved nurse-perceived patient safety and quality of care (Estabrooks et al., 2011, p. 74; Laschinger, 2014, p. 285; Norful et al., 2018; Wynn & Holden, 2020, p. 1), and better patient outcomes (Manojlovich & DeCicco, 2007, p. 540; Shen et al., 2011, p. 350; Goda et al., 2018, p. 14; Hanrahan *et al*., 2010, p. 200; Tervo-Heikkinen *et al*., 2008, p. 60). Specific patient outcomes include less nurse-reported incidence of medication errors (Manojlovich & DeCicco, 2007, p. 540; Fasolino & Snyder, 2012), ventilator-associated pneumonia, and catheter-associated

sepsis (Manojlovich & DeCicco, 2007, p. 540), reduced rates of morbidity and mortality, avoidable medical errors (Rosenstein & O'Daniel, 2006; Smith, 2012; Goda et al., 2018, p. 14), compromise in patient care or safety (Rosenstein & O'Daniel, 2006), and increased adherence to recommended care guidelines, increased patient access to care and continuity of care (Norful et al., 2018; Wynn & Holden, 2020, p. 1).

NURSE-MANAGER RELATIONSHIPS

Nurse management, leadership, and support of nurses are highly correlated with nurse outcomes, perceptions of the practice environment (Cummings et al., 2018; Cummings et al., 2010), quality of care and patient safety (Wong et al., 2013; Wong & Cummings, 2007) and nurse and patient satisfaction (McCay et al., 2018). AL-Dossary et al. (2016, p. 156) emphasise the importance of a positive relationship between nurses and their managers, as it serves to achieve safe care and optimal patient outcomes. The impact of nurse managers on the quality of care and patient safety is either through indirect or direct means.

An indirect impact of nurse managers is through outcomes such as staff satisfaction with job factors, staff health and wellbeing, staff productivity and effectivity, and processes such as staff's relationships with work, their colleagues, and the organisation (Cummings et al., 2018; Cummings et al., 2010). In a systematic review conducted by Wong et al. (2013), an indirect association of leadership with quality of care and patient safety was found in patient mortality (Houser, 2000; Capuano et al., 2005), complications of immobility (Anderson et al., 2003), medication errors (Houser, 2000; Capuano et al., 2005; Paquet et al., 2013; Vogus & Sutcliffe, 2007), patient falls (Houser, 2000; Capuano et al., 2005; Taylor et al., 2012), pressure ulcers (Taylor et al., 2012), hospital-acquired infections (Houser, 2003; Capuano et al., 2005) and length of hospital stay (Paquet et al., 2013). Direct impact refers to quality of care and patient safety impact that is caused immediately and obviously by the nurse manager. A direct impact of nurse managers' leadership on quality of care and patient safety was found in relation to patient satisfaction (Doran et al., 2006; Kroposki & Alexander, 2006; Havig et al., 2011), patient mortality (Cummings et al., 2010), restraint use (Anderson et al., 2003; Castle & Decker, 2011), fractures (Anderson et al., 2003), catheter use (Castle & Decker, 2011) and inadequate pain management (Castle & Decker, 2011).

NURSE-NURSE RELATIONSHIPS

Minimal information regarding the connection between nurse-nurse relationships and nurse, patient and organisational outcomes were found. A few studies showed an association between nurse-nurse relationships and job satisfaction (Ylitormanen et al., 2022; Masum et

al., 2016) patient safety perceptions (Özgönül et al., 2021), missed nursing care (Hassona & El-Aziz, 2017), and organisational climate, organisational commitment, teamwork, supportive climate, stress, negative interaction, human relations, hierarchy, and the communication and innovation climate (Kılıç & Altuntaş, 2019, p. 363). Interestingly, however, there was no association between nurse-nurse collaboration and medical errors (Lee & Hwang, 2019). Therefore, it is clear that this topic has not been extensively explored in research, and that findings are diverse.

WORKPLACE VIOLENCE

Vertical and horizontal violence are the two components of workplace violence (WPV). A pattern of aggressive behaviors, such as bullying and intimidation, between nurses who are at the same rank level in the hierarchy is known as horizontal violence (Hinchberger, 2009). Essentially, one nurse is perpetuating violence against another nurse who is a peer, which is known as nurse-to-nurse violence. In South Korea, 82% of nurses indicated being exposed to some form of horizontal violence (Park et al., 2015, p. 90), while in Cape Town, South Africa, 44% of nurses working in public hospitals had experienced horizontal violence in their work environment (Rust, 2018, p. 17-22. Vertical violence is a pattern of behavior that is usually directed against subordinates and is directed at someone who occupies a position at a lower or higher level of the hierarchical scale. Several studies have identified nurse managers and senior staff members (Allen et al., 2015; Ostrofsky, 2012), as well as physicians (Oludare & Kotronoulas, 2022) as perpetrators of WPV.

In the 2019-2020 American Nurses Association (ANA) and Healthy Nurse, Healthy Nation (HNHN) Survey, 23% of nurses reported having encountered vertical aggression or bullying from people in positions of authority (Grenny et al., 2020). The two forms of WPV include physical and psychological abuse. Regardless of whether an injury was caused, physical WPV involves using physical force against a person, including shoving, biting, pinching, shooting, kicking, slapping, stabbing, and sexual assault (Abbas & Selim, 2011, p. 1050). The use of words that are personally offensive, such as generally abusive spoken obscenities and foul language, or that demonstrate a lack of respect for an individual's dignity and worth, leading to abusive, humiliating, intimidating, ridiculing, and insulting behaviors, is further defined by these authors as psychological abuse (Abbas & Selim, 2011, p. 1050). Khoshknab et al. (2015, p. 1) are of the view that the phenomenon of physical and psychological violence is common, but psychological violence occurs more than other types. According to a recent systematic review (Mobaraki et al., 2020), the most prevalent forms of WPV are, in order of prevalence from most to least common, verbal, physical, psychological, and horizontal violence.

A substantial amount of research has been done concerning WPV and its effect on the nurse, but less is known about its eroding effect on quality of care and patient safety (Park et al., 2015, p. 93). A plethora of international studies show a direct link between collegial workplace relationships between nurses and physicians, their managers and nurse colleagues, and improved nurse, patient, and organisational outcomes. However, there is a dearth of such literature in developing countries. Furthermore, it is well documented that hospital environments are often plagued by horizontal and vertical workplace violence in the form of physical and psychological abuse, which disrupts collegial workplace relationships and healthcare delivery (Sahay et al., 2015, p. 23). Although much is published on the effect of WPV on the nurse, less is known about the effect on quality of care and patient safety (Allen et al., 2015, p. 382; Elmblad, 2013, p. 444; Lanctôt, & Guay, 2014, p. 494; Vessey et al., 2010, p. 133), especially in the African context.

MATERIAL AND METHODS

South Africa has a dual healthcare system, namely a public sector that provides care to approximately 83% of the population of the country, and a private sector that provides care to the rest of the population. The study was conducted in the North West Province (NWP) of South Africa. The NWP is divided into four district municipalities, which are further subdivided into 18 local municipalities. There are 23 public hospitals in the NWP (De Villiers, 2021, p. 4).

A financial means test is used in the public sector to assess if patients are eligible for free healthcare treatment; if not, they must pay a small fee based on their income. In the private sector, healthcare is either covered by a medical plan or paid for out of pocket (De Villiers, 2021, p. 4). This study was conducted in the public healthcare sector. Four hospital tiers, namely central, tertiary, regional, and district hospitals make up the public sector. These facilities provide a variety of healthcare services, from preventative to curative. District hospitals receive referrals from clinics and community health centers and offer generalist assistance to them. General practitioners or primary healthcare nurses are responsible for providing medical care. Where healthcare customers need the experience of teams led by resident specialists, a regional hospital accepts referrals from and offers specialized support to a district hospital. Any institution offering tertiary health education in the province is a tertiary institution (National DoH, 2012). Central hospitals consist of very specialised national referral units which provide environments for multi-specialty clinical services, innovation and research. The services provided will generally be of high cost and low volume and require high technology and/or multidisciplinary teams of people with scarce skills to provide sustained care of high quality. A cross-sectional survey design was applied in this study, using a valid

and reliable self-report, paper-based survey that measures five variables, namely the Practice Environment Scale of the Nurse Work Index (PES-NWI), Negative Acts Question Revised (NAQ-R), quality of care, patient safety, and adverse events, and selected nurse and unit demographics.

POSITIVE WORKPLACE RELATIONSHIPS OR COLLEGIALITY

The PES-NWI was used to measure positive workplace relationships or collegiality regarding the nurse-physician relationship and the nurse-manager relationship. The following two subscales were used: nurse manager ability, leadership, and support of nurses; and collegial nurse-physician relations. This scale consists of 11 questions answered on a Linkert scale from 1 to 4, where 1 represents strongly disagree and 4 strongly agree; a mean score of 2.5 and more indicates a positive practice environment. Scores on the PES-NWI are valid and reliable for measuring the nursing practice environment across samples in the United States and non-US countries (Zangaro & Jones, 2019; Swiger et al, 2017. p. 76-80; Lake, 2002).

WORKPLACE VIOLENCE

WPV was calculated using the NAQ-R (Negative Acts Questionnaire – Revised). There are three subscales that make up the NAQ: work-related, personal, and physical WPV. In this study, only the personal and physical WPV subscales were included. These comprised 15 questions, with responses on a Likert scale of 1 to 5, with 1 being never and 5 denoting daily. Subscale items are calculated and averaged to determine subscale scores. The test exhibits strong validity and reliability (Einarsen & Hoel, 2001).

QUALITY OF CARE

Four questions that were utilised as single items were used to assess the nurses' perceptions of the quality of the care. These have been utilised in multi-country studies in Asia (Liu et al., 2012), Europe (Sermeus et al., 2011), North America (Aiken et al., 2013), South Africa (Coetzee et al., 2013), and other regions. They were also included in multiple systematic reviews and meta-analyses (Lake et al., 2016). Questions were answered according to a Likert scale ranging from 1 representing frequently to 4 representing never.

PATIENT SAFETY

In this study two questions measuring nurse-perceived patient safety were used. These questions have been used as single items in multi-country studies conducted in Europe (Sermeus et al., 2011), North America (Aiken et al., 2013), Asia (Liu et al., 2012), South Africa

(Coetzee et al., 2013), and Europe (Sermeus et al., 2012). They have also been included in numerous systematic reviews and meta-analyses. These questions were answered according to a Likert scale of 1 to 5, where 1 is good and 5 is failing,

The remaining 8 questions came from surveys on patient safety (SOPS) culture conducted by the Agency for Healthcare Research and Quality (AHRQ). The responses were given on a Likert scale of 1 to 5, with 1 denoting strong agreement and 5 denoting strong disagreement.

ADVERSE EVENTS

In multi-country studies conducted in Europe (Sermeus et al., 2011), North America (Aiken et al., 2013), Asia (Liu et al., 2012), and South Africa (Coetzee et al., 2013), the nurse-perceived adverse events questionnaire consisted of seven questions. These questions have also been included in numerous systematic reviews and meta-analyses (Lake et al., 2016). These questions were answered according to a Likert scale of 0 to 5, where 0 equals never and 5 equals frequently. The study also included certain individual and unit variables, including age, gender, employment status, nursing category, Bachelor of Nursing degree, specialty of the current unit, nursing clinical specialty, level of clinical specialty, years worked as a nurse, and years employed in the hospital.

POPULATION AND SAMPLE

In this study, a multiphase sampling technique was used. NWP was purposively chosen, as was the public sector. Purposive sampling was also applied to select the hospitals in the public sector, including the regional and district hospitals (n = 3) neighbouring the largest tertiary hospital in the province. There is no central hospital in the NWP. When choosing the study's units and participants, all-inclusive sampling was used. The study covered every in-patient setting, including the emergency rooms and theatres. The participants included community service nurses, enrolled nurses, auxiliary nurses, registered nurses, and midwives. Because nurses who have worked in the chosen hospital for less than three months may not be able to provide an overall assessment of factors such as the working environment, quality of care, or patient safety within their units or even hospitals, since they are still new employees, this was used as an exclusion criterion. Distribution of 319 (N) surveys at the tertiary hospital resulted in 123 (N) returned surveys; distribution of 146 (N) surveys at the regional hospital resulted in 72 (N) returned surveys; and distribution of 76 (N) surveys at the small district hospital resulted in 41 (N) returned surveys. There was a total of n=236 nurses in the overall sample.

DATA COLLECTION

Data was collected from 11–23 April 2021. After ethical approval was obtained from the North-West University Health Research Ethics Committee (NWU-HREC) and the NWP Department of Health (DoH), goodwill consent was sought from the respective Chief Executive Officers who served as gatekeepers. The gatekeepers referred the researcher to the nursing service managers of the facilities, who acted as mediators in the study. The researcher was in contact with the mediators via email and telephone, to elaborate on the study in detail, and educated them on his/her role in the study. To accommodate each institution's individual needs, input from the mediator was sought and welcomed. Furthermore, it was expected of the nursing service managers to select an independent person to assist with data collection, and to inform them about the research project and what it entailed. If the hospital was not in the position to appoint such an independent person, then the principal investigator employed a research assistant who met the requirements of an independent person. The chosen independent person was prohibited from being associated with the study or from being in a position of authority.

The researcher arranged to meet the independent person at a convenient time for training on the research project, recruitment of participants, signing of informed consent forms, and distribution of the surveys. It was expected of the independent person to sign a confidentiality agreement. The researcher explained the project to potential participants in each of the units of the selected hospitals, in the presence of the independent person. The independent person then explained the process of informed consent. The informed consent form was handed out to the potential participants in written form, and the participants had the consent form for a minimum of 24 hours to allow them adequate time to make an informed decision on their willingness to participate.

After this period, the researcher and the independent person returned to the unit, and willing participants were asked to complete the informed consent form. The informed consent form was completed in the presence of the researcher and independent person in a private office, where all COVID-19 protocols were in place: hand hygiene, social distancing and always wearing a mask. All stationery such as pens was disinfected before and after use. The forms were sealed in a Dimension Lengthwise (DL) envelope and remained with the independent person. The independent person provided the willing participants with a survey, NWU-branded pen, and sachet of coffee. All of these tokens were placed in an unsealed C4 envelope along with a separate leaflet explaining entry into a lucky draw. The participant had 2 days to complete the survey, at any time and place that was convenient to them. Even after accepting

the survey, the participant was still able to withdraw from the study at any time should they wish to do so.

DATA ANALYSIS

Data was analysed using the computer software program SPSS version 27 (SPSS Inc., 2021). Descriptive statistics were used to present the demographic data of the participants. Confirmatory and exploratory factor analysis, and Cronbach's alpha were conducted to ensure the validity and reliability of the scales. In the calculation of the factor scores (dependent variables), missing data was handled by mean replacement. The correlations between workplace relationships, quality of care, patient safety, and adverse events were conducted using Spearman's rank-order correlations. Independent t-tests, ANOVAs and Spearman's rank-order correlations were conducted to determine the association between participant demographics and workplace relationships. Cohen's d effect sizes were used to determine the importance of the differences in means, where 0.2 is considered as small, 0.5 as medium, and 0.8 as large. The magnitude of correlations is regarded as the effect size, where 0.1 is considered as small, 0.3 as medium, and 0.5 as large.

ETHICS

This study received ethical approval from the NWU-HREC (NWU-000270-21-A1), and the NWP DoH, with goodwill consent from the three participating hospitals. The ethical considerations of the study adhere to the principals of ethics as stipulated by the DoH guidelines on ethics in health research (DoH, 2015).

RESULTS

DEMOGRAPHIC DETAILS Of NURSE PARTICIPANTS AND UNITS

A total of 542 surveys were distributed, of which 236 were returned, with a response rate of 43.5%. The total number of participants across all sectors was 236. The majority of the participants were female (81.8%), in the category of registered nurses and/or midwives (57.2%) and working in medical wards (20.0%). There were 19.5% with a bachelor's degree in Nursing, and 21.6% with specialty training, mostly at the level of a postgraduate diploma/degree (20.7%). The majority had occasional (30%) and routine contact with COVID-19 patients (36.4%). The most common perpetrators of WPV were supervisors/managers (52.3%33.4), followed by nursing colleagues (41.1%). On average the nurses were 41.4 years

of age, had worked as a nurse in any category for an average of 12.6 years and had spent 9.5 years in the specific hospital (see Table 1).

TABLE 3.1 Demographics (n=236)

Demographics			
Frequencies			
Variables		**Frequency (n)**	**Percentage (%)**
Gender	**Female**	**193**	**81.8**
	Male	**43**	**18.2**
Nursing category	**Registered nurse and/or midwife**	**135**	**57.2**
	Community service nurse	**7**	**3.0**
	Enrolled nurse and/or midwife	**31**	**13.1**
	Enrolled nursing auxiliary	**62**	**26.3**
Specialty of unit	**Medical**	**47**	**20.0**
	Surgical	**21**	**8.9**
	Trauma	**24**	**10.2**
	Maternity	**37**	**15.7**
	Critical care	**27**	**11.4**
	Theatre	**14**	**6**
	Paediatrics	**20**	**8.5**
	Other	**45**	**19.1**

Bachelor's degree in Nursing	**Yes**	**46**	**19.5**
	No	**188**	**79.6**
Clinical specialty training in nursing	**Yes**	**51**	**21.6**
	No	**182**	**77.1**
Level of clinical specialty training	**Certificate**	**25**	**10.6**
	Postgraduate diploma/ degree	**49**	**20.7**
	Master's degree	**1**	**0.42**
Current employment status	**Permanently employed (full-time)**	**202**	**86.0**
	Permanently employed (part-time)	**8**	**3.4**
	Temporary/agency	**25**	**10.6**
Hospitals	**Public hospital 1**	**123**	**52.1**
	Public hospital 2	**72**	**30.5**
	Public hospital 3	**41**	**17.4**
Direct care of COVID-19 patients	**Never**	**29**	**12.3**
	Rarely	**38**	**16.1**
	Occasionally	**71**	**30**
	Routinely	**86**	**36.4**
Perpetrators of workplace violence	**Physicians**	**10**	**4.2**
	Supervisors/managers	**79**	**33.4**
	Nursing colleagues	**62**	**26.2**

Descriptives			
	n	M	SD
Age	225	40.4	10.1
No. of years worked as a nurse	224	12.6	10.0
Years worked in current hospital	200	9.5	8.9

Descriptive statistics

The descriptive statistics and the reliability of the instruments used are shown in Table 2. The subscales of the NAQ-R and PES-NWI were considered reliable. Only selected items of the AHRQ were included, and therefore an exploratory factor analysis was conducted. The pattern matrix divided into two subscales with regard to the selected items of the AHRQ survey: 1) communication (We discuss ways to prevent errors from happening again; Regularly review work processes to determine if changes are needed to improve patient safety; The actions of the hospital management show that patient safety is a top priority; Staff feel free to question the decisions or actions of those in authority; Staff speak up if they see something that may negatively impact patient care); and 2) staffing and response to errors (Staff feel that their mistakes are held against them; There is a lack of support for staff involved in patient safety errors; Relies too much on temporary, float or agency staff), with a Kaiser-Meyer-Olkin measure of sampling adequacy of 0.729, and 49.89% of the total variance explained. However, the staffing and response to errors was not reliable, and was thus reported as single items.

On average, participants experience more personal WPV (M=1.61) than physical WPV (M=1.51). Regarding the PES-NWI, nurse manager ability, leadership, and support of nurses is below the mean of 2.5, indicating that it is not experienced as contributing towards a positive practice environment, although collegial nurse-physician relationships were experienced positively. Regarding quality of care, nurses were only somewhat confident that patients and their caregivers could manage their care after discharge (M=2.52), while other items were experienced positively. Patient safety issues included nurses being only somewhat confident that management would act to resolve problems in patient care that nurses identified (M=2.59) and being neutral with regard to relying too much on temporary, float or agency staff (M=3.28), staff feeling that their mistakes are held against them (M=2.53), and lack of support for staff involved in patient safety errors (M=2.71). Overall grades on patient safety and the communication subscales were experienced positively. With regard to adverse events, healthcare-associated infections occurred most often (M=1.92), followed by medication errors (M=1.80).

Table 3.2 Descriptive statistics and reliability of main study variables (n=236)

Variables	Mean	Range	Standard Deviation (SD)	Cronbach's alpha
Workplace relationships				
Personal WPV	1.61	1 – 5	0.80	0.93
Physical WPV	1.51	1 – 5	0.88	0.81
PES-NWI: Nurse manager, ability, leadership and support of nurses	2.45	1 – 4	0.79	0.85
PES-NWI: Collegial nurse-physician relationship	2.86	1 – 4	0.71	0.90
Quality of Care				
In general, how would you describe the quality of nursing care delivered to patients in your work setting?	2.12	1 – 4	0.78	Single item
Would you recommend where you work to your family and friends needing healthcare?	2.02	1 – 4	0.96	Single item
How confident are you that your patients and their caregivers can manage their care after discharge?	2.52	1 – 4	0.88	Single item
Patient Safety				
Communication errors	2.34	1 – 5	0.85	0.75
Please give your current practice setting an overall grade on patient safety.	2.23	1 – 5	1.01	Single item

How sure are you that management will act to resolve problems in patient care that nurses identify?	**2.59**	**1 – 4**	**0.99**	**Single item**
Relies too much on temporary, float or agency staff.	**3.28**	**1 – 5**	**1.42**	**Single item**
Staff feel that their mistakes are held against them.	**2.53**	**1 – 5**	**1.27**	**Single item**
There is a lack of support for staff involved in patient safety errors.	**2.71**	**1 – 5**	**1.32**	**Single item**
Adverse events				
Medication errors	**1.80**	**1 – 5**	**1.01**	**Single item**
Patient falls after admission	**1.45**	**1 – 5**	**0.72**	**Single item**
Healthcare-associated infections	**1.92**	**1 – 5**	**0.96**	**Single item**
Treatment procedures resulting in unintended harm	**1.66**	**1 – 5**	**0.84**	**Single item**

CORRELATIONS BETWEEN MAIN STUDY VARIABLES

In Table 3 the correlations between the main study variables are described. The PES-NWI: Nurse manager ability, leadership, and support of nurses had the most effect on quality of care and patient safety, with mostly medium to large, statistically significant negative correlations, especially the item management will act to resolve problems in patient care (r=-0.498; p=0.000) and communication errors (r=-0.467; p=0.000). It also had small to medium, statistically significant positive correlations with staff feel that their mistakes are held against them (r=0.320; p=0.000), and relies too much on temporary, float or agency staff (r=0.138; p=0.000). The PES-NWI: Collegial nurse-physician relationships had the most impact on adverse events, especially medication errors (r=-0.303; p=0.000) and healthcare-associated infections (r=-0.299; p=0.000), with medium, statistically significant negative correlations, and likewise with patient falls after admission (r=-0.299; p=0.000).

In contrast, personal WPV had small to medium, statistically significant positive correlations with most aspects of quality of care and patient safety, especially regarding whether the nurses would recommend where they work to family and friends needing healthcare (r=0.345; p=0.000) and lack of support for staff involved in patient safety errors (r=-0.342; p=0.000). This was also the case for adverse events (except the item relies too much on temporary, float or agency staff), especially medication errors (r=0.305; p=0.000) and healthcare-associated infections (r=0.283; p=0.000).

Physical WPV had mostly small but also a few medium correlations with quality of care and patient safety, especially in terms of communication errors (r=0.268; p=0.000) and whether the nurses would recommend where they work to family and friends needing healthcare (r=0.257; p=0.000). Physical WPV also had mostly small with a few medium correlations with adverse events, especially healthcare-associated infections (r=0.288; p=0.000) and treatment procedures resulting in unintended harm (r=0.218; p=0.000)

.

TABLE 3.3 Correlations between study variables

	Quality of care			Patient safety						Adverse events			
	Quality of nursing care delivered to patients in your work setting	Would you recommend where you work to your family and friends needing healthcare?	Confident that patients and their care-givers can manage their care after discharge	Communication errors	Overall grade on patient safety	Management will act to resolve problems in patient care	Relies too much on temporary, float or agency staff	Staff feel that their mistakes are held against them	Lack of support for staff involved in patient safety errors	Medication errors	Patient falls after admission	Health-care-associated infections	Treatment procedures resulting in unintended harm
Personal WPV	0.275**	0.345**	0.191**	0.340**	0.246**	0.212**	-0.105	-0.246**	0.342**	0.305**	0.145*	0.283**	0.190**
	0.000	0.000	0.004	0.000	0.000	0.001	0.116	0.000	0.000	0.000	0.031	0.000	0.005
Physical WPV	0.220**	0.257**	0.205**	0.268**	0.186**	0.149*	-0.121	-0.213**	0.203**	0.193**	0.175**	0.288**	0.218**
	0.001	0.000	0.002	0.000	0.005	0.025	0.071	0.001	0.003	0.004	0.009	0.000	0.001
PES-NWI: Nurse manager, ability, leader-ship and support of nurses	-0.348**	-0.385**	-0.288**	-0.467**	-0.355**	-0.498**	0.138*	0.320**	-0.195**	-0.164*	-0,060	-0.156*	-0,058
	0.000	0.000	0.000	0.000	0.000	0.000	0.042	0.000	0.004	0.017	0.385	0.024	0.396
PES-NWI: Collegial nurse-physician relationship	-0.371**	-0.317**	-0.245**	-0.274**	-0.327**	-0.343**	0.082	0.160*	-0.063	-0.303**	-0.244**	-0.299**	-0.120
	0.000	0.000	0.000	0.000	0.000	0.000	0.230	0.018	0.350	0.000	0.000	0.000	0.082

** Correlation is significant at the 0.01 level (two-tailed).
* Correlation is significant at the 0.05 level (two-tailed).

Association between demographic profile and workplace relationships

There was a medium association between having specialty training and personal WPV (d=0.66; p=0.000) and a small association between physical WPV (d=0.37; p=0.020), with those with specialty training having a higher mean than those without ([Personal WPV] M=2.00; M=1.50; [Physical WPV] M=1.77; M=1.44). There was a small association with PES-NWI Leadership, management, and support of nurses (d=0.32; p=0.049), with those without specialty training rating that aspect of the practice environment higher (M= 2.51) than those without specialty training (M=2.26). There was a medium association with PES-NWI: Leadership, management, and support of nurses and nurse category, with enrolled nursing auxiliaries rating that aspect of the practice environment higher than all of the other categories of nurses (d=0.44–0.50; p=0.031), with enrolled nursing auxiliaries experiencing this more positively than registered nurses, community service nurses and enrolled nurses and/or midwives (M=2.72 [enrolled nursing auxiliaries]; M=2.36 [registered nurses and/or midwives]; M=2.36 [community service nurses] and M=2.39 [enrolled nurses). There was a small to medium association between PES-NWI: Collegial nurse-physician relations and routinely caring for COVID-19 patients (d=0.22-0.62; p=0.028), in that the more that nurses worked with COVID-19 patients, the more positively they experienced collegial nurse-physician relations. There was no association with gender, having a Bachelor's degree, hospital where employed, employment status, specialty of the unit, level of specialty training, age, years worked as a nurse or years worked in the specific hospital.

DISCUSSION

The most common perpetrators of WPV were supervisors/managers, followed by nursing colleagues. On average, participants experience more personal WPV than physical WPV. A higher incidence of WPV was associated with specialty training. Personal WPV had more effect on quality of care, patient safety and adverse events than physical WPV, both having the most impact on recommending their place of work to family and friends needing healthcare, communication errors and lack of support for staff involved in patient safety errors.

Overall, nurse managers' ability, leadership, and support were not experienced as positively contributing to the practice environment and had the most effect on quality of care and patient safety, especially with regard to management resolving problems in patient care, communication errors and recommending their place of work to family and friends needing healthcare. Collegial

nurse-physician relationships were experienced as contributing positively to the practice environment, and after nurse managers' ability, leadership, and support, these had the most effect on quality of care and patient safety, and specifically on adverse events, namely medication errors, patient falls after admission and healthcare-associated infections.

Nursing category was linked to perceptions of leadership, management, and support of nurses. Finally, increased exposure to COVID-19 patients resulted in nurses having more positive perceptions of collegial nurse-physician relationships.

Leadership, management, and support of nurses was not perceived to be present in the practice environment; in addition, it was also perceived that managers/supervisors were most frequently the perpetrators of WPV. National (Goosen et al., 2019; Rust, 2018; Samuels, 2016) and international (Boafo et al., 2016; Nwaneri et al., 2017) studies have similarly found that managers/supervisors are commonly the perpetrators of WPV. It is apparent that managers/supervisors influence nurses' exposure to WPV in both direct and indirect ways. Direct factors include using WPV as a disciplinary measure, to sustain hierarchical work practices, top-down driven leadership, leadership voids, and lack of interpersonal skills; while indirect factors include the normalisation of WPV, indifference to ethical issues related to bullying, and/or a lack of managerial abilities to address the phenomenon (Hutchinson et al., 2006; Olender, 2013,). Grenny et al. (2020) further explain that when levels of stress increase like they did during the pandemic, those with greater perceived power often express more aggression and those who perceive themselves as less powerful often believe that their only option is to submit and abide.

This is a problematic finding, as it is also leadership, management and support of nurses that had the most impact on nurse-perceived quality of care and patient safety. It is well established from systematic reviews on nurse leadership (Cummings et al., 2018; Cummings et al., 2010; Wong et al., 2013; Wong & Cummings, 2007) that leadership, management and support of nurses have an impact on nurse, patient and system outcomes. However, of all of the studies included in the systematic reviews, only two were from Africa (Sojane et al., 2016; Negussie & Demissie, 2013), and these focused only on nurse outcomes. Authors agree that managers/supervisors have both a direct and indirect impact on patient outcomes: directly due to the fact that they make decisions about human resource variables (e.g. staffing and resources, overtime) that are connected to patient care outcomes (Wong et al., 2013), and indirectly through the health and wellbeing of nursing staff that impact on work performance (e.g. job satisfaction, turnover intention) (Hall et al., 2016; Cullati et al., 2019, p. 44), as well as through the quality standards of the organisation

(e.g. consultation and involvement of nurses in decision making, education and training) (Mogakwe et al., 2019,; Chisengantambu et al., 2018,)

According to the systematic review of Wong et al. (2013), leadership directly impacts patient outcomes regarding five aspects: patient satisfaction; patient mortality; adverse events (behaviour problems, restraint use, complications of immobility, fractures, medication errors, patient falls, catheter use, pressure ulcers, inadequate pain management, hospital-acquired infections); complications; and patient healthcare utilisation. These patient outcomes include patient reports, nurse-perceived assessments and actual recorded incidents, all of which are considered reliable forms of measuring patient outcomes, especially nurse-perceived assessments (Tvedt et al., 2012).

A focus on leadership development, as well as the recruitment and retention of relationally orientated leaders are therefore crucial to improve patient, nurse and organisational outcomes. A systematic review on leadership education interventions (Cummings et al., 2018) has shown that although these interventions differ widely with regard to programme content, length and delivery, most showed significant increases in self-reported leadership and observed leadership practices. However, such interventions must be evidence-based, theoretically grounded and incorporate cultural, social and the institution's contextual factors (Galuska, 2014; Lord et al., 2013).

Collegial nurse-physician relationships were experienced as contributing positively to the practice environment, and after nurse managers' ability, leadership and support, this aspect had the most effect on nurse-perceived quality of care and patient safety, and especially on the incidence of adverse events. This is in accordance with international literature on the topic, where collegial nurse workplace relationships have positive effects on quality of care and patient safety, including patient satisfaction (Larrabee et al., 2004), recorded incidents of patient outcomes (Manojlovich & DeCicco, 2007; Shen et al., 2011; Goda et al., 2018, p. 14; Hanrahan et al., 2010; Tervo-Heikkinen et al., 2008; Malidou et al., 2011) and nurse-perceived assessments (Stimpfel et al., 2014; Ma et al., 2015; Estabrooks et al., 2007; Laschinger, 2014; Norful et al., 2018; Wynn & Holden, 2020). An interesting finding from this study is that increased exposure to COVID-19 patients resulted in nurses having improved perceptions of physician-nurse collaboration. This may point to the fact that there was better collaboration and communication between nurses and physicians when caring for COVID-19 patients, due to the sheer volume and changes in the workplace environment related to the COVID-19 pandemic. This was also confirmed by Matusov et al. (2022), who reported increased team interdependence and appreciation among nurses and physicians during the COVID-19 pandemic.

Personal WPV was experienced more than physical WPV, and this finding is concurrent with the those of international studies (Pandey et al., 2017). In Africa studies have reported WPV rates ranging from as low as 26.7% in Ethiopia (Oljira, 2017) to as high as 85% in South Africa (Madzhadzhi et al., 2017). In all cases, the most common type of WPV was found to be non-physical violence (Boafo et al., 2016). Also, personal WPV had a greater effect than physical WPV on nurse-perceived quality of care, patient safety and adverse events. Interestingly, WPV had the most effect on recommending their place of work to family and friends needing healthcare, communication errors and lack of support for staff involved in patient safety errors. In a systematic review conducted by Lanctôt and Guay (2014), the outcomes of WPV include seven categories of consequences: physical, psychological, emotional, work functioning, relationship with patients/quality of care, social/general, and financial stress (Lanctôt, & Guay, 2014). Lanctôt and Guay (2014) found that among the selected articles in their review, only ten of them addressed issues related to relationships with clients or quality of care (Arnetz & Arnetz, 2001; Ünsal Atan et al., 2012; Early & Williams, 2002; Eker et al., 2012; Fernandes et al., 1999; Gates et al., 2011; Lawoko et al., 2004; McKenna et al., 2003; Needham et al., 2005b; Roche et al., 2010), with most articles indicating a reduction in quality of care and patient safety. Again, WPV education interventions are linked to a decrease in WPV, due to the fact that identification of incidents is improved, reporting increases and therefore situations can be addressed and dealt with; it also improves communication, clarification or roles and responsibilities between professionals, and knowledge of how to address WPV incidents (Rutherford et al., 2019; Runyan et al., 2000).

Specialisation level was linked to an increased perception of WPV, and this was also found by international studies (Ming et al., 2019). Interestingly, it was not linked to specialty units, as found in other South African studies (Khamisa et al., 2016). Also, perceptions of the practice environment with regard to leadership, management and support of nurses was linked to nursing categories, with lower-ranked categories experiencing this subscale more positively than higher-ranked categories. It is generally found in regional and national literature that lower-ranked categories rate the practice environment, quality of care and patient safety more positively than their higher-ranked counterparts (Alhassan et al., 2019; Swart et al., 2015). The common argument for this is that education and training bring greater knowledge and awareness of the practice environment, quality of care and patient safety.

LIMITATIONS

Nurse-nurse relationships were only measured through the presence of WPV, and not collegial or positive relationships; this is a limitation considering that in all instances both nurse-physician and nurse-manager collegial or positive relationships had a greater impact on quality of care, patient safety and adverse events than WPV or negative relationships did. There are two main instruments used to measure collegiality: a 72-item survey titled Nurse-Nurse Collaboration Scale (NNCS), with reliability scores of 0.66–0.99 (Dougherty & Larson, 2010), and a 54-item survey titled Colleague Solidarity of Nurses Scale (CSNS), with reliability scores of 0.63–0.80 (Ulusoy et al., 2013). Due to the extent of the scales, it was decided not to include these surveys in the study, and the PES-NWI does not dedicate a portion to nurse-nurse collegial relationships. Further study of this relationship is warranted, as there is little published in the field. This study has some limitations, including as its reliance on cross-sectional data, which makes it difficult to draw a conclusion on the causal relationship between collegial relationships and care quality, patient safety, and adverse events. The results of this study, which only included hospitals from the NWP region of South Africa, cannot be applied to other contexts. In addition, the province's hospitals were purposefully sampled; nonetheless, despite the sampling's vast participant pool, it was not a probability sample

CONCLUSION

This study showed that collegial relationships or positive relationships had a greater impact on quality of care, patient safety and adverse events, than WPV or negative relationships did. The most important collegial relationship was the nurse-manager relationship, as it had the most impact on quality of care and patient safety; this is problematic as quality of care and patient safety was not perceived as being present in the practice environment of the study participants, as well as the fact that nurse managers/supervisors were experienced as being the greatest perpetrators of WPV. Nurse-physician relationships had an impact on quality of care, patient safety and especially adverse events, indicating that improved nurse-physician relationships improved perceptions of quality of care, patient safety and adverse events. Also increased care of COVID-19 patients improved nurses’ perceptions of the nurse-physician collegial relationship, indicating increased collaboration and communication between the professions. Personal WPV had a greater effect on quality of care, patient safety and adverse events than physical WPV.

RELEVANCE TO CLINICAL PRACTICE

It is clear from the findings that urgent attention must be directed towards leadership development, as well as to the recruitment and retention of relationally orientated leaders, as this aspect is perceived negatively in the participants' current practice environment, even though it is most highly correlated with quality of care and patient safety. It would seem that the best method to improve leadership practice is through leaderships education interventions; these should be evidence-based, theoretically grounded, and based on the local culture, social practices and context, as these show most improvement in leadership practices. Researchers especially recommend the combination of experiential learning, such as mentorship and coaching, and action learning (Cummings et al., 2018; McNamara et al., 2014,). Although WPV or negative relationships also impacted on quality of care, patient safety and adverse events, it appeared from the findings that focusing on the development of collegial or positive relationships would have a greater impact not only on patient outcomes, but also on nurse and organisation outcomes.

REFERENCES

Abbas, R.A., & Selim, S.F. (2011). Workplace violence: A survey of diagnostic radiographers in Ismailia governorate hospitals, Egypt. *Journal of American Science*, *7*(6), 1049–1058.

Aiken, L.H., Sloane, D.M., Bruyneel, L., Van den Heede, K., Sermeus, W., & Rn4cast Consortium. (2013). Nurses' reports of working conditions and hospital quality of care in 12 countries in Europe. *International Journal of Nursing Studies, 50*(2), 143–153.

AL-Dossary, R.N., Kitsantas, P., & Maddox, P.J. (2016). Residency programs and clinical leadership skills among new Saudi graduate nurses. *Journal of Professional Nursing*, *32*(2), 152–158.

Alhassan, A., Fuseini, A. G., & Musah, A. (2019). Knowledge of the Glasgow Coma Scale among nurses in a tertiary hospital in Ghana. *Nursing Research and Practice*, 2019(1), 1-7.

Allen, B. C., Holland, P., & Reynolds, R. (2015). The effect of bullying on burnout in nurses: the moderating role of psychological detachment. *Journal of Advanced Nursing*, 71(2), 381–390.

Anderson, R. A., Issel, L. M., & McDaniel Jr, R. R. (2003). Nursing homes as complex adaptive systems: relationship between management practice and resident outcomes. *Nursing Research*, *52*(1), 12.

Arnetz, J. E., & Arnetz, B. B. (2001). Violence towards health care staff and possible effects on the quality of patient care. *Social Science & Medicine*, *52*(3), 417–427.

Boafo, I. M., Hancock, P., & Gringart, E. (2016). Sources, incidence, and effects of non-physical workplace violence against nurses in Ghana. *Nursing Open, 3*(2), 99–109.

Boev, C., & Xia, Y. (2015). Nurse-physician collaboration and hospital-acquired infections in critical care. *Critical Care Nurse*, *35*(2), 66-72. http://dx.doi.org/10.4037/ccn2015809

Capuano, T., Bokovoy, J., Hitchings, K., & Houser, J. (2005). Use of a validated model to evaluate the impact of the work environment on outcomes at a magnet hospital. *Health Care Management Review, 30*(3), 229–236.

Castle, N. G., & Decker, F. H. (2011). Top management leadership style and quality of care in nursing homes. *The Gerontologist, 51*(5), 630–642.

Chisengantambu, C., Robinson, G. M., & Evans, N. (2018). Nurse managers and the sandwich support model. *Journal of Nursing Management*, *26*(2), 192–199.

Clausen, C., Lavoie-Tremblay, M., Purden, M., Lamothe, L. Ezer, H., & McVey, L. (2017). Intentional partnering: a grounded theory study on developing effective partnerships among nurse and physician managers as they co-lead in an evolving healthcare system. *Journal of Advanced Nursing, 73*(9), 2156–2166. https://doi-org.nwulib.nwu.ac.za/10.1111/jan.13290

Coetzee, S.K., Klopper, H.C., Ellis, S.M., & Aiken, L.H. (2013). A tale of two systems— nurses' practice environment, well-being, perceived quality of care and patient safety in private and public hospitals in South Africa: A questionnaire survey. *International Journal of Nursing Studies*, *50*(2), 162–173.

Colbert, A., Yee, N., & George, G. (2016). The digital workforce and the workplace of the future. *Academy of Management Journal*, *59*(3), 731–739.

Cullati, S., Bochatay, N., Maître, F., Laroche, T., Muller-Juge, V., Blondon, K. S., ... & Nendaz, M. R. (2019). When team conflicts threaten quality of care: a study of health care professionals' experiences and perceptions. *Mayo Clinic Proceedings: Innovations, Quality & Outcomes*, *3*(1), 43–51.

Cummings, G. G., Tate, K., Lee, S., Wong, C. A., Paananen, T., Micaroni, S. P., & Chatterjee, G. E. (2018). Leadership styles and outcome patterns for the nursing workforce and work environment: A systematic review. *International Journal of Nursing Studies*, *85,* 19–60.

Cummings, G. G., MacGregor, T., Davey, M., Lee, H., Wong, C. A., Lo, E., ... & Stafford, E. (2010). Leadership styles and outcome patterns for the nursing workforce and work environment: a systematic review. *International Journal of Nursing Studies*, *47*(3), 363–385.

Department of Health. (2015). *Ethics in Health Research Principles, Processes and Structures*, 2nd ed. Department of Health.De Villiers, K. 2021. Bridging the health inequality gap: an examination of South Africa's social innovation in health landscape. *Infectious Diseases of Poverty*, 10(19):1-7. https://doi.org/10.1186/s40249-021-00804-9

Doran, D., Harrison, M. B., Laschinger, H., Hirdes, J., Rukholm, E., Sidani, S., & Cranley, L. (2006). Relationship between nursing interventions and outcome achievement in acute care settings. *Research in Nursing & Health, 29*(1), 61–70.

Dougherty, M. B., & Larson, E. L. (2010). The Nurse-Nurse Collaboration Scale. *Journal of Nursing Administration*, 40(1), 17–25. https://doi. org/10.1097/NNA.0b013e3181c47cd6

Early, M. R., & Williams, R. A. (2002). Emergency nurses' experience with violence: Does it affect nursing care of battered women? *Journal of Emergency Nursing*, *28*(3), 199.

Einarsen, S., & Hoel, H. (2001). *The validity and development of the Revised Negative Acts Questionnaire*. European Congress of Work and Organizational Psychology, Praga

Eker, H. H., Ozder, A., Tokaç, M., Topçu, I., & Tabu, A. (2012). Aggression and violence towards health care providers, and effects thereof. *Archives of Psychiatry and Psychotherapy, 4*, 19–29.

Elmblad, R. (2013). *Workplace incivility affecting CRNAs: a study of prevalence, severity, consequences with proposed interventions*: University of Michigan-Flint (Dissertation – PhD)

Estabrooks, C.A., Midodzi, W.K., Cummings, G.G., Ricker, K.L., & Giovannetti, P. (2011). The impact of hospital nursing characteristics on 30-day mortality. *Nursing Research*, *54*(2), 74–84.

Fasolino, T., & Snyder, R. (2012). Linking nurse characteristics, team member effectiveness, practice environment, and medication error incidence. *Journal of Nursing Care Quality*, *27*(2), E9–E16.

Fernandes, C. M., Bouthillette, F., Raboud, J. M., Bullock, L., Moore, C. F., Christenson, J. M., et al. (1999). Violence in the emergency department: A survey of health care workers. *Canadian Medical Association Journal/Journal De L'association Medicale Canadienne*, *161*(10), 1245–1248.

Galuska, L. A. (2014). Education as a springboard for transformational leadership development: Listening to the voices of nurses. *Journal of Continuing Education in Nursing*, *45*(2), 67–76.

Gates, D. M., Gillespie, G. L., & Succop, P. (2011). Violence against nurses and its impact on stress and productivity. *Nursing Economics*, *29*(2), 59–66.

Goda, L. R., Aref, S. M., & Abdel-Razek, A. M. (2018). Perception of nurses and physicians about importance of their collaboration in the work. *Minia Scientific Nursing Journal*, *3*(1), 9–15.

Goosen, S. S., Mokoena, J. D., & Lekalakala-Mokgele, S. (2019). *A model to manage workplace bullying between nurses at a private hospital group in South Africa*. [PhD dissertation, Sefako Makgatho Health Sciences University].

Grenny, J. McNamara, S. A., & Battie, R. (2020). *Vertical Violence & Workplace Bullying*. https://ortoday.com/vertical-violence-workplace-bullying/

Hall, L.H., Johnson, J., Watt, I., Tsipa, A. and O'Connor, D.B., 2016. Healthcare staff wellbeing, burnout, and patient safety: a systematic review. *PloS one*, *11*(7): 1-12

Hanrahan, N. P., Aiken, L. H., McClaine, L., & Hanlon, A. L. (2010). Relationship between psychiatric nurse work environments and nurse burnout in acute care general hospitals. *Issues in Mental Health Nursing*, *31*(3), 198–207.

Hassona, F. M. H., & El-Aziz, M. A. E. (2017). Relation between nurse-nurse collaboration and missed nursing care among intensive care nurses. *IOSR Journal of Nursing and Health Science*, *6*(2), 28–35.

Havig, A. K., Skogstad, A., Kjekshus, L. E., & Romøren, T. I. (2011). Leadership, staffing and quality of care in nursing homes. *BMC Health Services Research, 11*(1), 1–13.

Hinchberger, P. A. (2009, January). Violence against female student nurses in the workplace. *Nursing Forum, 44*(1), 37–46.

Houser, J. L. (2000). *A model for evaluating the context of nursing care delivery*. University of Northern Colorado.

Hutchinson, M., Vickers, M., Jackson, D., & Wilkes, L. (2006). Workplace bullying in nursing: towards a more critical organisational perspective. *Nursing Inquiry*, *13*(2), 118–126.

Khamisa, N., Peltzer, K., Ilic, D., & Oldenburg, B. (2016). Work related stress, burnout, job satisfaction and general health of nurses: A follow-up study. *International Journal of Nursing Practice*, *22*(6), 538–545.

Khoshknab, M.F., Oskouie, F., Najafi, F., Ghazanfari, N., Tamizi, Z., & Ahmadvand, H. (2015). Psychological violence in the health care settings in Iran: a cross-sectional study. *Nursing and Midwifery Studies, 4*(1)

Kılıç, E., & Altuntaş, S. (2019). The effect of collegial solidarity among nurses on the organizational climate. *International Nursing Review, 66*(3), 356-365. https://doi.org/10.1111/inr.12509

Kroposki, M., & Alexander, J. W. (2006). Correlation among client satisfaction, nursing perception of outcomes, and organizational variables. *Home Healthcare Now, 24*(2), 87–94.

Lake, E.T., Hallowell, S.G., Kutney-Lee, A., Hatfield, L.A., Del Guidice, M., Boxer, B., Ellis, L.N., Verica, L., & Aiken, L.H. (2016). Higher quality of care and patient safety associated with better NICU work environments. *Journal of Nursing Care Quality*, 31(1): 24.

Larrabee, J. H., Ostrow, C. L., Withrow, M. L., Janney, M. A., Hobbs Jr, G. R., & Burant, C. (2004). Predictors of patient satisfaction with inpatient hospital nursing care. *Research in Nursing & Health*, *27*(4), 254–268.

Lanctot, N., & Guay, S. (2014). The aftermath of workplace violence among healthcare workers: a systematic literature review of the consequences. *Aggression and Violent Behavior, 19*(5), 492–501.

Laschinger, H. K. S. (2014). Impact of workplace mistreatment on patient safety risk and nurse-assessed patient outcomes. *Journal of Nursing Administration*, *44*(5), 284–290.

Lawoko, S., Soares, J., & Nolan, P. (2004). Violence towards psychiatric staff: A comparison of gender, job and environmental characteristics in England and Sweden. *Work and Stress*, *18*(1), 39–55

Lee, J. H., Hwang, J., & Lee, K. S. (2019). Job satisfaction and job-related stress among nurses: The moderating effect of mindfulness. *Work*, *62*(1), 87–95.

Liu, K., You, L, Chen, S., Hao, Y, Zhu, X., Zhang, L., & Aiken, L. H. (2012). The relationship between hospital work environment and nurse outcomes in Guangdong, China: A nurse questionnaire survey. *Journal of Clinical Nursing*, *21*(9-10),1476–1485.

Lord, L., Jefferson, T., Klass, D., Nowak, M., & Thomas, G. (2013). Leadership in context: Insights from a study of nursing in Western Australia. *Leadership*, *9*(2), 180–200.

Ma, K, & Hommel, B., 2015. The role of agency for perceived ownership in the virtual hand illusion. *Consciousness and cognition*, *36*, pp.277-288

Madzhadzhi, L. P., Akinsola, H. A., Mabunda, J., & Oni, H. T. (2017). Workplace violence against nurses: Vhembe district hospitals, South Africa. *Research and theory for nursing practice*, *31*(1), 28–38.

Manojlovich, M., & DeCicco, B. (2007). Healthy work environments, nurse-physician communication, and patients' outcomes. *American Journal of Critical Care*, *16*(6), 536–543.

Masum, A. K. M., Azad, M. A. K., Hoque, K. E., Beh, L. S., Wanke, P., & Arslan, Ö. (2016). Job satisfaction and intention to quit: An empirical analysis of nurses in Turkey. PeerJ, 4(e1896), 1–23.

Matusov, Y., Matthews, A., Rue, M., Sheffield, L., & Pedraza, I. F. (2022). Perception of interdisciplinary collaboration between ICU nurses and resident physicians during the COVID-19 pandemic. *Journal of Interprofessional Education & Practice*, *27*, 100501.

McCay, R., Lyles, A. A., & Larkey, L. (2018). Nurse leadership style, nurse satisfaction, and patient satisfaction: a systematic review. *Journal of Nursing Care Quality*, *33*(4), 361–367.

McInnes, S., Peters, K., Bonney, A., & Halcomb, E. N. (2015). An integrative review of facilitators and barriers influencing collaboration and teamwork between general practitioners and nurses working in general practice*. Journal of Advanced Nursing, 71*(9), 1973–1985. https://doi.org/10.1111/jan.12647

McKenna, B. G., Poole, S. J., Smith, N. A., Coverdale, J. H., & Gale, C. K. (2003). A survey of threats and violent behaviour by patients against registered nurses in their first year of practice. *International Journal of Mental Health Nursing*, *12*(1), 56–63.

McNamara, M.S., Fealy, G.M., Casey, M., O'Connor, T., Patton, D., Doyle, L. and Quinlan, C., 2014. Mentoring, coaching and action learning: interventions in a national clinical leadership development programme. *Journal of clinical nursing*, *23*(17-18), 2533-2541.

Menard, K. I. (2014). *Collegiality, the nursing practice environment, and missed nursing care.* [Doctoral dissertation, University of Wisconsin-Milwaukee].

Ming, J. L., Huang, H. M., Hung, S. P., Chang, C. I., Hsu, Y. S., Tzeng, Y. M., ... & Hsu, T. F. (2019). Using simulation training to promote nurses' effective handling of workplace violence: A quasi-experimental study. *International Journal of Environmental Research and Public Health*, *16*(19), 3648.

Mobaraki, A., Aladah, R., Alahmadi, R., Almuzini, T., & Sharif, L. (2020). Prevalence of workplace violence against nurses working in hospitals: a literature review. *American Journal of Nursing*, *9*(2), 84–90.

Mogakwe, L. J., Ally, H., & Magobe, N. B. (2019). Recommendations to facilitate managers' compliance with quality standards at primary health care clinics. *Curationis*, *42*(1), 1–8.

National Department of Health. 2012. *Regulations relating to categories of hospitals (R185).* https://ndoh.dhmis.org/owncloud/index.php/s/R5cmdp0gY4Fa43

Needham, I., Abderhalden, C., Halfens, R.J.G., Fischer, J.E. & Dassen, T. (2005). Nonsomatic effects of patient aggression on nurses: A systematic review. *Journal of Advanced Nursing*, 49(3): 283-296. http://dx.doi.org/10.1111/j.1365-2648.2004. 03286

Negussie, N., & Demissie, A. (2013). Relationship between leadership styles of Nurse managers and nurses' job satisfaction in Jimma University Specialized Hospital. *Ethiopian Journal of Health Sciences*, *23*(1), 50–58.

Norful, A. A., de Jacq, K., Carlino, R., & Poghosyan, L. (2018). Nurse practitioner-physician co management: A theoretical model to alleviate primary care strain. *Annals of Family Medicine*, *16*(3), 250–256. https://doi.org/10.1370/ afm.2230

Nwaneri, A. C., Onoka, A. C., & Onoka, C. A. (2017). Workplace bullying among nurses working in tertiary hospitals in Enugu, southeast Nigeria: Implications for health workers and job performance. *Journal of Nursing Education and Practice*, 7(2), 69–78.

Olender, L. D. (2013). Nurse manager caring and workplace bullying in nursing: The relationship between staff nurses' perceptions of nurse manager caring behaviors and their perception of exposure to workplace bullying within multiple healthcare settings.

Oljira, S. (2017). *Assessment of Workplace Violence Against Nurses Working in Emergency Department of Referral Public Hospitals in Addis Ababa, Ethiopia.* Addis Ababa: University of Addis Ababa. (Dissertation – PhD).

Oludare, T. R., & Kotronoulas, G. (2022). Determinants and consequences of workplace violence against hospital-based nurses: a rapid review and synthesis of international evidence. *Nursing Management*, 29(4), 1-28

Ostrofsky, D. (2012). Incivility and the nurse leader. *Nursing Management*, *43*(12), 18–22.

Özgönül, M.L., Kırca, N., Karaçar, Y. & Bademli, K. 2021. Professional self-concept and moral sensitivity in nursing students: a descriptive and correlational study. *Türkiye Biyoetik Dergisi/Turkish Journal of Bioethics*, 8(1), 25-33.

Pandey, M., Bhandari, T.R. and Dangal, G., 2017. Workplace violence and its associated factors among nurses. *Journal of Nepal Health Research Council*, *15*(3), 235-241.

Park, M., Cho, S. H., & Hong, H. J. (2015). Prevalence and perpetrators of workplace violence by nursing unit and the relationship between violence and the perceived work environment. *Journal of Nursing Scholarship*, *47*(1), 87–95.

Paquet, C., Yudin, M. H., Allen, V. M., Bouchard, C., Boucher, M., Caddy, S., & Senikas, V. (2013). Toxoplasmosis in pregnancy: prevention, screening, and treatment. *Journal of Obstetrics and Gynaecology Canada*, *35*(1), 78–79.

Roche, M., Diers, D., Duffield, C., & Catling-Paull, C. (2010). Violence toward nurses, the work environment, and patient outcomes. *Journal of Nursing Scholarship*, *42*(1), 13–22.

Rosenstein, A. H., & O'Daniel, M. (2006). Impact and implications of disruptive behavior in the perioperative arena. *Journal of the American College of Surgeons*, *203*(1), 96–105.

Runyan, C. W., Zakocs, R. C., & Zwerling, C. (2000). Administrative and behavioral interventions for workplace violence prevention. *American Journal of Preventive Medicine*, *18*(4), 116–127.

Rust, H. (2018). *Horizontal violence among nurses working in intensive care environments within the private healthcare sector*. University of Stellenbosch. [PhD dissertation].

Rutherford, D. E., Gillespie, G. L., & Smith, C. R. (2019, January). Interventions against bullying of prelicensure students and nursing professionals: An integrative review. *Nursing Forum, 54*(1) 84–90.

Sahay, A., Hutchinson, M., & East, L. (2015). Exploring the influence of workplace supports and relationships on safe medication practice: A pilot study of Australian graduate nurses. *Nurse Education Today*, *35*(5), 21–26.

Samuels, A. (2016). *Workplace bullying among nurses at a psychiatric hospital in the Western Cape*. [Dissertation, University of the Western Cape].

Sermeus, W., Aiken, L.H., Van den Heede, K., Rafferty, A.M., Griffiths, P., Moreno-Casbas, M.T., Busse, R., Lindqvist, R., Scott, A.P., Bruyneel, L., & Brzostek, T. (2011). Nurse forecasting in Europe (RN4CAST): rationale, design, and methodology. BioMed Central Nursing, *10*(1), 1-9

Shen, H.C., Chiu, H.T., Lee, P.H., Hu, Y.C., & Chang, W.Y. (2011). Hospital environment, nurse–physician relationships and quality of care: questionnaire survey. *Journal of Advanced Nursing*, *67*(2), 349–358.

Sias, P. M. (2005). Workplace relationship quality and employee information experiences. *Communication Studies*, *56*(4), 375–395.

Smith, S.A., 2012. Nurse competence: A concept analysis. *International journal of nursing knowledge*, *23*(3), 172-182.

Sojane, J.S., Klopper, H.C., & Coetzee, S.K. (2016). Leadership, job satisfaction and intention to leave among registered nurses in the North-West and Free State provinces of South Africa. *Curationis*, *39*(1), 1–10

Stimpfel, A. W., Rosen, J. E., & McHugh, M. D. (2014). Understanding the role of the professional practice environment on quality of care in Magnet® and non-Magnet hospitals. *Journal of Nursing Administration*, *44*(1), 10.

Swart, R.P., Pretorius, R., & Klopper, H. (2015). Educational background of nurses and their perceptions of the quality and safety of patient care. *Curationis*, *38*(1), 1–8.

Taylor, J. A., Dominici, F., Agnew, J., Gerwin, D., Morlock, L., & Miller, M. R. (2012). Do nurse and patient injuries share common antecedents? An analysis of associations with safety climate and working conditions. *BMJ Quality & Safety*, *21*(2), 101–111.

Tervo-Heikkinen, T., Kvist, T., Partanen, P., Vehviläinen-Julkunen, K., & Aalto, P. (2008). Patient satisfaction as a positive nursing outcome. *Journal of Nursing Care Quality*, *23*(1), 58–65.

Tvedt, C., Sjetne, I. S., Helgeland, J., & Bukholm, G. (2012). A cross-sectional study to identify organisational processes associated with nurse-reported quality and patient safety. *BMJ Open*, *2*(6), e001967.

Ulusoy, E. C., Alpar, S. E. (2013). Colleague solidarity and its relationship with job satisfaction in nurses. *Florence Nightingale Journal of Nursing*, *21*(3), 154–163.

Ünsal Atan, Ş., Baysan Arabaci, L., Sirin, A., Isler, A., Donmez, S., Unsal Guler, M., & Yazar Tasbasi, F. (2013). Violence experienced by nurses at six university hospitals in T urkey. *Journal of Psychiatric and Mental Health Nursing*, *20*(10), 882–889.

Vessey, J. A., DeMarco, R., & DiFazio, R. (2010). Bullying, harassment, and horizontal violence in the nursing workforce the state of the Science. *Annual Review of Nursing Research*, *28*(1), 133–157.

Vogus, T. J., & Sutcliffe, K. M. (2007, October). *Organizational resilience: towards a theory and research agenda*. IEEE international conference on systems, man, and cybernetics (pp. 3418-3422). IEEE.

Wong, C.A. & Cummings, G.G. (2007). The relationship between nursing leadership and patient outcomes: a systematic review. *Journal of Nursing Management*, 15(5), 508-521

Wong, C. A., Cummings, G. G., & Ducharme, L. (2013). The relationship between nursing leadership and patient outcomes: a systematic review update. *Journal of Nursing Management*, *21*(5), 709–724.

World Health Organisation. (2002). *Framework guidelines for addressing workplace violence in the health sector*. Geneva, Switzerland: International Labour Office.

Wynn, B. S. N. & Holden, C. (2020). Nurse Practitioner and Physician Incivility in Healthcare. *American Research Journal of Nursing*, *5*(1), 1–2.

Ylitörmänen, T., Kvist, T., & Turunen, H. (2022). *Intraprofessional collaboration: A qualitative study of registered nurses' experiences*. Collegian.

Zangaro, G. A., & Jones, K. (2019). Practice environment scale of the nursing work index: a reliability generalization meta-analysis. *Western Journal of Nursing Research*, *41*(11), 1658–1684.

CHAPTER 4:

EVALUATION OF THE STUDY AND RECOMMENDATIONS FOR NURSING PRACTICE, RESEARCH, EDUCATION AND POLICY

4.1 INTRODUCTION

In this chapter the study is evaluated, the limitations of the study are discussed, and recommendations for nursing practice, nursing research, nursing education and policy are suggested.

4.2 EVALUATION OF THE STUDY

In this study the researcher investigated the impact of workplace relationships on nurse-reported quality of care and patient safety in the NWP. The background to different types of workplace relationships was provided, with a thorough presentation of how those relationships affect the quality of care and patient safety. The main objectives of describing nurses' perceptions of workplace relationships with physicians, their nurse managers, and colleagues were, and of quality of care and patient safety were presented.

The following research goals were established by identification of a knowledge gap:

- To describe nurses' perceptions of workplace relationships with physicians, their nurse managers, and colleagues.
- To describe the status of nurse-reported quality of care and patient safety.
- To determine the impact of workplace relationships on nurse-reported quality of care and patient safety.

These objectives and their associated results were presented in Chapter 3 of the study. The results revealed that workplace relationships do indeed have an impact on nurse-reported quality of care and patient safety, as per the theoretical framework presented in Chapter 1 and 2. An overview of the results are presented: The PES-NWI: Nurse manager, ability, leadership, and support of nurses had the most effect on quality of care and patient safety with mostly medium to large statistically significant negative correlations, especially the variable management will act to resolve problems in patient care (r=-0.498; p=0.000) and communication errors (r=-0.467; p=0.000). It also had small to medium statistically significant positive correlations with staff feel that their mistakes are held against them (r=0.320; p=0.000), and the hospital relies too much on temporary, float or agency staff (r=0.138; p=0.000). The PES-NWI: Collegial nurse-physician relationships had the most impact on adverse events, especially medication errors (r=-0.303;

p=0.000) and healthcare-associated infections (r=-0.299; p=0.000), with medium statistically significant negative correlations, and on patient falls after admission (r=-0.299; p=0.000).

4.3 LIMITATIONS

Nurse-nurse relationships were only measured through the presence of WPV, and not collegial or positive relationships. This is a limitation, considering that in all instances both nurse-physician and nurse-manager collegial or positive relationships had a greater impact on quality of care, patient safety and adverse events than did WPV or negative relationships. There are two (2) main instruments used to measure collegiality, the 72-item survey titled Nurse-Nurse Collaboration Scale (NNCS) with reliability scores of 0.66-0.99 (Dougherty & Larson, 2010) and a 54-item survey titled Colleague Solidarity of Nurses Scale (CSNS), with reliability scores of 0.63-0.80 (Uslusoy & Alpar, 2013). Due to the extent of these scales, it was decided not to include them in the study, and the PES-NWI does not dedicate a portion to nurse-nurse collegial relationships. Further study of this relationship is warranted, as there is as yet little literature published in the field. This study has some limitations, including as its reliance on cross-sectional data, which makes it difficult to draw a conclusion on the causal relationship between collegial relationships and care quality, patient safety, and adverse events. The results of this study, which only included hospitals from the NWP region of South Africa, cannot be applied to other contexts. In addition, the province's hospitals were purposefully sampled; nonetheless, despite the sampling's vast participant pool, it was not a probability sample.

In addition, the study may have had a limited narrative perspective on the phenomenon of WPV due to the data collection method, which was self-report paper-based surveys. Another limitation was that the current study did not include patient and family violence against nurses.

4.4 RECOMMENDATIONS

Grove *et al.* (2013:599) describe recommendations as including “ideas that emerged from the present study and previous studies in the same area that can provide direction for the future”. It is proposed that future investigation should be directed towards nursing practice, nursing research, nursing education and policy development. The recommendations that emerged from the study in terms of nursing practice, research, education and policy are outlined below.

4.4.1 Recommendations for practice

The study gave indications that there might be positive outcomes when effort is made to improve all aspects of workplace relationships, especially in relation to WPV and collegiality. The results demonstrate the need for immediate attention to be paid to leadership development as well as to the recruitment and retention of relationally oriented leaders, as this characteristic is perceived negatively in the participants' current practice environment even though it is most closely linked with patient safety and quality of care. The most effective way to enhance leadership practices would appear to be through interventions in leadership education; these should be evidence-based, theoretically founded, and based on the local culture, social practices, and setting, since these demonstrate the most improvement in leadership practices. Additionally, nurse managers can put in place the standard operating process for notifying and referring nurses in cases of severe WPV. Nurse-physician relationships also had an impact on quality of care, patient safety and especially on adverse events, indicating that improved nurse-physician relationships improved perceptions of quality of care, patient safety and adverse events

4.4.2 Recommendations for research

Nurse-nurse relationships were only measured through the presence of WPV, and not collegial or positive relationships in this study. This is a limitation considering that in all instances both nurse-physician and nurse-manager collegial or positive relationships had a greater impact on quality of care, patient safety and adverse events than WPV or negative relationships did. It is advised that workplace relationships be researched and explored further, considering their implications for nurses, patient, and organisations. The study also identified a specific need for studies that address the management of WPV episodes, particularly violence perpetrated by co-workers, and studies that assess the efficacy of associated measures. The findings of this study, which only comprised hospitals from South Africa's NWP region, are not applicable to other contexts. Additionally, the hospitals in the province were deliberately sampled; yet, despite the sampling's large participant pool, it was not a probability sample. The management of workplace incidents that are perpetrated against nurses by patients, visitors, or families of patients also needs to be studied, as should variations on this theme, including, but not limited to, workplace relationships, WPV, quality of care and patient safety.

4.4.3 Recommendations for education

Lashinger *et al.* (2013) stated that teaching programmes made available to nurses might help them to spot potential workplace difficulties. Participants acquire a learnt cognitive process that enables them to develop resiliency and optimism in dealing with violence through the use of educational methods about WPV. The priority should be cultivating positive relationships which is proven by this study to have a greater impact on quality of care and patient safety. Molina-Mula and Gallo-Estrada, (2020) interestingly found that there would be less tension in the nurse's practice and fewer restrictions on the patient's autonomy if the nurse and patient worked to foster a positive relationship based on genuine respect for their decisions. According to the research analysed for this study, nurses' cognitive processes were enhanced by educational and training initiatives, as well as by stimulating practices and instruction, which helped them to acquire the knowledge and abilities needed to recognise, report, and deal with violent incidents. Through intervention programmes like workshops, the occurrence of WPV can be established. These should not just be directed at the population of new nurses, but also extended to other co-workers so that all nurses can benefit from increased collegiality and compassion.

4.4.4 Recommendations for policy developments

Stronger and more transparent policies should be implemented by both management and employees in nursing work environments. Putting into practice novel approaches to healthcare management that enhance patient relationships with healthcare providers and the patient's ability to make decisions in a clinical context. Furthermore, the results show that the educational model for nurses needs to be changed to focus more on a patient-centred approach. On a larger scale, by implementing the Health Worker Safety Charter, the International Council of Nurses (ICN) promotes nurse protection and safety (ICN, 2020). The Charter makes several recommendations, including putting in place procedures to guarantee that there is zero tolerance of violence and abuse, safe staffing levels, decreased work-related stress, enough resources (including equipment), and open communication in the workplace (ICN, 2020). The ICN's zero-tolerance policy addressing violence against nurses is an approach that the SANC can adopt as well. Nurses' outcomes can be enhanced by putting policies against violence in healthcare into place. To pinpoint the tactics and environmental elements that promote the best patient participation in the planning, provision, and assessment of healthcare services is imperative.

4.5 CONCLUSION

The study's goals of examining and describing nurses' perceptions of workplace relationships with physicians, their nurse managers, and colleagues, outlining the state of nurse-reported patient safety, and ascertaining the effect of workplace relationships on nurse-reported quality of care and patient safety in North-West Province were all successfully achieved. This study was evaluated, limitations highlighted, and recommendations for (nursing practice, nursing research, nursing education, and nursing policy were made.

REFERENCE LIST

Abbas, R.A. & Selim, S.F. 2011. Workplace violence: a survey of diagnostic radiographers in Ismailia governorate hospitals, Egypt. *Journal of American Science*, 7(6):1049-1058.

Aiken, L.H., Sloane, D.M., Bruyneel, L., Van den Heede, K., Sermeus, W. & Rn4cast Consortium. 2013. Nurses' reports of working conditions and hospital quality of care in 12 countries in Europe. *International Journal of Nursing Studies,* 50(2):143-153.

Akbiyik, A., Korhan, E.A., Kiray, S. & Kirsan, M. 2020. The effect of nurses' leadership behavior on the quality of nursing care and patient outcomes. Creative Nursing, 26(1):8-18.

Almost, J., Doran, D.M., McGillis Hall, L. & Laschinger, H.K., 2010. Antecedents and consequences of intra-group conflict among nurses. *Journal of Nursing Management*, 18(8):981-992

Al-Dossary, R.N. 2017. Leadership in nursing. In: Aida, A., ed. *Contemporary Leadership Challenges.* IntechOpen. pp. 251-264. DOI: 10.5772/65308

AL-Dossary, R.N., Kitsantas, P. & Maddox, P.J. 2016. Residency programs and clinical leadership skills among new Saudi graduate nurses. *Journal of Professional Nursing*, 32(2):152-158. http://dx.doi.org/10.5772/65308

Al-Ghabeesh, S.H. & Qattom, H. 2019. Workplace bullying and its preventive measures and productivity among emergency department nurses. *BMC Health Services Research*, 19:art. #445. https://doi.org/10.1186/s12913-019-4268-x

Alhassan, A., Fuseini, A.G. & Musah, A. 2019. Knowledge of the Glasgow Coma Scale among nurses in a tertiary hospital in Ghana. *Nursing Research and Practice*, 2019(1):1-7. DOI: 10.1155/2019/5829028

Allen, B.C., Holland, P. & Reynolds, R. 2015. The effect of bullying on burnout in nurses: the moderating role of psychological detachment. *Journal of Advanced Nursing*, 71(2):381-390.

Anderson, R.A., Issel, L.M. & McDaniel, R.R., Jr. 2003. Nursing homes as complex adaptive systems: relationship between management practice and resident outcome. *Nursing Research,* 52(1):12-21.

Arnetz, J.E. & Arnetz, B.B. 2001. Violence towards health care staff and possible effects on the quality of patient care. *Social Science & Medicine*, 52(3):417-427.

Aquino, K. 2000. Structural and individual determinants of workplace victimization: the effects of hierarchical status and conflict management style. *Journal of Management*, 26(2):171-193.

Aveling, E.L., Kayonga, Y., Nega, A. & Dixon-Woods, M. 2015. Why is patient safety so hard in low-income countries? A qualitative study of healthcare workers' views in two African hospitals. *Globalization and Health*, 11(1):1-8.

Baek, H.S., Lee, K.U., Joo, E.J., Lee, M.Y. & Choi, K.S. 2010. Reliability and validity of the Korean version of the Connor-Davidson Resilience Scale. *Psychiatry investigation*, 7(2):109.

Bell, B., 2021. Towards abandoning the master's tools: The politics of a universal nursing identity. *Nursing Inquiry*, *28*(2).

Bernardes, M.L.G., Karino, M.E., Martins, J.T., Okubo, C.V.C., Galdino, M.J.Q. & Moreira, A.A.O. 2020. Workplace violence among nursing professionals. *Revista Brasileira de Medicina do Trabalho*, 18(3):250-257.

Berry, P.A., Gillespie, G.L., Gates, D. & Schafer, J. 2012. Novice nurse productivity following workplace bullying. *Journal of nursing scholarship*, *44*(1):80-87.

Berthelsen, M., Skogstad, A., Lau, B. & Einarsen, S. 2011. Do they stay or do they go? A longitudinal study of intentions to leave and exclusion from working life among targets of workplace bullying. *International Journal of Manpower*, 32(2):178-193 doi:10.1108/01437721111130198

Bhandari, P. 2020. *Population vs sample: what's the difference?* https://www.scribbr.co/methodology/population-vs-sample/ Date of access: 10 Sept. 2020.

Boafo, I.M., Hancock, P. & Gringart, E. 2016. Sources, incidence, and effects of non- physical workplace violence against nurses in Ghana. *Nursing Open,* 3(2):99-109.

Boev, C. & Kiss, E. 2017. Hospital-acquired infections: current trends and prevention. *Critical Care Nursing Clinics*, *29*(1):51-65.

Boev, C. & Xia, Y. 2015. Nurse-physician collaboration and hospital-acquired infections in critical care. *Critical Care Nurse*, 35(2):66-72. http://dx.doi.org/10.4037/ccn2015809

Botma, Y., Greeff, M., Mulaudzi, F.M. & Wright, S.C.D. 2010. *Research in health sciences*. 6th ed. Cape Town: Pearson Education South Africa.

Brink, P., Bäck-Pettersson, S. & Sernert, N. 2012. Group supervision as a means of developing professional competence within pre-hospital care. *International Emergency Nursing*, *20*(2):76-82.

Brink, E., Karlson, B.W. & Hallberg, L.R.M. 2006. Readjustment 5 months after a first-time myocardial infarction: reorienting the active self. *Journal of advanced nursing*, *53*(4):403-411.

Britannica. 2019. North West. *Encyclopedia Britannica.* https://www.britannica.com/place/North-West-province-South-Africa Date of access: 22 Nov. 2020.

Brooks, K.P. & Dunkel Schetter, C. 2011. Social negativity and health: conceptual and measurement issues. *Social and Personality Psychology Compass*, 5(11):904-918.

Brunetto, Y., Teo, S.T., Shacklock, K. & Farr-Wharton, R. 2012. Emotional intelligence, job satisfaction, well-being and engagement: explaining organisational commitment and turnover intentions in policing. *Human Resource Management Journal,* 22(4):428-441.

Budin, W. C., Brewer, C. S., Chao, Y. Y., & Kovner, C. 2013. Verbal abuse from nurse colleagues and work environment of early career registered nurses. *Journal of Nursing Scholarship*, 45(3):308-316

Buljac-Samardzic, M., Doekhie, K.D. & Van Wijngaarden, J.D. 2020. Interventions to improve team effectiveness within health care: a systematic review of the past decade. *Human Resources for Health*, 18(1):1-42.

Burns, N. & Grove, S.K. 2010. *Understanding nursing research-eBook: building an evidence-based practice*. Madrid: Elsevier Health Sciences. Callier, S.L., Hertelendy, A., Butler, J., Harter, T.D., Firmani, M. & Goldstein, M.M. 2017. Going online: A pedagogical assessment of bioethics distance education courses for health sciences professionals. *International Journal of Online Pedagogy and Course Design (IJOPCD)*, *7*(1):57-70.

Cantey, S.W. 2012. *Vertical violence and the student nurse: is this toxic for professional identity development?* Hattisburg: University of Southern Mississippi. (Dissertation – PhD).

Capuano, T., Bokovoy, J., Hitchings, K. & Houser, J. 2005. Use of a validated model to evaluate the impact of the work environment on outcomes at a magnet hospital. *Health Care Management Review,* 30(3):229-236.

Casciaro, S., Renna, M.D., Pisani, P., Greco, A., Conversano, F. & Muratore, M. 2014. *Osteoporosis: epidemiology and available diagnostic approaches*. Paper delivered at the 3rd Imeko TC13 Symposium on Measurements in Biology and Medicine: New Frontiers in Biomedical Measurements, 17-18 April, Lecce, Italy. pp. 7-11. https://www.imeko.org/publications/tc13-2014/IMEKO-TC13-2014-IT-02.pdf Date of access: 23/11/2022

Castle, N.G. & Decker, F.H. 2011. Top management leadership style and quality of care in nursing homes. *The Gerontologist,* 51(5):630-642.

Chisengantambu, C., Robinson, G.M. & Evans, N. 2018. Nurse managers and the sandwich support model. *Journal of Nursing Management*, 26(2):192-199.

Clark, M.S. & Taraban, C. 1991. Reactions to and willingness to express emotion in communal and exchange relationships. *Journal of Experimental Social Psychology*, 27(4):324-336.

Clausen, C., Lavoie-Tremblay, M., Purden, M., Lamothe, L. Ezer, H. & McVey, L. 2017. Intentional partnering: a grounded theory study on developing effective partnerships among nurse and physician managers as they co-lead in an evolving healthcare system. *Journal of Advanced Nursing,* 73(9):2156-2166. https://doi-org.nwulib.nwu.ac.za/10.1111/jan.13290

Coetzee, S.K., Klopper, H.C., Ellis, S.M. & Aiken, L.H. 2013. A tale of two systems— nurses practice environment, well-being, perceived quality of care and patient safety in private and public hospitals in South Africa: a questionnaire survey. *International Journal of Nursing Studies*, 50(2):162-173.

Cohen, E. 1984. The sociology of tourism: approaches, issues, and findings. *Annual Review of Sociology*, 16(6):373-392.

Colbert, A., Yee, N. & George, G. 2016. The digital workforce and the workplace of the future. *Academy of Management Journal*, 59(3):731-739.

Cowden, T., Cummings, G. & Profetto-Mcgrath, J. 2011. Leadership practices and staff nurses' intent to stay: a systematic review. *Journal of Nursing Management*, 19(4):461-477

Cowin, L.S. & Eagar, S.C. 2013. Collegial relationship breakdown: a qualitative exploration of nurses in acute care settings. *Collegian,* 20(2):115-121.

Cross, R., Rebele, R., & Grant, A. 2016. Collaborative overload. *Harvard Business Review*, 94(1), 16.

Cullati, S., Bochatay, N., Maître, F., Laroche, T., Muller-Juge, V., Blondon, K.S., ... & Nendaz, M.R. 2019. When team conflicts threaten quality of care: a study of health care professionals' experiences and perceptions. *Mayo Clinic Proceedings: Innovations, Quality & Outcomes*, 3(1):43-51. https://doi.org/10.1016/j.mayocpiqo.2018.11.003

Cummings, G., Lee, H., MacGregor, T., Davey, M., Wong, C., Paul, L. & Stafford, E. 2008. Factors contributing to nursing leadership: a systematic review. *Journal of health services research & policy*, *13*(4):240-248.

Cummings, G.G., MacGregor, T., Davey, M., Lee, H., Wong, C. A., Lo, E., & Stafford, E. 2010. Leadership styles and outcome patterns for the nursing workforce and work environment: a systematic review. *International Journal of Nursing Studies*, 47(3): 363-385. https://doi.org/10.1016/j.ijnurstu.2009.08.006

Cummings, G.G., Lee, S., Tate, K., Penconek, T., Micaroni, S.P., Paananen, T. & Chatterjee, G.E. 2021. The essentials of nursing leadership: A systematic review of factors and educational interventions influencing nursing leadership. *International Journal of Nursing Studies*, *115*:103842.

Cummings, G.G., Tate, K., Lee, S., Wong, C.A., Paananen, T., Micaroni, S.P.M. & Chatterjee, G.E. 2018. Leadership styles and outcome patterns for the nursing workforce and work environment: a systematic review. *International Journal of Nursing Studies*, 85:19-60. https://doi-org.nwulib.nwu.ac.za/10.1016/j.ijnurstu.2018.04.016

Davidson, R.J. 1992. Anterior cerebral asymmetry and the nature of emotion. *Brain and Cognition*, 20(1):125-151.

Department of Health. 2015. *Ethics in health research principles, processes and structures*. 2nd ed. Pretoria: Department of Health.

De Tormes Eby, L.T. & Allen, T.D., eds. 2012. *Personal relationships: the effect on employee attitudes, behavior, and well-being*. London: Routledge.

De Villiers, K. 2021. Bridging the health inequality gap: an examination of South Africa's social innovation in health landscape. *Infectious Diseases of Poverty*, 10(19):1-7. https://doi.org/10.1186/s40249-021-00804-9Donabedian, A. 2005. Evaluating the quality of medical care. *Milbank Quarterly*, 83(4):691-729.

Doran, D., Harrison, M.B., Laschinger, H., Hirdes, J., Rukholm, E., Sidani, S. & Cranley, L. 2006. Relationship between nursing interventions and outcome achievement in acute care settings. *Research in Nursing & Health*, 29(1):61-70.

Dougherty, M.B. and Larson, E.L., 2010. The nurse-nurse collaboration scale. *JONA: The Journal of Nursing Administration*, *40*(1), pp.17-25.

Dutton, J.E. & Heaphy, E.D. 2003. The power of high-quality relationships at work. In: Cameron, K. & Dutton, J., eds. *Positive organizational scholarship:foundations of a new discipline.* s.n.: Berrett-Koehler Publishers. pp. 263-278.

Early, M.R. & Williams, R.A. 2002. Emergency nurses' experience with violence: does it affect nursing care of battered women? *Journal of Emergency Nursing*, 28(3):199.

Einarsen, S. & Hoel, H. 2001. *The validity and development of the revised Negative Acts Questionnaire*. Praga: European Congress of Work and Organizational Psychology. https://psycnet.apa.org/doi/10.1037/t27542-000

Einarsen, S., Hoel, H. & Notelaers, G. 2009. Measuring exposure to bullying and harassment at work: validity, factor structure and psychometric properties of the Negative Acts Questionnaire-Revised*. Work & Stress*, 23(1): 24-44.

Eker, H.H., Ozder, A., Tokaç, M., Topçu, I. & Tabu, A. 2012. Aggression and violence towards health care providers, and effects thereof. *Archives of Psychiatry and Psychotherapy*, 14(4):19-29.

Ekici, D. & Beder, A. 2014. The effects of workplace bullying on physicians and nurses. Australian journal of advanced nursing, 31(4):24-33.

Elmblad, R. 2013. *Workplace incivility affecting CRNAs: a study of prevalence, severity, consequences with proposed interventions*. Michigan, MI: University of Michigan-Flint. (Dissertation – PhD). https://deepblue.lib.umich.edu/bitstream/handle/2027.42/143427/Elmblad.pdf?sequence=1&i

Elsous, A., Radwan, M. & Mohsen, S. 2017. Nurses and physicians attitudes toward nurse-physician collaboration: a survey from Gaza Strip, Palestine. *Nursing research and practice*.

Estabrooks, C.A., Midodzi, W.K., Cummings, G.G. & Wallin, L. 2007. Predicting research use in nursing organizations: a multilevel analysis. *Nursing Research*, 56(4):S7-S23.

Estabrooks, C.A., Midodzi, W.K., Cummings, G.G., Ricker, K.L. & Giovannetti, P. 2011. The impact of hospital nursing characteristics on 30-day mortality. *Nursing Research*, 54(2):74-84. https://doi.org/10.1097/00006199-200503000-00002

Estes, B. & Wang, J. 2008. Integrative literature review: workplace incivility: impacts on individual and organizational performance. *Human Resource Development Review*, *7*(2):218-240.

Falana, T.D., Afolabi, O.T., Adebayo, A.M. & Ilesanmi, O.S. 2016. Collaboration between Doctors and Nurses in a Tertiary Health Facility in South West Nigeria: Implication for Effective Healthcare Delivery. *International Journal of Caring Sciences*, *9*(1): 165-173

Fasolino, T. & Snyder, R. 2012. Linking nurse characteristics, team member effectiveness, practice environment, and medication error incidence. *Journal of Nursing Care Quality*, 27(2): E9–E16.

Fassier, T. & Azoulay, E. 2010. Conflicts and communication gaps in the intensive care unit. *Current opinion in critical care*, *16*(6):654-665.

Fei, L., Robinson, J. and Macneil, A., 2019. Case Study: Using Electronic Medication Administration Record to Enhance Medication Safety and Improve Efficiency in Long-Term Care Facilities. *Nursing Leadership (Toronto, Ont.)*, *32*(2):102-113.

Fernandes, C.M., Bouthillette, F., Raboud, J.M., Bullock, L., Moore, C.F., Christenson, J.M., Grafstein, E., Rae, S., Ouellet, L., Gillrie, C. & Way, M. 1999. Violence in the emergency department: a survey of health care workers. *Canadian Medical Association Journal/Journal De L'association Medicale Canadienne*, 161(10):1245-1248.

Ferris, G.R., Liden, R.C., Munyon, T.P., Summers, J.K., Basik, K. & Buckley, M.R. 2009. Relationships at work: toward a multidimensional conceptualization of Dyadic work relationships. *Journal of Management*, 35(6):1379-403. https://doi.org/10.1177/0149206309344741

Folorunso, T.R. & Folorunso, A.E. 2020. Nurse-physician collaboration: a comparison of attitudes of nurses and physicians in Nigerian tertiary hospital care settings. *West African Journal of Medicine*, 37(7):776-782.

Foulkes, M. 2011. Nursing metrics: measuring quality in patient care. *Nursing Standard (through 2013)*, *25*(42):40.

Galinsky, A. & Schweitzer, M. 2015. It's good to be the Queen... but it's easier being the King. *McKinsey Quarterly,* October 01.

Galuska, L.A. 2014. Education as a springboard for transformational leadership development: listening to the voices of nurses. *Journal of Continuing Education in Nursing*, 45(2):67-76.

Gates, D.M., Gillespie, G.L. & Succop, P. 2011. Violence against nurses and its impact on stress and productivity. *Nursing Economics*, 29(2):59-66.

Gates, D.M., Ross, C.S. & McQueen, L. 2006. Violence against emergency department workers. *Journal of Emergency Medicine*, 31(3):331-337.

Gianakos, D. 1997. Physicians, nurses, and collegiality. *Nursing Outlook*, 45(2):57-58.

Goda, L.R., Aref, S.M. & Abdel-Razek, A.M. 2018. Perception of nurses and physicians about importance of their collaboration in the work. *Minia Scientific Nursing Journal*, 3(1):9-15.

Goosen, S.S. 2019. *A model to manage workplace bullying between nurses at a private hospital group in South Africa*. Ga-Rankuwa: Sefako Makgatho Health Sciences University. (Dissertation – PhD). https://repository.smu.ac.za/20.500.12308/597

Govender, K., Masebo, W.G., Nyamaruze, P., Cowden, R.G., Schunter, B.T. and Bains, A., 2018. HIV Prevention in Adolescents and Young People in the Eastern and Southern African Region: A Review of Key Challenges Impeding Actions for an Effective Response. *Open AIDS Journal*, *12*:53-67.

Govender, S., Gerwel Proches, C.N. and Kader, A., 2018. Examining leadership as a strategy to enhance health care service delivery in regional hospitals in South Africa. *Journal of multidisciplinary healthcare*: 157-166.

Grove, S.K., Gray, J.R. & Burns, N. 2015. *Understanding nursing research: building evidence-based practice.* 6th ed. Elsevier, Saunders

Grove, S.K., Burns, N. and Gray, J.R. 2013. The Practice of Nursing Research—Appraisal, Synthesis, and Generation of Evidence. 7th Edition, Elsevier Saunders, St. Louis

Haddad, L.M. & Geiger, R. A. 2022. *Nursing ethical considerations*. Treasure Island, FL: StatPearls Publishing.

Hailu, F.B., Kassahun, C.W. & Kerie, M.W. 2016. Perceived nurse-physician communication in patient care and associated factors in public hospitals of Jimma zone, South West Ethiopia: cross sectional study. *PLoS ONE*, 11(9):1-21. https://doi.org/10.1371/journal.pone.0162264

Hall, L.H., Johnson, J., Watt, I., Tsipa, A. and O'Connor, D.B., 2016. Healthcare staff wellbeing, burnout, and patient safety: a systematic review. *PloS one*, *11*(7): 1-12

Hanafin, S., Cosgrove, J., Hanafin, P., Lynch, C. & Brady, A.M. 2022. Co-worker relationships and their impact on nurses in Irish public healthcare settings. *British Journal of Nursing*, 31(7):394-399.

Hanks, M.L. 2017. *New nurses' experiences in the lateral violence zone: a grounded theory* (Doctoral dissertation, University of Alabama Libraries). www.https://ir.ua.edu>handle>file_1

Hanrahan, N.P., Aiken, L.H., McClaine, L. & Hanlon, A.L. 2010. Relationship between psychiatric nurse work environments and nurse burnout in acute care general hospitals. *Issues in Mental Health Nursing*, 31(3):198-207.

Hartley, D., Ridenour, M. & Wassell, J.T. 2019. Workplace violence prevention for nurses. *American Journal of Nursing*, 119(9):19-20.

Haskins, J.L.M., Phakathi, S., Grant, M. & Horwood, C.M. 2014. Attitudes of nurses towards patient care at a rural district hospital in the KwaZulu-Natal province of South Africa. *Africa Journal of Nursing and Midwifery*, *16*(1):32-44.

Hassona, F.M.H. & El-Aziz, M.A.E. 2017. Relation between nurse-nurse collaboration and missed nursing care among intensive care nurses. *IOSR Journal of Nursing and Health Science*, 6(2):28-35.

Havig, A.K., Skogstad, A., Kjekshus, L.E. & Romøren, T.I. 2011. Leadership, staffing and quality of care in nursing homes. *BMC Health Services Research,* 11(1):1-13.

Heath, J., Johanson, W. & Blake, N. 2004. Healthy work environments: a validation of the literature. *Journal of Nursing Administration*, 34(11):524-530

Hess, J.A., Omdahl, B.L. & Fritz, J.M.H. 2006. *Turning points in relationships with disliked co-workers.* Dayton, OH: University of Dayton eCommons.

Hinchberger, P.A. 2009. Violence against female student nurses in the workplace. *Nursing Forum*, 44(1):37-46.

House, S. & Havens, D. 2017. Nurses' and physicians' perceptions of nurse-physician collaboration: a systematic review. *JONA: The Journal of Nursing Administration*, *47*(3):165-171

Houser, J.L. 2000. *A model for evaluating the context of nursing care delivery*. Greeley: University of Northern Colorado. (Dissertation – PhD).

Houser, J. 2003. A model for evaluating the context of nursing care delivery. *Journal of Nursing Administration* 33(1):39-47. https://doi.org/10.1097/00005110-200301000-00008

Huntington, A., Gilmour, J., Tuckett, A., Neville, S., Wilson, D. & Turner, C. 2011. Is anybody listening? A qualitative study of nurses' reflections on practice. *Journal of Clinical Nursing*, 20(9-10):1413-1422.

Hutton, S. and Gates, D., 2008. Workplace incivility and productivity losses among direct care staff. *AAOHN journal*, *56*(4): 168-175.

Ibraheem, E.E., Eid, N.M. & Rashad, Z.M. 2020. Intra professional nursing collaboration: a concept analysis. *Menoufia Nursing Journal*, 5(1):97-102.

Institute of Medicine. 2001. Crossing the quality chasm: A new health care system for the 21st century. Washington, DC: National Academy Press

International Council of Nurses (ICN). 2020. *ICN urges all governments to sign WHO"s Health Worker Safety Charter and tackle the dangers faced by nurses*. https://www.icn.ch/news/icn-urges-all-governments-sign-whos-health-worker-safety-charter-and-tackle-dangers-faced Date of access: 17 Nov. 2022

Jacobsen, K., Meeder, L. & Voskuil, V.R. 2016. Chronic student absenteeism: The critical role of school nurses. *NASN School Nurse*, *31*(3):178-185.

Jemal, M., Kure, M.A., Gobena, T. & Geda, B. 2021. Nurse–physician communication in patient care and associated factors in public hospitals of Harari regional state and Dire-Dawa city administration, Eastern Ethiopia: a multicenter-mixed methods study. *Journal of Multidisciplinary Healthcare*, 14(2021*)*: 2315.

Johnson, A.H. & Benham-Hutchins, M. 2020. The influence of bullying on nursing practice errors: a systematic review. *AORN Journal*, 111(2):199-210.

Johnson, S. & Kring, D. 2012. Nurses' perceptions of nurse-physician relationships: medical-surgical vs. intensive care. *Medical-Surgical Nursing*, 21(6):343-347.

Joint Commission. 2010. *National Patient Safety Goals.*https://www.jointcommission.org/standards/national-patient-safety-goals/ Date of access: 9 Nov. 2022.

Khamisa, N., Peltzer, K., Ilic, D. & Oldenburg, B. 2016. Work related stress, burnout, job satisfaction and general health of nurses: a follow-up study. *International Journal of Nursing Practice*, 22(6):538-545.2

Khani, H., Ghodsi, H., Nezhadnik, H., Teymori, S. and Ghodsi, A.R., 2016. Depression and its relationship with hypochondriasis in nurses in Neyshabur, Iran. *Military Caring Sciences Journal*, *3*(1): 34-40.

Khoshknab, M.F., Oskouie, F., Najafi, F., Ghazanfari, N., Tamizi, Z. & Ahmadvand, H. 2015. Psychological violence in the health care settings in Iran: a cross-sectional study. *Nursing and Midwifery Studies*, 4(1):1.

Kılıç, E. & Altuntaş, S. 2019. The effect of collegial solidarity among nurses on the organizational climate. *International Nursing Review*, 66(3):356-365. https://doi.org/10.1111/inr.12509

Klopper, H.C., Coetzee, S.K., Pretorius, R. & Bester, P. 2012. Practice environment, job satisfaction and burnout of critical care nurses in South Africa. *Journal of nursing management*, *20*(5):685-695

Koelble, T.A. & Siddle, A. 2014. Institutional complexity and unanticipated consequences: the failure of decentralization in South Africa. *Democratization*, 21(6):1117-1133.

Kram, K.E. & Isabella, L.A. 1985. Mentoring alternatives: the role of peer relationships in career development. *Academy of Management Journal*, 28(1):110-132.

Kroposki, M. & Alexander, J. W. 2006. Correlation among client satisfaction, nursing perception of outcomes, and organizational variables. *Home Healthcare Now,* 24(2):87-94.

Labianca, G., Gray, B. & Brass, D.J. 2000. A grounded model of organizational schema change during empowerment. *Organization Science,* 11(2):235-257.

Labrague, L.J. 2021. Influence of nurse managers' toxic leadership behaviours on nurse-reported adverse events and quality of care. *Journal of Nursing Management*, 29(4):855-863.

Lachman, V.D., Swanson, E.O.C. & Winland-Brown, J. 2015. The new 'code of ethics for nurses with interpretative statements': Practical clinical application, part II. *MedSurg Nursing*, *24*(5):363.

Lake, E.T. 2002. Development of the practice environment scale of the nursing work index. *Research in Nursing & Health,* 25(3):176-188.

Lake, E.T., Hallowell, S.G., Kutney-Lee, A., Hatfield, L.A., Del Guidice, M., Boxer, B., Ellis, L.N., Verica, L. & Aiken, L.H. 2016. Higher quality of care and patient safety associated with better NICU work environments. *Journal of Nursing Care Quality*, 31(1):24-32. https://doi.org/10.1097%2FNCQ.0000000000000146

Lanctôt, N. & Guay, S. 2014. The aftermath of WPV among healthcare workers: a systematic literature review of the consequences. *Aggression and Violent Behavior*, 19(5):492-501.

Larrabee, J.H., Ostrow, C.L., Withrow, M.L., Janney, M.A., Hobbs, G.R. & Burant, C. 2004. Predictors of patient satisfaction with inpatient hospital nursing care. *Research in Nursing and Health,* 27(4):254-268.

Laschinger, H.K.S. 2014. Impact of workplace mistreatment on patient safety risk and nurse-assessed patient outcomes. *Journal of Nursing Administration*, 44(5):284-290.

Laschinger, H.K.S. 2010. Positive working relationships matter for better nurse and patient outcomes. *Journal of Nursing Management*, 8(18):875-877

Laschinger, H.K.S., Wong, C., Regan, S., Young-Ritchie, C., & Bushell, P. 2013. Workplace incivility and new graduate nurses' mental health: the protective role of resiliency. *Journal of Nursing Administration*, 43(7/8):415-421.

Laschinger, H.K.S., Finegan, J. & Wilk, P. 2009. New graduate burnout: the impact of professional practice environment, workplace civility, and empowerment. Nursing economics, 27(6):377-383

Lawoko, S., Soares, J. & Nolan, P. 2004. Violence towards psychiatric staff: a comparison of gender, job and environmental characteristics in England and Sweden. *Work and Stress*, 18(1):39-55.

Lee, J.H., Hwang, J. & Lee, K.S. 2019. Job satisfaction and job-related stress among nurses: the moderating effect of mindfulness. *Work*, 62(1):87-95.

Lee, T., Kang, K.H., Ko, Y.K., Cho, S.H. & Kim, E.Y. 2014. Issues and challenges of nurse workforce policy: a critical review and implication. *Journal of Korean Academy of Nursing Administration*, *20*(1):106-116.

Leiter, M.P., Laschinger, H.K., Price, S.L. & Latimer, M. 2010. When respect deteriorates: incivility as a moderator of the stressor–strain relationship among hospital workers. *Journal of Nursing Management*, *18*(8):878-888.

Leonard, M., Graham, S. & Bonacum, D. 2004. The human factor: the critical importance of effective teamwork and communication in providing safe care. *BMJ Quality & Safety*, 13(1):85-90.

Lin, M.H. & Hsu, H.C. 2020. Effects of a cultural competence education programme on clinical nurses: A randomised controlled trial. *Nurse Education Today*, *88*:04385.

Liu, K., You, L, Chen, S., Hao, Y, Zhu, X., Zhang, L., & Aiken, L. H. 2012. The relationship between hospital work environment and nurse outcomes in Guangdong, China: a nurse questionnaire survey. *Journal of Clinical Nursing*, 21(9-10):1476-1485.

Lord, L., Jefferson, T., Klass, D., Nowak, M. & Thomas, G. 2013. Leadership in context: insights from a study of nursing in Western Australia. *Leadership*, 9(2):180-200.

Longo, J. & Hain, D. 2014. Bullying: a hidden threat to patient safety. Nephrology nursing journal, 41(2):193-199

Ma, K, & Hommel, B., 2015. The role of agency for perceived ownership in the virtual hand illusion. *Consciousness and cognition*, *36*, pp.277-288.

Mabona, J.F., van Rooyen, D.R. and ten Ham-Baloyi, W. 2022. Best practice recommendations for healthy work environments for nurses: An integrative literature review. *Health SA Gesondheid*, *27*(1).

Madzhadzhi, L. P., Akinsola, H. A., Mabunda, J. & Oni, H. T. 2017. Workplace violence against nurses: Vhembe district hospitals, South Africa. *Research and Theory for Nursing Practice*, 31(1):28-38.

Manojlovich, M. & DeCicco, B. 2007. Healthy work environments, nurse-physician communication, and patients' outcomes. *American Journal of Critical Care*, 16(6):536-543.

Maniou, M. 2012. Measurement of patients' admissions to an intensive care unit of Crete. *Health Science Journal*, 6(3):469-478.

Manski-Nankervis, J. A., Furler, J., Blackberry, I., Young, D., O'Neal, D., & Patterson, E. 2014. Roles and relationships between health professionals involved in insulin initiation for people with type 2 diabetes in the general practice setting: a qualitative study drawing on relational coordination theory. *BMC family practice*, 15(1):1-10.

Maphumulo, W.T. & Bhengu, B.R. 2019. Challenges of quality improvement in the healthcare of South Africa post-apartheid: a critical review. *Curationis*, 42(1):1-9.

Marinič, M. 2015. The importance of health records. *Health*, *7*(5):617.

Masum, A.K.M., Azad, M.A.K., Hoque, K.E., Beh, L.S., Wanke, P. & Arslan, Ö. 2016. Job satisfaction and intention to quit: an empirical analysis of nurses in Turkey. *PeerJ*, *4*:e1896, 1-23

Matta, F.K., Scott, B.A., Koopman, J. & Conlon, D.E. 2015. Does seeing "eye to eye" affect work engagement and organizational citizenship behavior? A role theory perspective on LMX agreement. *Academy of Management Journal*, 58(6):1686-1708.

Matziou, V., Vlahioti, E., Perdikaris, P., Matziou, T., Megapanou, E. & Petsios, K. 2014. Physician and nursing perceptions concerning inter-professional communication and collaboration. *Journal of Interprofessional Care*, 28(6):526–533.

Matusov, Y., Matthews, A., Rue, M., Sheffield, L. & Pedraza, I. F. 2022. Perception of interdisciplinary collaboration between ICU nurses and resident physicians during the COVID-19 pandemic. *Journal of Interprofessional Education & Practice*, 27:100501.

McCay, R., Lyles, A. A. & Larkey, L. 2018. Nurse leadership style, nurse satisfaction, and patient satisfaction: a systematic review. *Journal of Nursing Care Quality*, 33(4):361-367.

McCombes, S. 2019, 15 May. *Descriptive research* [Blog post]. https://www.scribbr.com/methodology/descriptive-research/ Date of access: 13 Mar. 2020.

McInnes, S., Peters, K., Bonney, A. & Halcomb, E.N. 2015. An integrative review of facilitators and barriers influencing collaboration and teamwork between general practitioners and nurses working in general practice. *Journal of Advanced Nursing,* 71(9):1973-1985. https://doi.org/10.1111/jan.12647

McKenna, B.G., Poole, S.J., Smith, N.A., Coverdale, J.H. & Gale, C.K. 2003. A survey of threats and violent behaviour by patients against registered nurses in their first year of practice. *International Journal of Mental Health Nursing*, 12(1):56-63.

McNamara, M.S., Fealy, G.M., Casey, M., O'Connor, T., Patton, D., Doyle, L. and Quinlan, C., 2014. Mentoring, coaching and action learning: interventions in a national clinical leadership development programme. *Journal of clinical nursing*, *23*(17-18): 2533-2541

Medical Dictionary. 2020. Nurse manager. *Medical Dictionary*. https://medical-dictionary.thefreedictionary.com/nurse+manager Date of access: 13 Mar. 2020.

Menard, K.I. 2014. *Collegiality, the nursing practice environment, and missed nursing care.* Milwaukee, WI: University of Wisconsin-Milwaukee. (Thesis – PhD).

Methot, J.R., Melwani, S. & Rothman, N.B. 2017. The space between us: a social-functional emotions view of ambivalent and indifferent workplace relationships. *Journal of Management*, 43(6):1789-1819.

Mobaraki, A., Aladah, R., Alahmadi, R., Almuzini, T., & Sharif, L. 2020. Prevalence of workplace violence against nurses working in hospitals: a literature review. *American Journal of Nursing*, 9(2):84-90.

Molina-Mula, J. and Gallo-Estrada, J., 2020. Impact of nurse-patient relationship on quality of care and patient autonomy in decision-making. *International journal of environmental research and public health*, *17*(3):835.

Mulvale, G., Embrett, M. & Razavi, S.D. 2016. 'Gearing Up'to improve interprofessional collaboration in primary care: a systematic re view and conceptual framework. *BMC family practice*, *17*(1):1-13.

Murata, A. 2014. *Doctor, nurse, patient relationships: negotiating roles and power a case study of decision-making for C-sections.* Ann Arbor, MI: University of Michigan. (Thesis – PhD). https://deepblue.lib.umich.edu/bitstream/handle/2027.42/107761/almurata.pdf

Mutshatshi, T.E., Mothiba, T.M., Mamogobo, P.M. & Mbombi, M.O. 2018. Record-keeping: Challenges experienced by nurses in selected public hospitals. Curationis, 41(1):1-6.

Napolitano, J. D. & Saini, I. 2014. Observation units: definition, history, data, financial considerations, and metrics. *Current Emergency and Hospital Medicine Reports*, 2(1):1-8

National Department of Health. 2012. *Regulations relating to categories of hospitals (R185).* https://ndoh.dhmis.org/owncloud/index.php/s/R5cmdp0gY4Fa43

Needham, I., Abderhalden, C., Halfens, R.J.G., Dassen, T., Haug, H. & Fischer, J.E. 2005a. the impact of patient aggression on Carers Scale: instrument derivation and psychometric testing. *Scandinavian Journal of Caring Sciences*, 19(3):296-300.

Needham, I., Abderhalden, C., Halfens, R.J.G., Fischer, J.E. & Dassen, T. 2005b. Nonsomatic effects of patient aggression on nurses: a systematic review. *Journal of Advanced Nursing*, 49(3):283-296. https://doi.org/10.1111/j.1365-2648.2004.03286.x

Negussie, N. & Demissie, A. 2013. Relationship between leadership styles of nurse managers and nurses' job satisfaction in Jimma University Specialized Hospital. *Ethiopian Journal of Health Sciences*, 23(1):50-58.

Noguchi-Watanabe, M., Yamamoto-Mitani, N. and Takai, Y. 2018. A cyclic model describing the process of sustaining meaningfulness in practice: How nurses continue working at one home care agency. *Global Qualitative Nursing Research*, *5*:1-8

Norful, A.A., De Jacq, K., Carlino, R. & Poghosyan, L. 2018. Nurse practitioner-physician co management: a theoretical model to alleviate primary care strain. *Annals of Family Medicine*, 16(3)250-256. https://doi.org/10.1370/afm.2230

Norris, T. 2018. *Workplace violence among nurses and nursing assistants in Texas* (Doctoral dissertation, Walden University).

North-West University. 2020. Manual for Higher Degree Studies. Higher Degrees Manual_Senate_1Sept2020.pdf Date of access: 10 February 2023

Nurmeksela, A., Mikkonen, S., Kinnunen, J. & Kvist, T., 2021. Relationships between nurse managers' work activities, nurses' job satisfaction, patient satisfaction, and medication errors at the unit level: a correlational study. *BMC Health Services Research*, 21(1):1-13.

Nursing Act, No. 33 of 2005.

Nwaneri, A.C., Onoka, A.C. & Onoka, C.A. 2017. Workplace bullying among nurses working in tertiary hospitals in Enugu, southeast Nigeria: implications for health workers and job performance. *Journal of Nursing Education and Practice*, 7(2):69-78.

Ogweyo, M.O. 2013. Factors influencing job satisfaction among nurses in private hospitals in Dar Es Salaam (Doctoral dissertation, Muhimbili University of Health and Allied Sciences).

Okello, D.R. & Gilson, L. 2015. Exploring the influence of trust relationships on motivation in the health sector: a systematic review. *Human Resources for Health*, 13(1):16.

Olender, L.D. 2013. *Nurse manager caring and workplace bullying in nursing: the relationship between staff nurses' perceptions of nurse manager caring behaviors and their perception of exposure to workplace bullying within multiple healthcare settings*. South Orange, NJ: Seton Hall University. (Thesis – PhD).

Oljira, S. 2017. Assessment of workplace violence against nurses working in emergency department of referral public hospitals in Addis Ababa, Ethiopia. Addis Ababa: University of Addis Ababa. (Dissertation – PhD). http://etd.aau.edu.et/handle/123456789/1911

Oludare, T.R. & Kotronoulas, G. 2022. Determinants and consequences of workplace violence against hospital-based nurses: a rapid review and synthesis of international evidence. *Nursing Management*, 29(4):1-28.

Omar, M., Salam, M. & Al-Surimi, K. 2019. Workplace bullying and its impact on the quality of Ostrofsky, D. 2012. Incivility and the nurse leader. *Nursing Management*, 43(12):18-22.

Özgönül, M.L., Kırca, N., Karaçar, Y. & Bademli, K. 2021. Professional self-concept and moral sensitivity in nursing students: a descriptive and correlational study. *Türkiye Biyoetik Dergisi/Turkish Journal of Bioethics*, 8(1)25-33.

Padgett, S.M. 2013. Professional collegiality and peer monitoring among nursing staff: an ethnographic study. *International Journal of Nursing Studies*, 50(10):1407-1415.

Pandey, M., Bhandari, T.R. and Dangal, G., 2017. Workplace violence and its associated factors among nurses. *Journal of Nepal Health Research Council*, *15*(3), pp.235-241.

Park, M., Cho, S. & Hong, H. 2015. Prevalence and perpetrators of WPV by nursing unit and the relationship between violence and the perceived work environment. *Journal of Nursing Scholarship*, 47(1):87-95.

Paquet, C., Yudin, M.H., Allen, V.M., Bouchard, C., Boucher, M., Caddy, S. & Senikas, V. 2013. Toxoplasmosis in pregnancy: prevention, screening, and treatment. *Journal of Obstetrics and Gynaecology Canada*, 35(1):78-79.

Pronovost, P.J. & Vohr, E. 2011. *Safe patients, smart hospitals: how one doctor's checklist can help us change health care from the inside out*. New York:

Rawlins, W.K. 1994. Being there and growing apart: sustaining friendships during adulthood. In: Ogolsky, B.G. & Kale Monk, J., eds. *Communication and relational maintenance.* Cambridge: Cambridge University Press. pp. 275-294.

Registered Nurses' Association of Ontario. 2016. Practice education in Nursing. Toronto, ON: Registered Nurses' Association of Ontario

Reitz, A.K., Zimmermann, J., Hutteman, R., Specht, J. & Neyer, F.J. 2014. How peers make a difference: The role of peer groups and peer relationships in personality development. *European journal of personality*, 28(3):279-288.

Riga, M., Vozikis, A., Pollalis, Y. & Souliotis, K. 2015. MERIS (Medical Error Reporting Information System) as an innovative patient safety intervention: A health policy perspective. Health policy, 119(4):539-548.

Roche, M., Diers, D., Duffield, C. & Catling-Paull, C. 2010. Violence toward nurses, the work environment, and patient outcomes. *Journal of Nursing Scholarship*, 42(1):13-22.

Rodwell, J., McWilliams, J. & Gulyas, A. 2017. The impact of characteristics of nurses' relationships with their supervisor, engagement, and trust, on performance behaviours and intent to quit. *Journal of Advanced Nursing*, 73(1):190-200.

Rosenstein, A.H. 2002. Nurse-physician relationships: impact on nurse satisfaction and retention. *American Journal of Nursing*, 102(6):26-34.

Rosenstein, A.H. & O'Daniel, M. 2006. Impact and implications of disruptive behavior in the perioperative arena. *Journal of the American College of Surgeons*, 203(1):96-105.

Rothman, N.B. 2011. Steering sheep: how expressed emotional ambivalence elicits dominance in interdependent decision-making contexts. *Organizational Behavior and Human Decision Processes*, 116(1):66-82.

Rothman, N.B. & Wiesenfeld, B.M. 2007. The social consequences of expressing emotional ambivalence in groups and teams. In: Mannix, E.A., Neale, M.A. & Anderson, C.P., eds. *Affect and groups* (Research on managing groups and teams, vol. 10). Bingley: Emerald Group Publishing. https://doi.org/10.1016/S1534-0856(07)10011-6

Runyan, C.W., Zakocs, R.C. & Zwerling, C. 2000. Administrative and behavioral interventions for workplace violence prevention. *American Journal of Preventive Medicine*, 18(4):116-127.

Rust, H. 2018. *Horizontal violence among nurses working in intensive care environments within the private healthcare sector*. Stellenbosch: University of Stellenbosch. (Thesis – PhD). https://scholar.sun.ac.za/handle/10019.1/103457

Rutherford, D.E., Gillespie, G.L. & Smith, C.R. 2019. Interventions against bullying of prelicensure students and nursing professionals: an integrative review. *Nursing Forum,* 54(1):84-90.

Saber, D.A. 2014. Frontline registered nurse job satisfaction and predictors over three decades: a meta-analysis from 1980 to 2009. *Nursing Outlook*, 62(6):402-414.

Sabone, M., Mazonde, P., Cainelli, F., Maitshoko, M., Joseph, R., Shayo, J., Morris, B., Muecke, M., Wall, B.M., Hoke, L. & Peng, L. 2020. Everyday ethical challenges of nurse-physician collaboration. *Nursing Ethics*, 27(1):206-220.

Sadler, D. 2020. Vertical violence & workplace bullying. *OR Today Magazine*, 31 October. https://ortoday.com/vertical-violence-workplace-bullying Date of access: 9 Jun. 2021.

Sahay, A., Hutchinson, M. & East, L. 2015. Exploring the influence of workplace supports and relationships on safe medication practice: a pilot study of Australian graduate nurses. *Nurse Education Today*, 35(5):21-26.

Samuels, A. 2016. *Workplace bullying among nurses at a psychiatric hospital in the Western Cape*. Bellville: University of the Western Cape. (Thesis – University of the Western Cape). http://etd.uwc.ac.za/xmlui/handle/11394/4902

Scandura, T.A. & Graen, G.B. 1984. Moderating effects of initial leader–member exchange status on the effects of a leadership intervention. *Journal of Applied Psychology,* 69(3):428.Schot, E., Tummers, L. & Noordegraaf, M. 2020. Working on working together: a systematic review on how healthcare professionals contribute to interprofessional collaboration. *Journal of Interprofessional Care*, 34(3):332-342.

Schwendimann, R., Blatter, C., Dhaini, S., Simon, M. & Ausserhofer, D. 2018. The occurrence, types, consequences and preventability of in-hospital adverse events–a scoping review. *BMC health services research*, *18*(1):1-13

Sepasi, R.R., Abbaszadeh, A., Borhani, F. & Rafiei, H. 2016. Nurses' perceptions of the concept of power in nursing: a qualitative research. *Journal of clinical and diagnostic research: JCDR*, *10*(12):LC10v.

Sermeus, W., Aiken, L.H., Van den Heede, K., Rafferty, A.M., Griffiths, P., Moreno-Casbas, M.T., Busse, R., Lindqvist, R., Scott, A.P., Bruyneel, L. & Brzostek, T. 2011. Nurse forecasting in Europe (RN4CAST): rationale, design, and methodology. *BioMed Central Nursing*, 10(1): 1-9.

Sharma, R.K. & Sharma, V. 2016. Workplace violence in nursing. *Journal of Nursing Care*, 5(2):1-3.

Sherony, K.M. & Green, S.G. 2002. Coworker exchange: relationships between coworkers, leader-member exchange, and work attitudes. *Journal of Applied Psychology*, 87(3):542.

Shen, H.C., Chiu, H.T., Lee, P.H., Hu, Y.C. & Chang, W.Y. 2011. Hospital environment, nurse–physician relationships and quality of care: questionnaire survey. *Journal of Advanced Nursing*, 67(2):349-358.

Sias, P.M. 2005. Workplace relationship quality and employee information experiences. *Communication Studies*, 56(4):375-395.

Simons, S.R. & Mawn, B. 2010. Bullying in the workplace—A qualitative study of newly licensed registered nurses. *AAOHN journal*, 58(7):305-311.

Smith, S.A. 2012. Nurse competence: A concept analysis. *International journal of nursing knowledge*, *23*(3), pp.172-182.

Sofield, L. & Salmond, S.W. 2003. Workplace violence: a focus on verbal abuse and intent to leave the organization. *Orthopaedic Nursing*, *22*(4):274-283.

Sojane, J.S., Klopper, H.C. & Coetzee, S.K. 2016. Leadership, job satisfaction and intention to leave among registered nurses in the North West and Free State provinces of South Africa. *Curationis*, 39(1):1-10.

Somani, R., Muntaner, C., Hillan, E., Velonis, A.J. & Smith, P. 2021. A systematic review: effectiveness of interventions to de-escalate workplace violence against nurses in healthcare settings. *Safety and Health at Work*, 12(3):289-295.

South African Nursing Council (SANC). 2019. Report: Distribution by province of nursing manpower versus the population of South Africa. Pretoria: SANC.

SPSS Inc., 2021, IBM SPSS Statistics, 23, Release 23.0.0, Copyright© IBM Corporation and its licensors

Stalpers, D., De Brouwer, B.J., Kaljouw, M.J. & Schuurmans, M.J. 2015. Associations between characteristics of the nurse work environment and five nurse-sensitive patient outcomes in hospitals: a systematic review of literature. *International Journal of Nursing Studies*, 52(4):817-835.

Stimpfel, A.W., Rosen, J.E. & McHugh, M.D. 2014. Understanding the role of the professional practice environment on quality of care in Magnet® and non-Magnet hospitals. *Journal of Nursing Administration*, 44(1):10.

Swart, R.P., Pretorius, R. & Klopper, H. 2015. Educational background of nurses and their perceptions of the quality and safety of patient care. *Curationis*, 38(1): Art. #1126. http://dx.doi.org/10.4102/curationis.v38i1.1126

Swiger, P.A., Patrician, P.A., Miltner, R.S.S., Raju, D., Breckenridge-Sproat, S. and Loan, L.A., 2017. The Practice Environment Scale of the Nursing Work Index: An updated review and recommendations for use. *International journal of nursing studies*, *74*:76-84.

Tang, C. J., Chan, S. W., Zhou, W. T. & Liaw, S. Y. 2013. Collaboration between hospital physicians and nurses: an integrated literature review. International nursing review, 60(3):291-302.

Taylor, J.A., Dominici, F., Agnew, J., Gerwin, D., Morlock, L. & Miller, M.R. 2012. Do nurse and patient injuries share common antecedents? An analysis of associations with safety climate and working conditions. *BMJ Quality & Safety*, 21(2):101-111.

Tervo-Heikkinen, T., Kvist, T., Partanen, P., Vehviläinen-Julkunen, K. & Aalto, P. 2008. Patient satisfaction as a positive nursing outcome. *Journal of Nursing Care Quality*, 23(1):58-65.

Thompson, L.M., Zablotska, L.B., Chen, J.L., Jong, S., Alkon, A., Lee, S.J. & Vlahov, D. 2018. Development of quantitative research skills competencies to improve Doctor of Philosophy Nursing student training. *Journal of Nursing Education*, 57(8):483-488.

Thomson, S. 2007. Nurse-physician collaboration: a comparison of the attitudes of nurses and physicians in the medical-surgical patient care setting. *Medical-Surgical Nursing*, 16(2):87-104.

Tourangeau, A.E., Cummings, G., Cranley, L.A., Ferron, E.M. & Harvey, S. 2010. Determinants of hospital nurse intention to remain employed: broadening our understanding. *Journal of advanced nursing*, 66(1): 22-32

Tracy, J.S. 2013. *Qualitative research methods: collecting evidence, crafting analysis, communicating impact*. Chicester: Wiley-Blackwell.

Tran, K.T., Nguyen, P.V., Dang, T.T. & Ton, T.N. 2018. The impacts of the high-quality workplace relationships on job performance: a perspective on staff nurses in Vietnam. *Behavioral Sciences* 8(109):1-21

Tschannen, D. & Kalisch, B.J. 2009. The impact of nurse/physician collaboration on patient length of stay. *Journal of Nursing Management*, 17(7):796-803.

Tvedt, C., Sjetne, I.S. & Helgeland J. 2012. A cross-sectional study to identify organisational processes associated with nurse-reported quality and patient safety. *BMJ Open*, 2(6):e001967. DOI: 10.1136/bmjopen-2012-001967

Ünsal Atan, Ş., Baysan Arabaci, L., Sirin, A., Isler, A., Donmez, S., Unsal Guler, M., Oflaz, U., Yalcinkaya Ozdemir, G. & Yazar Tasbasi, F., 2013. Violence experienced by nurses at six university hospitals in Turkey. *Journal of Psychiatric and Mental Health Nursing*, 20(10):882-889. http://dx.doi.org/10.1111/jpm.12027

Uslusoy, E.C. & Alpar, S.E. 2013. Developing scale for colleague solidarity among nurses in Turkey. *International Journal of Nursing Practice*, 19(1):101-107.

Uslusoy, E.C. & Alpar, S.E. 2013. Colleague solidarity and its relationship with job satisfaction in nurses. *Florence Nightingale Journal of Nursing*, 21(3):154-163.

Van den Heever, A.E., Poggenpoel, M. & Myburgh, C.P. 2013. Nurses and care workers' perceptions of their nurse-patient therapeutic relationship in private general hospitals, Gauteng, South Africa. *Health SA Gesondheid*, 18(1):1-7.

Vera, M., Martínez, I.M., Lorente, L., & Chambel, M.J. 2016. The role of co-worker and supervisor support in the relationship between job autonomy and work engagement among Portuguese nurses: a multilevel study. *Social Indicators Research*, 126(3):1143-1156. DOI: 10.1007/s11205-015-0931-8

Vessey, J.A., DeMarco, R. & DiFazio, R. 2010. Bullying, harassment, and horizontal violence in the nursing workforce the state of the Science. *Annual Review of Nursing Research*, 28(1):133-157.

Vogus, T.J. & Sutcliffe, K.M. 2007. The impact of safety organizing, trusted leadership, and care pathways on reported medication errors in hospital nursing units. *Medical Care*, 45(10):997-1002.

Waschgler, K., Ruiz-Hernández, J.A., Llor-Esteban, B. & Jiménez-Barbero, J.A. 2013. Vertical and lateral workplace bullying in nursing: development of the hospital aggressive behaviour scale. *Journal of Interpersonal Violence*, 28(12):2389-2412.

Wassell, J.T. 2009. Workplace violence intervention effectiveness: a systematic literature review. *Safety Science*, 47(8):1049-1055

Weldetsadik, A.Y., Gishu, T., Tekleab, A.M., Asfaw, Y.M., Legesse, T.G. & Demas, T. 2019. Quality of nursing care and nurses' working environment in Ethiopia: nurses' and physicians' perception. *International Journal of Africa Nursing Sciences*, 10:131-135. DOI: 10.1016/j.ijans.2019.03.002

Wong, C.A. & Cummings, G.G. 2007. The relationship between nursing leadership and patient outcomes: a systematic review. *Journal of Nursing Management*, 15(5):508-521.

Wong, C.A., Cummings, G.G. & Ducharme, L. 2013. The relationship between nursing leadership and patient outcomes: a systematic review update. *Journal of Nursing Management*, 21(5):709-724.

Wong, C.A., Spence Laschinger, H.K. & Cummings, G.G. 2010. Authentic leadership and nurses' voice behaviour and perceptions of care quality. *Journal of Nursing Management*, 18(8): 889-900.

World Health Organization. 2021. *Global strategic directions for Nursing and Midwifery, 2021-2025.* https://apps.who.int/iris/bitstream/handle/10665/344562/9789240033863-eng.pdf.

World Health Organization. *Strategic directions for Strengthening Nursing and midwifery services 2011-2015*. No. WHO/HRH/HPN/10.1. World Health Organization, 2010.

World Health Organization. 2010. *Strategic directions for strengthening nursing and midwifery services 2011-2015* (No. WHO/HRH/HPN/10.1). World Health Organization.

World Health Organisation. 2002. *Framework guidelines for addressing workplace violence in the health sector*. Geneva, Switzerland: International Labour Office.

Wynn, B.S.N. & Holden, C. 2020. Nurse practitioner and physician incivility in healthcare. *American Research Journal of Nursing*, 5(1):1-2.

Yılmaz, G., Kıran, Ş. & Bulut, H.K. 2021. The mediating role of nurse–physician collaboration in the effect of organizational commitment on turnover intention. *Journal of interprofessional care*(Provisionally accepted): 1-7. DOI: 10.1080/13561820.2021.2004099

Ylitörmänen, T., Kvist, T. & Turunen, H. 2022. Intraprofessional collaboration: a qualitative study of registered nurses' experiences. *Collegian* (Provisionally accepted):1-8. https://doi.org/10.1016/j.colegn.2022.05.008

Zangaro, G.A. & Jones, K. 2019. Practice environment scale of the nursing work index: a reliability generalization meta-analysis. *Western Journal of Nursing Research*, 41(11):1658-1684.

Zhang, Y., Qian, Y., Wu, J., Wen, F. & Zhang, Y. 2016. The effectiveness and implementation of mentoring program for newly graduated nurses: a systematic review. *Nurse Education Today*, 37:136-144.

ANNEXURE A: ETHICS APPROVAL FROM NWU - LARGER STUDY

Private Bag X1290, Potchefstroom
South Africa 2520

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

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

Tel: 018 299-1206
Email: Ethics-HRECApply@nwu.ac.za (for human studies)

22 March 2021

ETHICS APPROVAL LETTER OF STUDY

Based on approval by the North-West University Health Research Ethics Committee (NWU-HREC) on 22/03/2021, the NWU-HREC hereby approves your study as indicated below. This implies that the NWU-HREC grants its permission that, provided the general and specific conditions specified below are met and pending any other authorisation that may be necessary, the study may be initiated, using the ethics number below.

Study title: Nurse outcomes, patient safety and quality of care in the public and private hospitals of South Africa
Principal Investigator/Study Supervisor/Researcher: Prof SK Coetzee
Student: -

Ethics number:

N	W	U	-	0	0	0	3	3	-	1	9	-	A	1
Institution				Study Number						Year			Status	

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

Application Type: Larger study
Commencement date: 22/03/2021
Expiry date: 31/03/2022

Risk: Minimal

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

General conditions:

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

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

- *to ask further questions, seek additional information, require further modification or monitor the conduct of your research or the informed consent process;*
- *withdraw or postpone approval if:*
  - *any unethical principles or practices of the study are revealed or suspected;*
  - *it becomes apparent that any relevant information was withheld from the NWU-HREC or that information has been false or misrepresented;*
  - *submission of the annual monitoring report, the required amendments, or reporting of adverse events or incidents was not done in a timely manner and accurately; and/or*
  - *new institutional rules, national legislation or international conventions deem it necessary.*

- *NWU-HREC can be contacted for further information via Ethics-HRECApply@nwu.ac.za or 018 299 1206*

Special conditions of the research approval due to the COVID-19 pandemic:

Please note: Due to the nature of the study i.e. (collection of both quantitative and qualitative data through means that do not involve entrance of the researchers into the public health facilities), this study will be able to proceed during the current alert level, following receipt of this approval letter. No additional COVID-19 restrictions, other than that indicated under the COVID-19 infection risk mitigation strategies indicated by the researcher in their application documents, have been placed on the study except that the researcher must ensure that before proceeding with the study that all research team members have reviewed the North-West University COVID-19 Occupational Health and Safety Standard Operating Procedure.

Special in process conditions of the research for approval (if applicable):

a. Please provide the NWU-HREC with the approval letters from the remaining provincial Department of Healths to be included in the second year of the study, before accessing the entities under their jurisdiction.
b. Please provide the NWU-HREC with the approval letters from the management of the remaining private hospitals to be included in the second year of the study, before accessing the entities under their jurisdiction.
c. Please provide the NWU-HREC with the goodwill permission letters from the CEOs of all the hospitals to be included in the study as well as the medical, surgical and maternity units to be included in the study, as they become available, before entering these facilities.

As the study progresses the aforementioned conditions should be submitted to Ethics-HRECProcess@nwu.ac.za with a cover letter with a specific subject title indicating "Outstanding documents for approval: NWU-XXXXX-XX-XX." The letter should include the title of the approved study, the names of the researchers involved, that the documents are being submitted as part of the conditions of the approval set by the NWU-HREC, the nature of the document i.e. which condition is being fulfilled and any further explanation to clarify the submission.

The *e-mail*, to which you attach the documents that you send, should have a *specific subject line* indicating the nature of the submission e.g. "Outstanding documents for approval: NWU-XXXXX-XX-XX". The e-mail should indicate the nature of the document being sent. This submission will be handled via the expedited process.

The NWU-HREC would like to remain at your service and wishes you well with your study. Please do not hesitate to contact the NWU-HREC for any further enquiries or requests for assistance.

Yours sincerely,

Chairperson NWU-HREC

Current details:(23239522) G:\My Drive\9. Research and Postgraduate Education\9.1.5.4 Templates\9.1.5.4.2_NWU-HREC_EAL.docm
20 August 2019
File Reference: 9.1.5.4.2

ANNEXURE B: ETHICS APPROVAL FROM NWU - SINGLE STUDY

Private Bag X1290, Potchefstroom
South Africa 2520

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

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

Tel: 018 299-1206
Email: Ethics-HRECApply@nwu.ac.za (for human studies)

18 November 2021

ETHICS APPROVAL LETTER OF STUDY

Based on approval by the North-West University Health Research Ethics Committee (NWU-HREC) on 18/11/2021, the NWU-HREC hereby approves your study as indicated below. This implies that the NWU-HREC grants its permission that, provided the general and specific conditions specified below are met and pending any other authorisation that may be necessary, the study may be initiated, using the ethics number below.

Study title: The impact of workplace relationships on nurse reported quality of care and patient safety in the North West Province
Principal Investigator/Study Supervisor/Researcher: Prof SK Coetzee
Student: OKN Tlhako - 25034715

Ethics number:

N	W	U	-	0	0	2	7	0	-	2	1	-	A	1
Institution				Study Number						Year			Status	

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

Application Type: Single study
Commencement date: 18/11/2021
Expiry date: 30/11/2022

Risk: Minimal

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

General conditions:

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

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

- *to ask further questions, seek additional information, require further modification or monitor the conduct of your research or the informed consent process;*
- *withdraw or postpone approval if:*
  - *any unethical principles or practices of the study are revealed or suspected;*
  - *it becomes apparent that any relevant information was withheld from the NWU-HREC or that information has been false or misrepresented;*
  - *submission of the annual monitoring report, the required amendments, or reporting of adverse events or incidents was not done in a timely manner and accurately; and/or*
  - *new institutional rules, national legislation or international conventions deem it necessary.*

- *NWU-HREC can be contacted for further information via Ethics-HRECApply@nwu.ac.za or 018 299 1206*

Special conditions of the research approval due to the COVID-19 pandemic:

Please note: Due to the nature of the study i.e. (face-to-face and online collection of quantitative data from nurses in the public and private health sector in the North West province), this study will be able to proceed during the current alert level, following receipt of the approval letter. No additional COVID-19 restrictions have been placed on the study, other than that indicated under the COVID-19 risk mitigation strategy indicated in the application documents. The researcher must, however, ensure that before proceeding with the study that all research team members have reviewed the North-West University COVID-19 Occupational Health and Safety Standard Operating Procedure.

Special in process conditions of the research for approval (if applicable):

a. Please provide the NWU-HREC with a copy of the goodwill permission letters from the remaining CEO of the 1 outstanding hospital in the private health sector, granting access to this facility.

As the study progresses the aforementioned conditions should be submitted to Ethics-HRECProcess@nwu.ac.za with a cover letter with a specific subject title indicating "Outstanding documents for approval: NWU-XXXXX-XX-XX." The letter should include the title of the approved study, the names of the researchers involved, that the documents are being submitted as part of the conditions of the approval set by the NWU-HREC, the nature of the document i.e. which condition is being fulfilled and any further explanation to clarify the submission.

The e-mail, to which you attach the documents that you send, should have a specific subject line indicating the nature of the submission e.g. "Outstanding documents for approval: NWU-XXXXX-XX-XX". The e-mail should indicate the nature of the document being sent. This submission will be handled via the expedited process.

The NWU-HREC would like to remain at your service and wishes you well with your study. Please do not hesitate to contact the NWU-HREC for any further enquiries or requests for assistance.

Yours sincerely,

Digitally signed by
Prof Petra Bester
Date: 2021.11.18
20:33:33 +02'00'

Chairperson NWU-HREC

Current details (23239522) G:\My Drive\9. Research and Postgraduate Education\9.1.5.4 Templates\9.1.5.4.2_NWU-HREC_EAL.docm
20 August 2019
File Reference: 9.1.5.4.2

ANNEXURE C: ETHICS APPROVAL FROM NORTH-WEST DEPARTMENT OF HEALTH

health
Department of
Health
North West Province
REPUBLIC OF SOUTH AFRICA

3801 First Street
New Office Park
MAHIKENG, 2735

Enq: Nthabiseng Mapogo
Tel: 018 391 4504
NMapogo@nwpg.gov.za
www.nwhealth.gov.za

RESEARCH, MONITORING AND EVALUATION DIRECTORATE

Name of researcher : **Prof. S.K. Coetzee**
North West Univeristy

Physical Address 11 Hoffman Street
(Work/ Institution) North-West University

Subject : **Research Approval Letter- Nurse outcomes, patient safety and quality of care in the public and private hospitals of South Africa.**

This letter serves to inform the Researcher that permission to undertake the above mentioned study has been granted by the North West Department of Health. The Researcher is expected to arrange in advance with the chosen facilities, and issue this letter as proof that permission has been granted by the Provincial office.

This letter of permission should be signed and a copy returned to the department. By signing, the Researcher agrees, binds him/herself and undertakes to furnish the Department with an electronic copy of the final research report. Alternatively, the Researcher can also provide the Department with electronic summary highlighting recommendations that will assist the Department in its planning to improve some of its services where possible. Through this the Researcher will not only contribute to the academic body of knowledge but also contributes towards the bettering of health care services and thus the overall health of citizens in the North West Province.

Kindest regards

Dr. F.R. M. Reichel
Director: RM&E

15/10/2020
Date

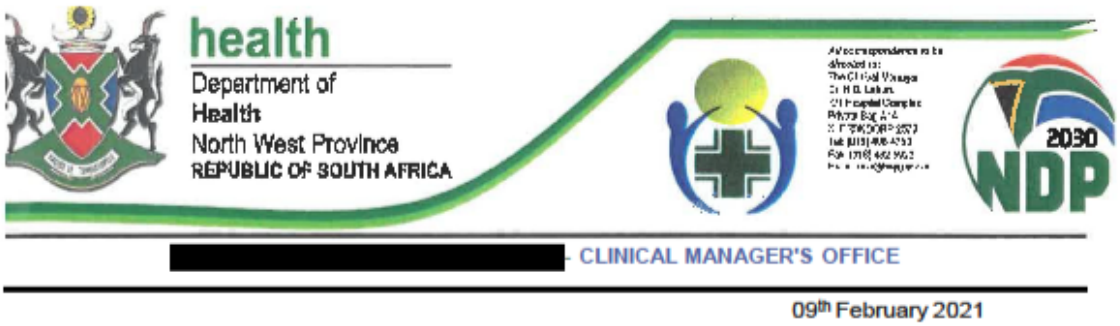
Researcher

15-10-2020

15/10/2020
Date

Healthy Living for All

ANNEXURE D: GOODWILL CONSENT PUBLIC HOSPITAL 1



[redacted] - CLINICAL MANAGER'S OFFICE

09th February 2021

To : Prof Coetzee
School of Nursing Science
North West University
Potchefstroom

Dear Sir/ Madam,

RE : NURSE OUTCOMES, PATIENT SAFETY AND QUALITY OF CARE IN PUBLIC AND PRIVATE HOSPITALS OF SOUTH AFRICA

This letter serves to confirm that permission has been granted by [redacted] Patient Safety Group (PSG) for study approval letter for study title: Nurse Outcomes, Patient Safety and Quality of Care in Public and Private Hospitals of South Africa study at [redacted]. The researcher is requested to submit regular study progress reports and final study report upon completion of the project. The permission is subject of approval of the Ethics Committee.

Kind Regards,

rb/f. **N.D. Leburu**
_clinical Manager
[redacted]

1

Healthy Living for All

ANNEXURE E: GOODWILL CONSENT PUBLIC HOSPITAL 2

health
Department of
Health
North West Province
REPUBLIC OF SOUTH AFRICA

Cnr. Chris Hani &
Kruis Street
Private Bag X 938
Potchefstroom
2520
Tel: (018) 293 4584
[redacted]

TO Prof. S. K Coetzee
NWU
Potchefstroom Campus

From Dr. JMM Shakung
Medical Manager
[redacted]

Date 29 January 2021

Subject: APPROVAL FOR RESEARCH PROPOSAL: RS33/ 01/ 2021

Topic: NURSE OUTCOMES, PATIENT SAFETY AND QUALITY OF CARE IN PUBLIC AND PRIVATE HOSPITALS OF SOUTH AFRICA

The research committee had a meeting with the candidate via zoom on the 27 January 2021. The research proposal was accepted and the candidate is allowed to resume with data collection.

An independent data collector/ surveyor will be availed by the candidate as agreed.

Kind regards

Ms.L. M Sekano
Social Work Supervisor
Committee Secretary

Dr. M Shakung
Clinical Manager
PSG Chairperson

j.l
Healthy Living for All

ANNEXURE F: GOODWILL CONSENT PUBLIC HOSPITAL 3

health
Department of
Health
North West Province
REPUBLIC OF SOUTH AFRICA

[redacted]
X7.Wolmaransstad
.2630

Enquiries- Tel018 5961100
Fax 018 596 2769
Email-
asegami@nwpg.gov.za

TO: Prof Siedine Coetzee
FROM: Ms Angelina Segami
CEO
[redacted]
DATE: 4 Novemeber 2020

SUBJECT: NURSE OUTCOMES, PATIENT SAFETY AND QUALITY OF CARE IN PUBLIC AND PRIVATE HOSPITALS OF SOUTH AFRICA (NWU-00033-19-S1)

Herewith I would like to inform you that your request to include [redacted] in your research study has been approved and you are permitted to collect data in the hospital. Data can only be collected once it is permissible to enter the hospital for research purposes, as per Covid-19 risk adjusted strategy.

Kindly inform the hospital CEO when it will be most convenient for you and arrangements will be made with the hospital team.

Yours sincerely

A.M Segami
Hospital CEO
[redacted]

Healthy Living for All

ANNEXURE G: INFORMED CONSENT FOR PAPER-BASED SURVEY

Private Bag X1290, Potchefstroom
South Africa 2520
Tel: +2718 299-1111/2222
Fax: +2718 299-4910
Web: http://www.nwu.ac.za

NWU-HREC Approval Date: 2021.03.22 17:27:27 +02'00'

HREC Stamp

INFORMED CONSENT DOCUMENTATION FOR NURSING PERSONNEL (REGISTERED NURSES, COMMUNITY SERVICE NURSES, ENROLLED NURSES AND ENROLLED NURSING AUXILIARIES) COMPLETING A PAPER-BASED SURVEY

TITLE OF THE RESEARCH STUDY: **Nurse outcomes, patient safety and quality of care in the public and private hospitals of South Africa**

ETHICS REFERENCE NUMBERS: NWU-00033-19-A1

PRINCIPAL INVESTIGATOR: Prof SK Coetzee

ADDRESS: 11 Hoffman Street, Potchefstroom, South Africa

CONTACT NUMBER: 018 299 1879

You are being invited to take part in a **research study** that forms part of a funded research program. Please take some time to read the information presented here, which will explain the details of this study. Please ask the researcher or person explaining the research to you any questions about any part of this study that you do not fully understand. It is very important that you are fully satisfied that you clearly understand what this research is about and how you might be involved. Also, your participation is **entirely voluntary** and you are free to say no to participate. If you say no, this will not affect you negatively in any way whatsoever. You are also free to withdraw from the study at any point, even if you do agree to take part now.

This study has been approved by the **North-West University Health Research Ethics Committee (NWU-HREC) (NWU-00033-19-A1)** and will be conducted according to the ethical guidelines and principles of Ethics in Health Research: Principles, Processes and Structures (DoH, 2015) and other international ethical guidelines applicable to this study. It might be necessary for the research ethics committee members or other relevant people to inspect the research records.

What is this research study all about?

- The overall aim of this study is to identify interventions that public and private hospitals can apply to recruit and retain nursing staff that are satisfied with their jobs; physically and mentally healthy; and committed to quality nursing care of the South African population.
- To achieve this aim we need to explore how the environment in which you work and your experiences thereof affect your views of your job, health and wellbeing, and quality nursing care.
- Data will be collected in three ways:
    - 1) Public hospitals: Data will be collected at the largest central/tertiary public hospital in the province, and the closest surrounding regional and district public hospitals using a paper-based survey.
    - 2) Private hospitals: Data will be collected from the four largest private hospital groups using an online survey.
    - 3) Online social and professional nurse networking platforms: Data will be collected from these platforms using an online survey.
- The survey will be completed anonymously, but you will have to identify your hospital and unit, so that the hospitals with the best nurse outcomes can be identified for the next phase of the study.
- The seven hospitals with the best nurse outcomes, will be contacted to do interviews in a group setting. Interviews will be held with nurse managers, physicians, and nursing personnel to find out what interventions or practices these hospitals apply that made them the best-rated hospitals by nurses.

Why have you been invited to participate?

- You have been invited to be part of this research because you are a registered nurse and midwife/ community service nurse/ enrolled nurse and midwife/ enrolled nursing auxiliary, that is employed for at least 3 months in a hospital or clinic in South Africa.
- You will unfortunately not be able to take part in this research if you are a student nurse.

What will be expected of you?

- You will be expected to complete a survey that will take approximately 30-45 minutes to complete. You have two days to complete the survey at any time and place that suits you.
- If your hospital is selected as one of the public hospitals or one of the private hospitals that was rated best by nurses with regard to their own personal health and wellbeing, then you will be invited by the researcher to do interviews in a group setting at a later stage.

Will you gain anything from taking part in this research?

- There will be no direct gains for you in the study. You will be provided with a NWU branded pen and sachet of coffee as token of appreciation.
- You will also have the opportunity to enter a lucky draw. The lucky draw will include the following prizes: x1 Samsung Galaxy Note 10.1, x1 (R1 000) Dis-Chem Voucher, x1 (R500) Dis-Chem Voucher, x2 (R250) Dis-Chem Voucher and x10 (R100) Dis-Chem Vouchers. If you would like to participate in the lucky draw, you would need to add your cellular phone number to the leaflet accompanying the survey. No other identifying data will be included i.e. name. Your cellular phone number will not be linked to your survey responses, and it will not be used for research purposes.
- The Provincial Departments of Health, and private hospital groups will receive a research report, but it will report findings as a whole (unit and hospital data will not be reported separately), with no comparative data i.e. comparing different hospital groups. However, it will give the different Provincial Departments of Health and private hospitals groups an overview of the environment in which you work and how your experiences thereof affect your views of your job, health and wellbeing, and quality nursing care.
- The interventions and practices applied in the hospitals that were rated best by nurses, will be explored, and these results shared with all hospitals that participated in the study. The results of the study, will also be published so that all hospitals in South Africa have access to the information.

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

- The risk of Covid-19 infection is possible since you will have contact with persons that may be infected with the virus and/or objects contaminated by the virus, but every precaution will be taken to safeguard you from infection as per the Covid-19 protocol e.g. maintaining a distance of 1.5m, wearing of face masks, disinfection of surfaces, etc.
- You may become bored or tired when you complete the survey but this will be limited by giving you two days to complete the survey, at any time and place that is convenient for you.
- There may also be a possible psychological risk in the form of discomfort if you become aware that you work in an unhealthy work environment and/or that nursing care in your unit is poor and/or that you do not experience personal health and wellbeing. In the case that you feel distressed, counseling and debriefing will be arranged by the researcher at your request.
- There are more gains for you in joining this study than there are risks.

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

- You will complete the survey without adding any detail that could identify you or your hospital. You will seal the survey in an envelope before you post it in a sealed data collection box in your hospital. You will need to identify the hospital and unit, as this will allow us to identify the hospital with the best nurse outcomes for the next phase of the study. The hospital and unit identifiers will be anonymised by the researcher, and will only be known to her. All findings will be reported as a whole (unit and hospital data will not be reported separately). The surveys will be kept safe by storing hard copies separately from informed consent forms in locked

cupboards in the researcher's office, while electronic data will be password protected. Data will be stored for 5 years.

What will happen with the findings or samples?

- The findings of this study will be used in future, as the researcher plans to conduct similar studies in other African countries, and would like to compare the data among countries. In this case, the researcher will seek ethical clearance to use the data for these purposes, and ensure that your rights are respected in every way.

How will you know about the results of this research?

The research findings will be made available as a research report, and the researcher will be available to present the results to the hospital, and interested parties.

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

- This study is funded by FUNDISA (Forum of University Deans in South Africa) and the NRF (National Research Foundation). There will thus be no costs involved for you, if you do take part in this study.

Is there anything else that you should know or do?

- You can contact Prof SK Coetzee at 018 299 1879 if you have any further questions or have any problems.
- You can also contact the Health Research Ethics Committee via Mrs Carolien van Zyl at 018 299 1206 or carolien.vanzyl@nwu.ac.za if you have any concerns that were not answered about the research or if you have complaints about the research.
- You will receive a copy of this information and consent form for your own purposes.

Declaration by participant

By signing below, I …… agree to take part in the research study titled: Nurse outcomes, patient safety and quality of care in the public and private hospitals of South Africa

I declare that:

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

- I may be asked to leave the study before it has finished, if the researcher feels it is in the best interest, or if I do not follow the study plan, as agreed to.

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

....
Signature of participant **Signature of witness**

Declaration by person obtaining consent

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

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

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

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

.....
Signature of person obtaining consent

Declaration by researcher

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

- I explained the information in this document to the nursing personnel.
- I did not use an interpreter
- I was available should he/she want to ask any further questions.
- The informed consent was obtained by an independent person.
- I am satisfied that he/she adequately understands all aspects of the research, as described above.

- I am satisfied that he/she had time to discuss it with others if he/she wished to do so.

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

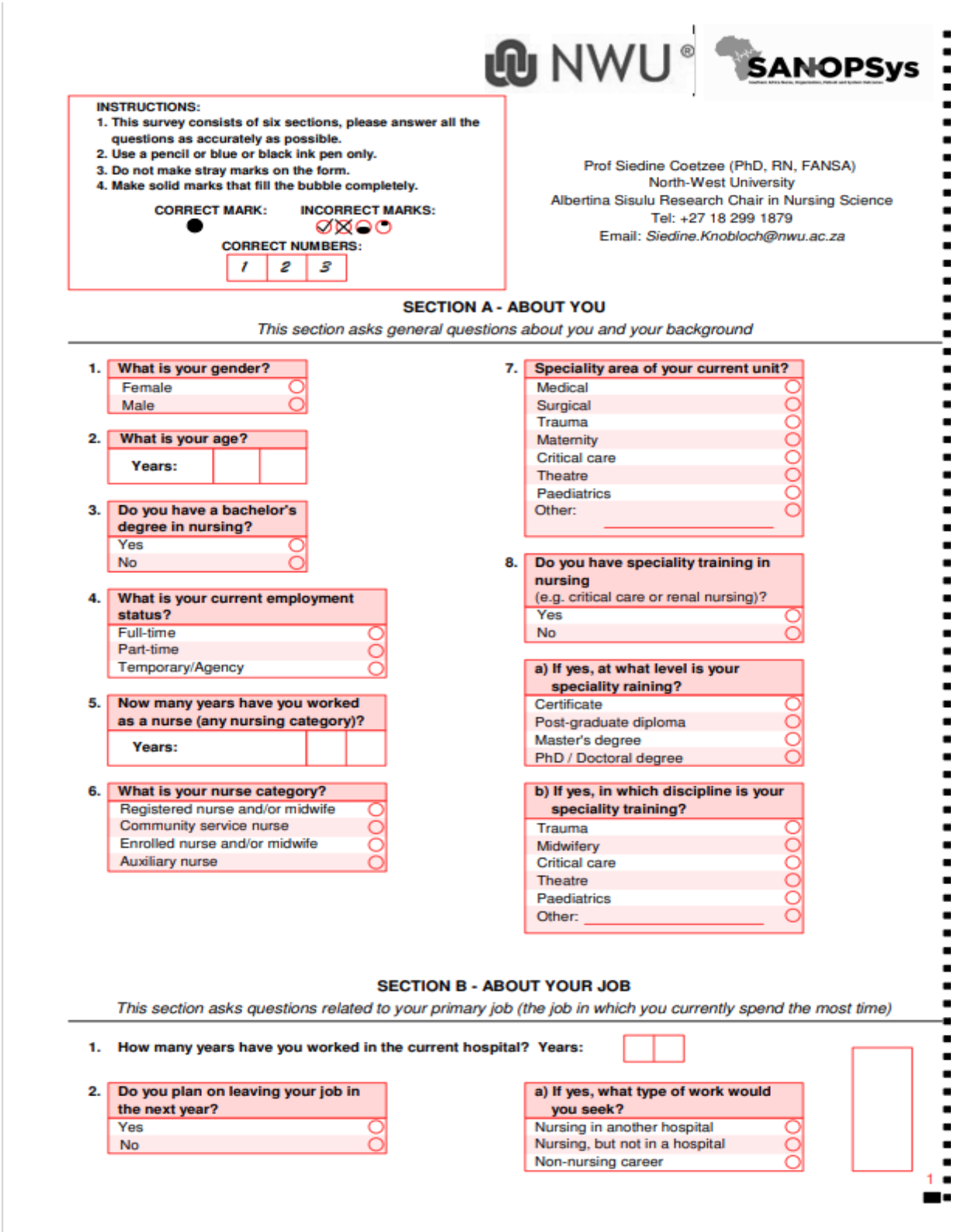
.....

Signature of researcher

Current details: (23239522) G:\My Drive\9. Research and Postgraduate Education\9.1.5.6 Forms\HREC\9.1.5.6_HREC_ICF_Template_Apr2018.docm
25 April 2018

File reference: 9.1.5.6

ANNEXURE H: SURVEY



NWU® SANOPSys

INSTRUCTIONS:
1. This survey consists of six sections, please answer all the questions as accurately as possible.
2. Use a pencil or blue or black ink pen only.
3. Do not make stray marks on the form.
4. Make solid marks that fill the bubble completely.

CORRECT MARK: ● INCORRECT MARKS: ⊘ ⊠ ◒ ◔

CORRECT NUMBERS: 1 2 3

Prof Siedine Coetzee (PhD, RN, FANSA)
North-West University
Albertina Sisulu Research Chair in Nursing Science
Tel: +27 18 299 1879
Email: *Siedine.Knobloch@nwu.ac.za*

SECTION A - ABOUT YOU

This section asks general questions about you and your background

1. **What is your gender?**
   - Female ○
   - Male ○

2. **What is your age?**
   - Years: ____

3. **Do you have a bachelor's degree in nursing?**
   - Yes ○
   - No ○

4. **What is your current employment status?**
   - Full-time ○
   - Part-time ○
   - Temporary/Agency ○

5. **Now many years have you worked as a nurse (any nursing category)?**
   - Years: ____

6. **What is your nurse category?**
   - Registered nurse and/or midwife ○
   - Community service nurse ○
   - Enrolled nurse and/or midwife ○
   - Auxiliary nurse ○

7. **Speciality area of your current unit?**
   - Medical ○
   - Surgical ○
   - Trauma ○
   - Maternity ○
   - Critical care ○
   - Theatre ○
   - Paediatrics ○
   - Other: _____ ○

8. **Do you have speciality training in nursing** (e.g. critical care or renal nursing)?
   - Yes ○
   - No ○

   a) If yes, at what level is your speciality raining?
   - Certificate ○
   - Post-graduate diploma ○
   - Master's degree ○
   - PhD / Doctoral degree ○

   b) If yes, in which discipline is your speciality training?
   - Trauma ○
   - Midwifery ○
   - Critical care ○
   - Theatre ○
   - Paediatrics ○
   - Other: _____ ○

SECTION B - ABOUT YOUR JOB

This section asks questions related to your primary job (the job in which you currently spend the most time)

1. **How many years have you worked in the current hospital? Years:** ____

2. **Do you plan on leaving your job in the next year?**
   - Yes ○
   - No ○

   a) If yes, what type of work would you seek?
   - Nursing in another hospital ○
   - Nursing, but not in a hospital ○
   - Non-nursing career ○

1

3. **How would you rate the work environment at your job in this hospital** (such as adequacy of resources, relations with co-workers, support from supervisors)?

Poor	Fair	Good	Excellent
○	○	○	○

4. **How satisfied are you with your job?**

Very dissatisfied	A little dissatisfied	Moderately satisfied	Very satisfied
○	○	○	○

5. **How satisfied are you with your choice of nursing as a career?**

Very dissatisfied	A little dissatisfied	Moderately satisfied	Very satisfied
○	○	○	○

6.

How satisfied are you with the following aspects of your job?	Very dissatisfied	A little dissatisfied	Moderately satisfied	Very satisfied
Work schedule	○	○	○	○
Opportunities for advancement	○	○	○	○
Independence at work	○	○	○	○
Professional status	○	○	○	○
Salary / wages	○	○	○	○
Educational opportunities	○	○	○	○
Appreciation, recognition and rewards	○	○	○	○
Immediate supervisor / manager	○	○	○	○
Co-workers	○	○	○	○
Work-Life balance	○	○	○	○

7.

Please indicate how frequently, if ever, you have experienced these feelings or engaged in these behaviours while working with patients in the last 30 days?	Never	Rarely	Some-times	Often	Very often	Always
I struggle to open myself up to patients' suffering and sorrow	○	○	○	○	○	○
I am unable to care for patients the way I would like to	○	○	○	○	○	○
I doubt I make much difference in the lives of patients	○	○	○	○	○	○
I feel good about the care I provide to patients	○	○	○	○	○	○
I try to shield (protect) myself from patients' suffering and sorrow	○	○	○	○	○	○
I do not live up to my expectations of providing patient care	○	○	○	○	○	○
I am unable to see meaning and purpose in caring for patients	○	○	○	○	○	○
I make a positive difference in the lives of patients	○	○	○	○	○	○
I try to limit contact with patients as much as possible	○	○	○	○	○	○
I feel that I don't live up to patients' expectations of care	○	○	○	○	○	○
Caring for patients provides me with no satisfaction	○	○	○	○	○	○
Meeting patients' needs gives meaning and purpose to my life	○	○	○	○	○	○
I distance myself emotionally from patients	○	○	○	○	○	○
I feel that the care I provide to patients does not live up to my standards	○	○	○	○	○	○
Caring for patients is a thankless job	○	○	○	○	○	○
I enjoy interacting with patients	○	○	○	○	○	○
I struggle to identify with patients' suffering and sorrow	○	○	○	○	○	○
I don't like providing patient care	○	○	○	○	○	○
I feel satisfied when I am able to help patients	○	○	○	○	○	○
I struggle to imagine my patients' suffering and sorrow	○	○	○	○	○	○

8. **How often in your current practice setting do you have to deal with death and dying?**

Never	Rarely	Occasionally	Routinely
○	○	○	○

9. **How often in your current practice setting do / did you have to directly care for COVID19 patients?**

Never	Rarely	Occasionally	Routinely
○	○	○	○

SECTION C - ABOUT THE HEALTHCARE ENVIRONMENT

This section asks questions about your practice setting, your direct manager / supervisor and your experience of workplace violence

1.

Rank whether the following characteristics are present in your practice setting?	Strongly disagree	Somewhat disagree	Somewhat agree	Strongly agree
Adequate support services allow nurses to spend time with patients	○	○	○	○
Physicians and nurses have good working relationships	○	○	○	○
A good orientation program for newly employed nurses	○	○	○	○
A supervisory staff that is supportive of nurses	○	○	○	○
Active staff development or continuing education programs for nurses	○	○	○	○
Career development opportunities	○	○	○	○
Opportunity for nurses to participate in policy decisions	○	○	○	○
Physicians value nurses' observations and judgements	○	○	○	○
Enough time and opportunity to discuss patient care problems with other nurses	○	○	○	○
Enough registered nurses and staff to provide quality patient care	○	○	○	○
A nurse manager who is a good manager and leader	○	○	○	○
A nursing service manager who is highly visible and accessible to staff	○	○	○	○
Enough staff to get the work done	○	○	○	○
Physicians recognise nurses' contributions to patient care	○	○	○	○
Praise and recognition for a job well done	○	○	○	○
High standards of nursing care are expected by the management	○	○	○	○
A nursing service manager is equal in power and authority to other top-level executives	○	○	○	○
A lot of team work between nurses and physicians	○	○	○	○
Opportunities for advancement	○	○	○	○
Nurses are supported to improve their nursing qualifications	○	○	○	○
A clear philosophy of nursing is implemented in the patient care environment	○	○	○	○
The nurses I work with are clinically competent	○	○	○	○
Physicians respect nurses as professionals	○	○	○	○
A nurse manager who backs up the nursing staff in decision making, even if the conflict is with a physician	○	○	○	○
Management that listens and responds to employee concerns	○	○	○	○
An active quality improvement program	○	○	○	○
Nurses are involved in organisational governance (e.g. practice and policy committee)	○	○	○	○
Collaboration between nurses and physicians	○	○	○	○
Nursing care is based on a nursing rather than a medical model	○	○	○	○
Nurses serve on important committees	○	○	○	○
Nurse managers consult with staff on daily problems and procedures	○	○	○	○
Up-to-date care plans for all patients	○	○	○	○
Patient care assignments that foster continuity of care (i.e. the same nurse cares for the patient from one day to the next)	○	○	○	○
Supervisors use mistakes as learning opportunities, not criticism	○	○	○	○
Nurses have good working relationships with each other	○	○	○	○

2.

Please mark the response that best describes how frequently you have each feeling.	Never	A few times a year	Once a month or less	A few times a month	Once a week	A few times a week	Every day
I feel emotionally drained from my work	○	○	○	○	○	○	○
I feel used up at the end of the work day	○	○	○	○	○	○	○
I feel fatigued when I get up and have to face another day on the job	○	○	○	○	○	○	○
Working with people every day is really a strain for me	○	○	○	○	○	○	○
I feel burned-out from my work	○	○	○	○	○	○	○
I feel frustrated by my job	○	○	○	○	○	○	○
I feel I'm working too hard on my job	○	○	○	○	○	○	○
Working directly with people puts too much stress on me	○	○	○	○	○	○	○
I feel like I'm at the end of my rope	○	○	○	○	○	○	○

3.

How often are you exposed to the following forms of workplace violence?	Never	Now and then	Monthly	Weekly	Daily
Being humiliated or ridiculed (teased) in connection with your work	○	○	○	○	○
Having key areas of responsibility removed or replaced with more trivial or unpleasant tasks	○	○	○	○	○
Spreading of gossip and rumours about you	○	○	○	○	○
Being ignored or excluded	○	○	○	○	○
Having insulting or offensive remarks made about your attitudes, private life or you as a person	○	○	○	○	○
Being shouted at or being the target of spontaneous anger	○	○	○	○	○
Intimidating behaviours such as finger-pointing, invasion of personal space, shoving, blocking your way	○	○	○	○	○
Hints or signals from others that you should quit your job	○	○	○	○	○
Repeated reminders of your errors or mistakes	○	○	○	○	○
Being ignored or facing hostile reaction when you approach	○	○	○	○	○
Persistent criticism of your errors or mistakes	○	○	○	○	○
Practical jokes carried out by people you don't get along with	○	○	○	○	○
Having allegations (accusations / claims) made against you	○	○	○	○	○
Being the subject of excessive teasing and sarcasm	○	○	○	○	○
Threats of violence or physical abuse or actual abuse	○	○	○	○	○

4.

Which persons most often perform these acts of workplace violence towards you?	
Physicians	○
Nursing colleagues	○
Supervisors / managers	○

SECTION D - ABOUT YOUR MOST RECENT SHIFT

This section asks about staffing and workload on your latest shift that you worked at your primary job

1.

What best describes the most recent shift you worked in this hospital?	
Day duty	○
Night duty	○

2.

Was it on a weekend or holiday?	
Yes	○
No	○

3. **How many hours did you work in total on your latest shift (include overtime / extra hours)?** ☐☐

4. **How many patients were you directly responsible for on your latest shift e.g. 1,3,10 patients?** ☐☐

5. **How many total patients were in your unit on your latest shift e.g. 10,12,25 patients?** ☐☐

6. **How many patients in your unit required assistance with activities of daily living on your latest shift e.g. feeding, bathing?** ☐☐

7. **<u>Counting yourself,</u> how many of each of the following provided direct patient care in your unit on your latest shift?**

   RNs / RMs ☐☐

   Enrolled nurses / midwives ☐☐

   Community service nurses ☐☐

   Auxiliary nurses ☐☐

8. **Out of the RNs listed above, how many were temporary / agency staff?** ☐☐

SECTION E - QUALITY OF CARE AND SAFETY IN YOUR WORK SETTING

Please mark the response that best describes quality of care and patient safety in your practice setting

1. **Please give your current practice setting an overall grade on patient safety?**

Excellent	Good	Acceptable	Poor	Failing
○	○	○	○	○

2. **How confident are you that management will act to resolve problems in patient care that nurses identify?**

Very confident	Confident	Somewhat confident	Not at all confident
○	○	○	○

3. **In general how would you describe the quality of nursing care delivered to patients in your work setting?**

Excellent	Good	Fair	Poor
○	○	○	○

4. **Would you recommend your place of work to your family and friends needing healthcare?**

Definitely yes	Probably yes	Probably no	Definitely no
○	○	○	○

5. **How confident are you that your patients and their caregivers can manage their care after discharge?**

Very confident	Confident	Somewhat confident	Not at all confident
○	○	○	○

6. **Please indicate whether you agree or disagree with the following statements about patient safety in your work setting?**	Strongly agree	Agree	Neither	Disagree	Strongly disagree
Relies too much on temporary, float or agency staff	○	○	○	○	○
Regularly review work processes to determine if changes are needed to improve patient safety	○	○	○	○	○
Staff speak up if they see something that may negatively affect patient care	○	○	○	○	○
Staff feel like their mistakes are held against them	○	○	○	○	○
There is a lack of support for staff involved in patient safety errors	○	○	○	○	○
We discuss ways to prevent errors from happening again	○	○	○	○	○
Staff feel free to question the decisions or actions of those in authority	○	○	○	○	○
The actions of hospital management show that patient safety is a top priority	○	○	○	○	○

7. **How often would you say each of the following occurs involving you or your patients?**	Never	A few times a year	Monthly	Weekly	Daily
Medication errors	○	○	○	○	○
Patient fall with injury after admission	○	○	○	○	○
Healthcare-associated infection	○	○	○	○	○
Treatments / procedures resulting in unintended harm	○	○	○	○	○
Work related physical injuries to nurses	○	○	○	○	○
Complaints from patients or their families	○	○	○	○	○
Verbal abuse from patients or their families	○	○	○	○	○
Physical abuse from patients of their families	○	○	○	○	○
Needlestick injuries to nurses	○	○	○	○	○

8. **How often is your work interrupted or delayed by the following?**	Frequently	Occasionally	Rarely	Never
Missing supplies or broken equipment	○	○	○	○
Missing, incomplete or incorrect physician / provider orders	○	○	○	○
Missing medication	○	○	○	○
Insufficient staff	○	○	○	○

9. **How much of your workday is usually spent on solving problems like those above?**

None of my day	A small part of my day	A large part of my day
○	○	○

10. **How much of your day is usually spent doing tasks that should be done by non-nurses (transportation, housekeeping, pharmacy, materials management, etc.)?**

None of my day	A small part of my day	A large part of my day
○	○	○

11. **Due to time constraints, how often are you unable to complete patient care that you think is necessary?**

Frequently	Occassionally	Rarely	Never
○	○	○	○

SECTION F - YOUR HEALTH AND WELLBEING

These questions ask about your general physical and mental health and wellbeing

1. **What is your weight?**

Kilograms:			

2. **What is your length?**

Metres:		,	

	Yes	No	Unknown
3. **Do you have high blood pressure?**	○	○	○
4. **Do you have diabetes?**	○	○	○
5. **Do you have high cholesterol?**	○	○	○

6. **How would you rate your pain on average, where 1 is no pain and 10 is the worst pain imagineable?**

1	2	3	4	5	6	7	8	9	10
○	○	○	○	○	○	○	○	○	○

No pain — Worst pain

7. **In the past year, how many times have you missed work?**

Days:			

8. **In the past year, what is the most common reason you missed work (choose one only)?**

Physical illness	Injury (work related)	Family responsibility	Mental health day
○	○	○	○

7

9.

In the past 7 days...	None	Mild	Moderate	Severe	Very severe
How often have you been bothered by emotional problems such as feeling anxious, depressed or irritable?	○	○	○	○	○
How would you rate your fatigue, on average?	○	○	○	○	○

10.

Please respond to each question regarding your global health.	Excellent	Very good	Good	Fair	Poor
In general, would you say your health is:	○	○	○	○	○
In general, would you say your quality of life is:	○	○	○	○	○
In general, how would you rate your physical health?	○	○	○	○	○
In general, how would you rate your mental health, including your mood and your ability to think?	○	○	○	○	○
In general, how would you rate your satisfaction with your social activities and relationships?	○	○	○	○	○
In general, please rate how well you carry out your usual social activities and roles. (This includes activities at home, at work and in your community, and responsibilities as a parent, child, spouse, employee, friend, etc.)	○	○	○	○	○
To what extent are you able to carry out your everyday physical activities such as walking, climbing stairs, carrying groceries, or moving a chair?	○	○	○	○	○

THANK YOU FOR COMPLETING THIS SURVEY!

For office use:

Hospital group code: | | | |

Hospital code: | | | |

Unit Number: | | | |

ANNEXURE I: LUCKY DRAW

ANNEXURE J: LANGUAGE EDITING CERTIFICATE

Leverne Gething, M.Phil. *cum laude*
PO Box 1155, Milnerton 7435; cell 072 212 5417
e-mail: leverne@eject.co.za

21 November 2022

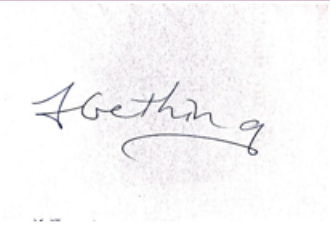
Declaration of editing of a Master's thesis

The impact of workplace relationships on nurse-reported quality of care and patient safety in the North West Province

I hereby declare that I carried out language editing of the body copy of the above thesis on behalf of Naledi Tlhako.

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

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



Yours sincerely

LEVERNE GETHING leverne@eject.co.za

ANNEXURE K: TURNITIN REPORT

turnitin

Digital Receipt

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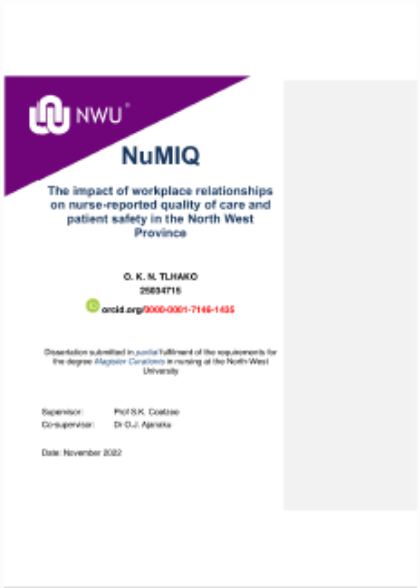
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The impact of workplace relationships on nurse-reported quality of care and patient safety in the North West Province

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Supervisor: Prof S.K. Coetzee

Co-supervisor: Dr O.J. Ajanaku

Date: November 2022

ANNEXURE L: RESEARCHER'S ETHICS CERTIFICATES

TRREE

Zertifikat
Certificat
Certificado
Certificate

Promouvoir les plus hauts standards éthiques dans la protection des participants à la recherche biomédicale
Promoting the highest ethical standards in the protection of biomedical research participants

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of the TRREE training programme in research ethics evaluation

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