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THE PSYCHOSOCIAL WORK ENVIRONMENT OF PRIMARY HEALTH CARE NURSES IN THE NORTHERN SUB-DISTRICT CITY OF EKURHULENI

Theodora Motsumi

A research report submitted to the Faculty of Health Sciences, University of the Witwatersrand, Johannesburg, in partial fulfilment of the requirements for the degree of Master of Science in Nursing.

Johannesburg, 2024

DECLARATION

I, Theodora Motsumi, declare that the research report on “The psychosocial work environment of primary health care nurses in the northern sub-district City of Ekurhuleni” is my own, unaided work. It is being submitted for the degree of Master of Sciences in Occupational Health Nursing at the University of the Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination at any other University.



_____ **(**Signature of candidate)

04 day of June 20 24 in Centurion, Pretoria

HREC Protocol number: M210527

DEDICATION

This research study is dedicated to:

- My Grandmother, Caroline Motsumi; parents, Jacobeth Podile and Reuben Podile.

- My friends, who supported me and helped me to turn this manuscript into a finished product.

ACKNOWLEDGEMENTS

My appreciation and sincere thanks to the following people who supported me throughout the study:

- My grandmother, Caroline Motsumi.
- My parents, Jacobeth Podile and Rueben Podile, and my sister, Kelebogile Motsumi.
- My friends, Palesa Mabote, Dineo Mbalati, Vangile Mabitsela, and Livhuwani Mudau.
- The Olifantsfontein team for their support and encouragement.
- My supervisor, Dr Amme Tshabalala, for her guidance, courage and support.
- The City of Ekurhuleni Ethics Committee for granting me permission to do research in the eight selected primary health care facilities.
- The eight selected primary health care facilities, and the nursing managers for granting me permission to conduct this study in their facilities.
- The Human Research Ethics Committee of the University of the Witwatersrand for their approval.

Above all, I give thanks to the almighty, God.

ABSTRACT

Background: Studies have shown that nurses in general are exposed to higher psychosocial work environment challenges primarily manifested as work-related stress, burnout, depression, and fatigue. Hence, the need to investigate how PHC nurses experience their psychosocial work environments in the northern sub-district of the City of Ekurhuleni.

Objectives: To describe the psychosocial work environment as well as determine the association between the socio-demographic data and domains that score as negatively and positively indicative of the perceived psychosocial work environment.
Method: A descriptive cross-sectional survey design was used for this study, and data were collected using a self-administered questionnaire, the Copenhagen Psychosocial Questionnaire II (COPSOQ II).

Data analysis: Firstly, STATA 18 (Standard Edition) was used for demographic and COPSOQ II scale analysis. Secondly, the open-ended question was analyzed through the sentiment analysis process using Microsoft Excel 2021, Office 365 add-on package Azure Machine Learning to identify the themes and determine the emotional tone of the responses which were classified as positive, negative or neutral. Lastly, Bivariable analysis was conducted using a Pearson Chi-square test (χ^2 test) and a Fisher's Exact test for the purpose of establishing associations. **Results:** A total number of (n=80) PHC nurses participated in the study. Most were females (87.5%) and (60%) have more than ten years of professional nursing experience. Quantitative work demands, Work pace, Emotional work demands, Work/ life conflict as well as Burnout and stress are the dimensions that were Red coded, rated as needing immediate care and are indicative of poor care. Age was associated with Job demands and Work/individual interface. Years of experience was associated with interpersonal relationships and Leadership, and Health and wellbeing. Three themes emerged from the sentiment analysis of the open-ended question namely; professional recognition and job satisfaction, workload and staffing issues, and workplace environment and support. The results further showed that (76%) of the respondents expressed negative sentiment regarding the psychosocial environment and the average sentimental score was 0.26 indicating highly negative perception about the psychosocial environment.
Conclusion: The results serve as a baseline for a study on psychosocial environment and can be used to inform the development of a more comprehensive in-depth psychosocial research study, to develop and implement sustainable and effective healthy workplace programs to meet the psychosocial needs of PHC nurses and other health care workers.
Keywords: psychosocial work, primary health care nurses, Copenhagen Psychosocial Questionnaire II**.**

Table of Contents

DECLARATION i
DEDICATION ii
ACKNOWLEDGEMENTS iii
ABSTRACT iv
Table of Contents v
CHAPTER ONE 1
OVERVIEW OF THE STUDY 1
1.1 INTRODUCTION 1
1.2 BACKGROUND 1
1.3 THE VALUE OF THE PROPOSED STUDY 4
1.4 PROBLEM STATEMENT 4
1.5 RESEARCH QUESTION 5
1.6 PURPOSE AND OBJECTIVE OF THE STUDY 6
1.7 OPERATIONAL DEFINITIONS 6
1.8 OVERVIEW OF THE RESEARCH METHODOLOGY 7
1.9 OUTLINE OF THE RESEARCH REPORT 8
1.10 SUMMARY 8
CHAPTER TWO 9
REVIEW OF LITERATURE 9
2.1 INTRODUCTION 9
2.2 PRIMARY HEALTH CARE (PHC) AND PRIMARY HEALTH CARE NURSES 9
2.2.1 Primary health care 9
2.2.2 Primary health care nurses 10
2.3 PSYCHOSOCIAL WORK ENVIRONMENT 10
2.4 MEASURING THE PSYCHOSOCIAL WORK ENVIRONMENT 11
2.4.1 Demands at work 12
2.4.2 Work organisation and job content 12
2.4.3 Interpersonal relationships and leadership (work environment) 13
2.4.4 Work/individual interface 13
2.4.5 Values at the workplace level 14
2.4.6 Health and well-being 14
2.5 EFFECTS EXPERIENCED IN PRIMARY HEALTH CARE 15
2.5.1 Physical health effects experienced by PHC nurses 15

2.5.2 Psychosocial health effects experienced by PHC nurses 16
2.6 PREVENTION AND MANAGEMENT OF PSYCHOSOCIAL HAZARDS FOR PHC NURSES 18
2.7 BUILDING A PSYCHOLOGICALLY HEALTHY WORKPLACE 19
2.7.1 Levels of a healthy workplace initiative 19
2.7.2 Workplace as a health resource 19
2.7.3 Comprehensive healthy workplace model 19
2.8 SUMMARY 21
CHAPTER THREE 22
RESEARCH DESIGN AND METHOD 22
3.1 INTRODUCTION 22
3.2 RESEARCH DESIGN 22
3.2.1 Quantitative descriptive study 22
3.2.2 Cross-sectional study 22
3.3 RESEARCH METHOD 22
3.3.1 Study setting 23
3.3.2 Study population 24
3.3.4 Data collection 25
3.4 DATA MANAGEMENT 29
3.4.1 Measures 29
3.5 DATA ANALYSIS 31
3.5.2 Descriptive statistics 33
3.5.2 Inferential statistics 34
3.6 ETHICAL CONSIDERATIONS 35
3.6.1 Institutional clearances 35
3.6.2 Participant consent and privacy 35
3.6.3 Avoidance of psychosocial harm and risk 35
3.7 SUMMARY 36
CHAPTER FOUR 37
4.1 INTRODUCTION 37
4.2 RESEARCH RESULTS 37
4.2.1 Section One: Response Rate and Socio-Demographic Profile 37
4.2.2. Section Two: Description of the Psychosocial Work Environment of PHC Nurses 40

4.2.3. Section Three: Association Between the Socio-Demographic Data . 50
and Domains of The COPSOQ 11 50
4.3 DISCUSSION 54
4.3.1 Section One: Response Rate and Socio-Demographic Profile 54
4.3.2 Section two: Description of the Psychosocial Work Environment of PHC 55
Nurses 55
4.3.3 SECTION THREE: INFERENTIAL RESULTS DISCUSSION 64
4.4 SUMMARY 65
CHAPTER FIVE 66
5.1 INTRODUCTION 66
5.2 SUMMARY OF THE STUDY 66
5.2.1 Purpose of the study 66
5.2.2 Objectives 66
5.2.3 Summary of the methodology 66
5.3 SUMMARY OF THE MAIN FINDINGS 67
5.3.1 Section one: Response rate and demographic data 67
5.3.2 Section Two: Description of the Psychosocial Work Environment of PHC 68
Nurses 68
5.3.3 Section Three: Association Between the Socio-Demographic Data and . 69
Domains of The COPSOQ II 69
5.4 VALUE OF RESEARCH FINDINGS 69
5.5 LIMITATIONS OF THE STUDY 69
5.5 RECOMMENDATIONS 70
5.6.1 Health service management 70
5.6.2 Recommendation for Clinical Practice 71
5.6.3 Recommendations for nursing education 72
5.6.4 Recommendations for further research 72
5.7 CONCLUSION 72
REFERENCES 74
APPENDICES 89
Appendix 1: 89
Appendix 2: 90
Appendix 3 91
Appendix 4 106

Appendix 4 106

List of Figures

Figure 2.1 Comprehensive Healthy Workplace Model……20

Figure 3.1 Locality of the City of Ekurhuleni including the three sub-districts (Piketh, Fatti, & Dunsmore et al., 2014). 23
Figure 3.2 Schematic diagram and Age…… 30
Figure 3.3 Schematic diagram of Years of Experience…… 30

Figure 4.1 Section two: COPSOQ II Overview (n=80……..... 43
Figure 4.2 Number of scores by domains(n=80) ……. 43
Figure 4.3 Staff offended according to gender and Offences.....45
Figure 4.4 Staff offended by age……..... 45
Figure 4.5 Overall summary for sentiment analysis……46
Figure 4.6 Analysis of the sentiment themes 48

List of Tables

Table 3.1 Primary health care facilities 24
Table 3.2 COPSOQ II: DOMAINS AND DIMENSIONS 26-27
Table 3.3 Scoring system for COPSOQ II (NFA/Arbejdmiljo Instituttet, 2011). 32
Table 3.4 Comments categorized by sentiment scores…… 34

Table 4.1 Overall Summary of Socio-demographic data (n=80) ….... 38
Table 4.2 COPSOQ II results: Domains1-6 and Dimensions 1–19 41
Table 4.3 Offensive behaviour Domain 44
Table 4.4 Scoring of Comments…… 47
Table 4.5 Sentiment scores…… 47-48
Table 4.6 Association between Age and COPSOQ II responses……51-52
Table 4.7 Association of Years of experience and COPSOQ II responses…….53-54

NOMENCLATURE

COE	City of Ekurhuleni
COPSOQ II	Copenhagen Psychosocial Questionnaire II
CPD	Continuity Professional Development
EAP	Employee Assistant Program
ICN	International Council of Nurses
ILO	International Labour Organization

NLP	Natural Language Processing
OHN	Occupational Health Nurse
OHNP	Occupational Health Nurse Practitioner
OHSA	Occupational Health and Safety Act (Act No 85 of 1993)
PN	Professional Nurse
PHC	Primary Health Care
PWE	Psychosocial Work Environment
PPE	Positive Practice Environment
SAHRC	South African Human Rights Commission
SANC	South African Nursing Council
SDGs	Sustainable Developmental Goals
WHO	World Health Organization

CHAPTER ONE

OVERVIEW OF THE STUDY

1.1 INTRODUCTION

This chapter presents an overview of the study, including the background, value, problem statement, clarification of concepts, a synopsis of the research design and methodology of the study, ethical considerations, and the outline of the chapters in the report.

1.2 BACKGROUND

The World Health Organisation (WHO, 2017) states that nurses play a pivotal role in the Primary Health Care (PHC) system. The services provided by PHC nurses include comprehensive health assessments; diagnosing, treating and managing conditions; and facilitating rehabilitation services (WHO, 2019). In the South African context, the nursing structure in PHC settings consists of Professional Nurses (PNs), Enrolled Nurses (ENs), and Assistant Nurses (ANs). Services provided include chronic care management (HIV, TB, diabetes, hypertension, and mental illnesses), mother and child care, acute care, home-based care, community outreach programs, and social services. Some community facilities also offer emergency 24-hour services and a maternity unit. PHC nurses work independently and interdependently; they make necessary referrals to other health care professionals, such as doctors, social workers, occupational therapists, physiotherapists, and dieticians.

A study in Slovenia by Starc (2018) describes working in nursing as one of the most physically and mentally demanding stressful professions. Ilic et al. (2017) attribute this to the quantity and diversity of the risk factors affecting the work environment.
Burton (2010) defines a psychosocial work environment as a place where there is an interaction between the employee and the work itself, influenced by values, beliefs, and attitudes in a specific organization.

Nurses are exposed to a wide range of psychosocial stress factors, such as patient health and safety needs, long working hours, work overload, work-related conflicts, disagreements with managers, lack of resources, and lack of organizational support

(Salem & Ebrahem, 2018; Galdikiene et al., 2014). Nursing has a higher susceptibility to occupational stress, burnout, depression, and fatigue (Leyva-Vela et al., 2018). Factors such as lack of appreciation and recognition from superiors, high job demands, and over-commitment are significant enough for nurses to leave their profession (Rahmun, Mumin & Naing, 2017).

The International Labour Organization (ILO) emphasizes that the working environment is one of the key settings that affect worker's health and well-being (Freimann & Merisalu, 2015). Nurses work in high-risk conditions, as they are exposed to multiple hazards such as biological, physical, ergonomic, and psychological hazards (Horrigan et al., 2013). PHC nurses have more close contact with patients, and they see them more regularly; thus, the risk of encountering violence is likely to be higher than for any other health care professionals (Ilic et al., 2017).

A study by Galdikiene et al. (2014) showed that primary health care nurses in Lithuania had a trend of higher psychosocial work demands, which mostly manifested as work-related stress. Bur et al., 2019 stated the importance of managing and monitoring a balance between the workplace and the well-being of the workers, despite workers being adaptive to stressful situations.

Venter et al. (2017) state that PHC nurses in South Africa work under extremely demanding situations due to the quadruple burden of disease, which is on average four times larger than that of developed countries, such as the United Kingdom, United States, and Germany. Therefore, there is a huge demand for health care services, which causes overcrowding in the clinics and leads to a strain on community health care facilities. Furthermore, the lack of resources in the public sector may lead to poor service delivery in health care facilities, which negatively affects the impoverished population who are unable to pay for their health care services (Venter et al., 2017).

In a study conducted by Lee and Shin (2021), psychosocial work environment factors were found to affect retention intentions, contributing to a shortage of nurses. Data from the South African Nursing Council (2020) indicated a decrease of nearly 42% from 1996 to 2005 in the number of professional nurses who completed a four-year

nursing program from different training facilities (Munyewende, Rispel & Chirwa, 2014).

Shortage of nurses is a significant problem in South Africa and is fuelled by the migration of nurses to developed countries through factors that include improved working conditions, nursing staff ratios, increased wages, and improved prospects (Wang et al., 2020). South Africa has the lowest number of nurses employed, with the worst prognosis compared to other developing countries such as Thailand, Argentina, Chile, Costa Rica, and Colombia (Coetzee, Klopper & Ellis, 2012). The WHO further elaborated that there will be a shortage of 12.9 million nurses globally by 2035 (Munyewende, Rispel & Chirwa, 2014).

According to Acutt and Hattingh (2016), psychosocial risk factors in the work environment should be identified, evaluated, and managed on an ongoing basis; it is the role of the occupational health nurse (OHN) and other occupational health professionals to identify all the risks and hazards and design strategies to mitigate the possible effects in the working environment.

It is important to identify and address work-related stress among nurses working in PHC facilities as such stress can negatively impact patient care. It affects the attitude, behavior, communication, staff morale, and quality of care among nurses (Galdikiene et al., 2014).

The International Council of Nurses (ICN) indicated that all nurses have the right to work in an environment that is healthy and safe, and that all employers need to create a positive practice environment with enough staffing, support from managers, managing workloads, and quality leadership (ICN, 2017). The ICN has initiated a Positive Practice Environment (PPE) campaign globally to ensure the quality of health care services, through health education, initiating good practices, and developing tools for workers and managers to improve the working environment. The PPE promotes settings that support the quality care of patients, by ensuring a healthy and safe working environment (Schmidt, 2012).

Both legislative and non-legislative policies have been developed to improve psychosocial risk management within workplaces (Berk & Lenhardt, 2019). These policies advocate that occupational health and safety professionals must be well informed about legislation that applies to the workplace and work environments in which they practice. The Occupational Health and Safety Act 85 of 1993 (OHSA), as amended, was developed to ensure that workplace conditions promote health and safety for workers that may affect work activities (Acutt & Hatting, 2016). Furthermore, OHSA sections 8 and 16 state that the employer must identify and minimize or eliminate all the risks and hazards present in the work environment.

The World Health Organization (WHO) and International Labour Organization (ILO) state that a healthy workplace program should be implemented to meet the psychosocial needs of the workers (Burton, 2010). Bur et al. (2019) stated the importance of managing and monitoring a balance between the workplace and the well-being of the workers, despite workers being adaptive to stressful situations. Hence there is a need to conduct a study investigating how primary health care nurses in South Africa experience their psychosocial work environment. The study will take place in the northern sub-district of the City of Ekurhuleni, as it is more accessible to the researcher.

1.3 THE VALUE OF THE PROPOSED STUDY

The objective of occupational health nursing is to create and sustain a healthy environment, promote health, and prevent injuries and illnesses in the workplace (Acutt & Hattingh, 2016). As an occupational health nurse student, the researcher has become aware of the significance of identifying all the risks and hazards in the workplace and has a vested interest in the psychosocial work environment among nurses in a PHC setting. The results of this study may be used to develop recommendations and implement programs that reduce psychosocial hazards, improve staff morale and productivity, and increase commitment in the workplace, which can contribute to good quality nursing care.

1.4 PROBLEM STATEMENT

Studies have been conducted nationally and internationally focusing on the psychosocial work environment among primary health care nurses (Coetzee, Klopper

& Ellis, 2012; Rahmun, Mumin & Naing, 2017). In these studies, nursing has been acknowledged as a very stressful and demanding profession.

Peter et al. (2022) highlighted the importance of conducting psychosocial work environment studies reliably measuring work-related stress, as it is essential to develop appropriate prevention and intervention strategies.

The OHSA (Act 85 of 1993) aims to promote, prevent, protect, empower, and ensure continuous improvement. Therefore, it is the employers' responsibility to ensure a healthy and safe environment for the workers. The Sustainable Development Goals (SDGs) as adopted in September in 2015 by United Nations (UN), provide a comprehensive framework for addressing various social, economic, and environmental challenges, including those related to occupational health and safety. By working towards the achievement of the SDGs, countries can contribute to creating safer and healthier workplaces for all (Haywood et al., 2018).

Peter et al. (2022) recommended using comparable and reliable instruments, such as the Copenhagen Psychosocial Questionnaire (COPSOQ). Masuku (2019), using the COPSOQ II, identified burnout, stress, and high emotional work demands as some of the high-risk factors among nurses working in two hospital emergency departments in Johannesburg, South Africa.

No recent studies found in the literature on the psychosocial work environment of PHC in the City of Ekurhuleni (COE). Yet, findings from such studies are crucial to develop and execute policies for integrated occupational and workplace programs to improve the psychosocial work environment of PHC nurses in South Africa.

1.5 RESEARCH QUESTION

How do primary health care nurses in South Africa within the City of Ekurhuleni describe their psychosocial work environment?

1.6 PURPOSE AND OBJECTIVE OF THE STUDY

The purpose of the study was to investigate how South African primary health care nurses describe their psychosocial work environment within the City of Ekurhuleni.

The objective of the study was to:

- Describe the psychosocial work environment of primary health care nurses in a sub-district of the City of Ekurhuleni.
- Determine the association between the socio-demographic data and domains that score as negatively and positively indicative of the perceived psychosocial work environment.

1.7 OPERATIONAL DEFINITIONS

Psychosocial work environment – A complex system that consists of the work, the workers, and the environment, along with the influence of attitudes, values, and practices in an organisation, which all affect the mental, psychological, and physical health of workers (Rahmun, Mumin & Naing, 2017). In this study, the psychosocial work environment pertains to how job-related factors, organisational factors, and psychosocial risk factors affect nurses' mental and physical well-being.

Primary health care – The World Health Organization (2017) defined PHC as the first point of contact within the health care system made easily available to individuals, families, and the community at large. For this study, primary health care is essential health care that is based in the community and is centred on the needs of individuals, families, and the community.

Primary health care nurse : The South African Nursing Council (2005) defined a PHC nurse as a professional nurse with an additional qualification in primary care nursing, who is registered as such by the South African Nursing Council (Regulation 48). This skilled professional provides comprehensive and holistic care to individuals with all types of diseases and ailments. For this study, the primary health care nurses are qualified professional nurses with or without PHC qualifications.

Occupational Health nurses: Occupational Health Nurses play a crucial role in identifying, evaluating, and managing psychosocial and other risk factors in the

workplace (Acutt & Hattingh, 2016). They contribute to creating a healthy work environment and preventing work-related injuries and illnesses.

Sentiment: In the context of this study, sentiment refers to the overall emotional tone expressed in the responses of the participants.

Negative Sentiment: Negative sentiment refers to the expression of unfavourable or pessimistic emotions in the participants' responses (Smith, 2021).

Positive Sentiment: Positive sentiment denotes the expression of favourable or optimistic emotions in the participants' responses (Jones & Johnson, 2019).

Neutral Sentiment: Neutral sentiment signifies a lack of overt positive or negative emotional tone in the participants' responses (Brown & White, 2020).

Psychosocial Hazard: Psychosocial hazards encompass aspects of the work environment that have the potential to cause harm to employees' psychological well-being (Freimann & Merisalu, 2019).

1.8 OVERVIEW OF THE RESEARCH METHODOLOGY

A quantitative descriptive cross-sectional design method was used in the study. A total sampling was used, which involves the entire population of PHC nurses in the City of Ekurhuleni. The sample size consisted of (n=122) PHC nurses practising in the eight selected PHC facilities in the northern sub-district of the City of Ekurhuleni.

To collect data, a self-administered questionnaire, the Copenhagen Psychosocial Questionnaire (COPSOQ II), was used. It was developed by the National Research Centre for the Working Environment (NRCWE) in Copenhagen, Denmark (NFA, 2011).

Descriptive data: management was conducted using STATA 18 (Standard Edition). Data was described as, proportions, percentages, and sums for descriptive analysis Variables presenting as strings (Age, Clinic ID, Gender, Years of experience, Department, Sexual harassment, Threats of violence, Physical violence, and Bullying)

were encoded and thus converted to numeric variables whilst retaining their value labels. Tables and figures were used to present the descriptive data of the study.

The general comments concerning the psychosocial work environment were first analysed through qualitative content analysis to determine the emerging themes then sentiment analysis conducted to determine the emotional tone of the responses and classified as positive, negative or neutral.

Measures of association were analysed using the bivariate analyses conducted using a Pearson Chi-square test (χ^2 test) a Fisher's Exact applied to identify the association between socio-demographic data and domains that score negatively and positively indicative of the perceived psychosocial work environment.

The measures followed to obtain permission to conduct the study as well as ethical measures to ensure the participants' rights are described in detail in Chapter Three. Furthermore, a detailed explanation of the research design and method is also further outlined in Chapter Three.

1.9 OUTLINE OF THE RESEARCH REPORT

Chapter One -focuses on the overview of the study.

Chapter Two -focuses on a detailed description of the concepts and the related literature review of the study.

Chapter Three - describes the research design and method.

Chapter Four - focuses on presenting and discussing the results.

Chapter Five - conclusion, limitations, and recommendations of the study.

1.10 SUMMARY

An overview of the study was given in this chapter. The background, the value of the study, and the research problem statement were discussed. Lastly, the purpose of the study and the overview of the research methodology was described. As written in the outline of the research report, the following chapter focuses on the literature review of the study.

CHAPTER TWO

REVIEW OF LITERATURE

2.1 INTRODUCTION

This chapter focuses on the literature review conducted on the concepts related to the focus of the proposed study. A review of both national and international literature was undertaken.

Google Scholar, PubMed, MEDLINE, and CINALH were used to locate and review the literature, and printed materials such as textbooks, occupational health and safety policies, and acts from the past 10 years were included.

2.2 PRIMARY HEALTH CARE (PHC) AND PRIMARY HEALTH CARE NURSES

2.2.1 Primary health care

Nursing is a very demanding profession that requires nurses to deliver humane, culturally sensitive, skilled, understanding, and moral care in a working environment. A lack of these aspects may have an effect on patients physically, psychologically, and emotionally (Khamisa et al., 2015).

The World Health Organization (2017) defined PHC as the first level of care that is easily accessible to individuals, families, and communities. PHC provides a variety of services such as prevention, management, and treatment of diseases; rehabilitation; and palliative care (Halcomb, Smyth & Mannes, 2018). PHC facilities are regarded as the first point of contact for patients and offer primary care in need of preventive, diagnosis, and curative of minor ailments (Nesengani et al., 2020).

The WHO (2021) has stated that PHC is the most comprehensive, equitable, cost-effective approach to improve physical and mental health, as well as social well-being.

PHC is regarded as a cornerstone of the effective health care system in South Africa (Nesengani et al., 2020). However, a United States study by Bitton et al. (2016) found a huge gap concerning what an individual and community needs, and effectiveness of the health care service delivered. To enhance PHC delivery and the health care system

in low-middle income countries, the International Consortium established the Primary Care Performance Initiative (Bitton et al., 2016).

2.2.2 Primary health care nurses

In the South African context, according to SANC (under the provision of the Nursing Act, 2005), PHC nurses are essential, highly skilled professionals who provide health assessments, diagnoses illnesses, and prescribe treatment to achieve the needs of an individual, families, and the community (Regulation 48). PHC nurses are usually employed on a part-time and full-time basis, in the public sector or private sector (Halcomb et al., 2020).

In South Africa, PHC nurses offer specialised nursing care, and they are also responsible for rendering treating all types of illnesses and rendering primary care services in clinics, homes, schools, and the private and public sectors (Nesengani et al., 2020).

Smolowitz et al. (2015) mentioned that in the United States, some of the roles and responsibilities of PHC nurses, also known as family nurse practitioners, are delegated care for illness management, telephonic triage, health coaching, and hospital transition management. In Brazil, PHC nurses are responsible for carrying out nursing consultations, performing procedures, prescribing medication, and assisting in planning, managing, and evaluating the activities developed by Community Health Agents (Ferreira, Perico & Dias, 2017).

2.3 PSYCHOSOCIAL WORK ENVIRONMENT

Rahmun, Mumin & Naing (2017) define the psychosocial work environment (PWE) as a complex system that consists of the work itself, the workers, and the environment. PWE is perceived as one of the most vital and valuable aspects of the work environment in the present, and for future societies, and influences the mental and emotional states of workers, their motivation, satisfaction, engagement, and productivity (Arminian et al., 2017).

2.4 MEASURING THE PSYCHOSOCIAL WORK ENVIRONMENT

Numerous instruments can be used to assess and measure the factors affecting one's psychosocial work environment; some of them are listed below:

- The Maslach Burnout Inventory (MBI) is a tool used to measure burnout (Padyab, Erlanson & Brulin, 2016). The MBI consists of three sub-programs to evaluate emotional exhaustion (EE), sense of low personal achievement (LPA), and depersonalisation (DP) (Lim et al., 2020).
- The Copenhagen Burnout Inventory (CBI) is a tool used to measure burnout in the workplace (Smit, 2011). The CBI consists of sub-programs to assess personal, work-related, and client-related burnout (Papaefstathiou et al., 2019).
- The Job Demands Resource Model (JDR) is used to describe a process of mental health impairment in the workplace (Roelen et al., 2018). The JDR has been used to measure both negative and positive effects on work engagements (Cho et al., 2020).
- The Job Content Questionnaire (JCQ) calculates social support, decision authority, psychosocial demands, and job security (Montoro et al., 2018). The JCQ consists of scales to evaluate decision latitude, psychological demands, and social support (Ramaci et al., 2020).
- The Copenhagen Psychosocial Questionnaire (COPSOQ) is a tool used to describe a broad range of psychosocial factors in a workplace (Useche et al., 2019).

The Copenhagen Psychosocial Questionnaire (COPSOQ) was found to be the most appropriate for the context of this study. It was used in a similar study by Masuku (2019), of the psychosocial work environment among emergency nurses in two of Johannesburg's central hospitals.

There are three versions (I, II, III) of the COPSOQ. The first version was developed in 1997 by the Danish NRCWE as a standardised tool used to cover psychosocial factors, and was revised in 2010, to create the second version (Useche et al., 2019). This study used COPSOQ II, the shorter version, which consists of six domains and 19 dimensions. The six domains are discussed in the next section.

2.4.1 Demands at work

Bur et al. (2019) description of demands at work is includes quantitative demand, emotional demand, and work pace. Quantitative demand is described as the number of tasks given versus the time available to accomplish the tasks, and emotional demand occurs when workers are exposed to disturbing situations or have to deal with people's feelings. Bur et al. (2019) further described work pace as the momentum at which tasks have to be performed.

PHC nurses experience a very complex environment with heavy administrative tasks in the workplace (documentation, reporting information, and referrals to the multidisciplinary team), having to render services during staff shortages, and being expected to coordinate activities such as campaigns to reach targets (Anskar et al., 2019).

A study by Nowrouzy et al. (2015) stated that the work environment of nurses in Canada has raised attention due to a high rate of absenteeism and staff shortages. The Canadian Federation of Nurses Unions reported that 86% of nurses experience their workplace as very stressful, 88% complained of inadequate resources at work, and 91% reported heavy workloads.

Health care providers play a pivotal role in the health care system, balancing work demands and resources to render quality care for patients, which mostly does not exist in the public health sector (Meirum et al., 2020). High job demands among PHC nurses may cause general health problems, which may impact work-life balance (Bragrad et al., 2015).

2.4.2 Work organisation and job content

Bur et al. (2019) described factors that affect work organisation and job contentment as having an influence at work, developing new skills, having meaningful work, and being committed to the workplace.

The initiative of Continuing Professional Development (CPD) in the United Kingdom aimed to reinforce new skills development, sustain competence, and enhance the

commitment of work among health care providers to offer quality, ethical, and safe practices to the public (King et al., 2021).

King et al. (2021) found that organisational support plays a huge role in workplace learning, as it motivates workers to be more committed, confident, find more meaning in their work, and increase staff morale.

2.4.3 Interpersonal relationships and leadership (work environment)

Bur et al. (2019) described the effects of interpersonal relationships and leadership as predictability in the workplace, appreciation and recognition, better leadership quality and social support.

Lack of recognition at work may cause, workers to feel that they are not appreciated; they may experience helplessness, injustice, and feelings of anger (Maissiat et al., 2015). The responsibility of managers is to identify work-related issues, frustrations, and stress, which can be addressed if the contributing factors are known (Khonou & Maselesele, 2016).

2.4.4 Work/individual interface

Bur et al. (2019) described factors affecting the work/individual interface as job satisfaction and work/family conflict**.** Halcomb, Smyth & Mannes (2018) described the psychosocial risk factors that may affect job satisfaction as organisational policies and procedures, remuneration, security and supervision, and communication. The PHC work environment is not always supportive of the professional practice of nurses, and there is solid evidence that occupational hazards may lead to negative outcomes (Fernandez et al., 2018).

According to Khonou & Maselesele (2016), nurses in South Africa receive a very low income compared to other developed countries, which results in the emigration of nurses and causes a huge barrier to achieving the goals of the National Department of Health. Dugani et al. (2018) revealed that the World Health Organisation estimated the global shortages of nurses will increase by 80% to 12, 9 million over the next 20 years, and it has called for the development of strategies to retain the current health care providers and a high-quality workforce. Magana & Damons (2013) found a

correlation between salary and the well-being of nurses, that most nurses want their work conditions and remuneration need to be improved.

2.4.5 Values at the workplace level

Values at the workplace have to do with management/worker trust, and being treated with respect and justice in the workplace (Bur et al., 2019). Nurses have become more mindful of their rights and of being treated fairly in the workplace, as it contributes to their emotional well-being (Hashish, 2020). Managers are responsible for building trust; creating a healthy, civil, and safe environment; and giving social support to enhance professional growth, enable high quality care and reduce burnout among nurses (Wei et al., 2020).

2.4.6 Health and well-being

Health and well-being have to do with self-rated health, burnout and stress in the workplace (Bur et al., 2019). Stressful situations in the workplace may exert a negative influence on the physical and psychological well-being of workers, which may eventually cause mental illnesses. Due to increased growth in the primary health care nursing workforce and a need for strong nursing work, PHC nurses are at risk of experiencing stressful events (Halcomb, Smyth & Mclnnes, 2018).

Dugani et al. (2018) stated that burnout is associated with unexplained absenteeism, a decline in the quality of care for patients, and complaints from peers and patients, characterised as disagreements or criticisms. The authors further described the three elements of burnout, namely, low personal achievement (feelings of incompetence or lack of achievement), emotional exhaustion, and depersonalisation (feeling unreal and detached from reality). Misiak et al. (2020) & Khamisa et al. (2015) agree that burnout is caused by ongoing involvement in situations that may lead to an emotional burden.

The unexpected COVID-19 pandemic from 2020–2022 put a strain on the health care system. The global spread caused a massive burden on health care workers. The high infection and mortality rates, and poor compliance with protocols by the public, impacted nurses psychologically and physically. Meirum et al. (2020) stated that nurses experienced health issues, such as anger, anxiety, stress, and fatigue, needing

more psychological support and intervention. O'Connell (2019) defined fatigue as a feeling of having low energy levels, or being excessively tired, and a desire to sleep Nurses faced fatigue due to seeing and admitting more patients daily due to COVID19 complications while also being expected to do their daily routines with the shortage of staff.

2.5 EFFECTS EXPERIENCED IN PRIMARY HEALTH CARE

Prolonged exposure to occupational health hazards may contribute to occupational health disorders and diseases (Ribeiro, Serranheira & Loureiro, 2017).

2.5.1 Physical health effects experienced by PHC nurses

An occupation is a social movement that affects health and quality of life positively and negatively. Quality of life is defined as the individual's perception of their position in life and the standard of their health (WHO, 2017 & Teles et al., 2014).

Studies conducted in several countries have revealed that work-related musculoskeletal disorders (WRMSDs) are the most common health problem in nursing worldwide and have a greater impact in terms of absenteeism and premature retirement (Ribeiro, Serranheira & Loureiro, 2017). Rahman, Abdul-Mumin & Naing (2017) describe WRMSDs as repetitive strain injuries or trauma disorders.

Ergonomics is the science of the design of equipment, especially to reduce operator fatigue, discomfort and injury. Nurses often bend over when performing necessary procedures or during resuscitations and have to sit for long hours for administrative duties in non-adjustable chairs. Sitting or standing for hours may cause WRMDSs, cumulative muscle problems, and cardiovascular diseases (Waters & Dick, 2015).

PHC nurses may perform multiple duties inside or outside of the medical facility (such as during home care) on the same working day, which increases the risk of physical strain and of developing WRMSDs. A study in Portugal found that 89% of PHC nurses presented with WRMSD symptoms in one or more body parts in the previous 12 months; 63% reported lower back problems, and 50% reported cervical pain (Ribeiro, Serranheira & Loureiro, 2017).

With the need for nurses to cover for others during staff shortages, and be able to adapt to the patient's condition, they are susceptible to occupational stress, burnout, and increased fatigue (Leyva-Vela et al., 2018).

Per Han, Trinkoff & Seiger-Brown (2014) and Ribeiro, Serranheira & Loureiro (2017), fatigue is a problem for nurses' and patients' safety, as it affects neurocognitive functioning and lowers work performance. Extreme fatigue may lead to occupational injuries, WRMSDs, needle stick injuries, medication errors, and patient mortality (Ribeiro, Serranheira & Loureiro, 2017).

Exacting work schedules, such as shift work and long hours in 24-hour facilities, work overload, physical demands such as lifting or bending, and extreme fatigue are associated with increased sleeping problems (Akersteldt et al., 2015). Chronic sleep disturbances may lead to chronic diseases such as cardiovascular diseases, diabetes, injuries, and general health problems (Caruso, 2014).

A key factor that contributes to poor work conditions in South Africa is the poor physical infrastructure of our health facilities. The South African Human Rights Commission (SAHR) reported that most public health facilities are old; they have gaping walls, ceiling leaks, cramped waiting areas, and small consultation rooms. In rural areas,health clinics struggle with water and electricity supply, which affects the daily work duties and ability to cope with work demands, leading to poor quality care (Manyisa & Aswegen, 2017). Furthermore, as nurses are expected to work according to their scope of practice and to adhere to inflexible protocols to avoid penalties, this may exert stress and cause illnesses (Fischer, 2016).

2.5.2 Psychosocial health effects experienced by PHC nurses

2.5.2.1 Work-related stress, burnout, and job dissatisfaction

A negative relation between work-related stress, burnout, and job satisfaction has been found among nurses and has played a huge role in more nurses intending to leave the profession (Khamisa et al., 2015).

The nature of nurses' work is stressful: they need to meet the patients' demands, work long hours, and experience high workloads and professional and interpersonal conflicts. Inability to meet work demands may lead to illnesses or psychosocial distress (Khamisa et al., 2017). Work-related stressors, such as poor supervision, high job demands, and conflict with peers, are all associated with one or more dimensions of burnout (Khamisa et al., 2015). Stressors involve the interaction of work, personal stressors such as family responsibilities, personal resources, and lack of sleep that influence nurses' coping with workplace situations (Nowrouzi et al., 2015).

Burnout is a result of long-time exposure to job stressors. It is accompanied by effects such as a decrease in feelings of competence, low mood, lack of commitment to work, decreased productivity, absenteeism, and role conflict. As such, burnout causes health problems and job dissatisfaction (Misiak, 2020).

Nurses are the backbone of the health care system, as they play an important role in sustaining and determining the effectiveness and efficacy of the health care system in South Africa. As such, the government needs to continuously research and understand what factors may satisfy and motivate them to continue working in the public sector (Khunou & Maselesele, 2016). Saleh, Saleh & Aburuz (2013) define job satisfaction as a positive feeling or attitude towards a job and the nature of the job.

Health facilities with a shortage of staff, inadequate resources, and poor working conditions are more likely to have higher levels of job dissatisfaction among nurses and poor-quality nursing care (Lambrou et al., 2014). Job satisfaction is affected by different components such as work conditions, organisational policies and procedures, promotion, opportunities, appreciation, recognition, relationships, and supervision (Halcomb, Smyth & Mclnnes, 2018).

The huge gap in salaries and poor working conditions of South Africa compared to other countries, remains a problem that causes job dissatisfaction among nurses, which motivates nurses to migrate to other developed countries (Khonou & Maselesele, 2016).

The key factors that contribute to job dissatisfaction in a PHC setting are a lack of resources and inappropriate physical structure (Halcomb, Smyth & Mclnnes, 2018).

2.6 PREVENTION AND MANAGEMENT OF PSYCHOSOCIAL HAZARDS FOR PHC NURSES

Interventions that target the prevention and management of psychosocial hazards in the workplace are important to nurses' quality of life (Nowrouzi et al., 2015). Participation of workers is a key element in the work environment policy, as all employers need to consult with their workers and safety representatives, and allow them to take part in discussions and decisions relating to their health and safety in the work environment (Abilgaard et al., 2020).

According to Horrigan et al. (2013), Asamani, Naab & Ofei (2016) and Ribeiro, Pompeo & Pinto (2015), nurses' health and quality of work life may be improved with the following strategies.

The role of occupational health nurses in an organisation is to promote health and safety, protect the work environment, and advocate for the improvement of nurses' health and quality of work life. They should be able to educate nurses about the quality of work-life issues and monitor illnesses, injuries, and absenteeism rates in the work setting.

There should be continued research by occupational health nurses to advocate for any policy changes that improve staff levels and nurse-to-patient ratios, to reduce workloads. Health organisations may assist nurses by creating employee assistance programs (EAPs) to improve their quality of work life, involving a multidisciplinary team, such as clinical psychologists, psychiatrists or social workers, and life coaches.

Nurse Managers need to exhibit a positive and effective leadership style to retain nurses and avoid upsetting them. Nurses need to take time to rest, exercise, get enough sleep, and lead a healthy lifestyle. Furthermore, they need to be able to seek help and make use of all the support they receive from co-workers, their families and organisations.

2.7 BUILDING A PSYCHOLOGICALLY HEALTHY WORKPLACE

Day & Randell (2014) defined a psychologically healthy workplace (PHW) as a workplace that promotes organisational work resources to improve the well-being of employees, aiming to reduce work demands and stressors. This study focuses on the psychosocial work environment of PHC nurses. Therefore, it is vital to describe the components of building a PHW.

The following components were illustrated by Day & Randell (2014).

2.7.1 Levels of a healthy workplace initiative

Primary intervention/initiative is the prevention or reduction of stressful events (such as reducing working hours or re-adjusting the work program). A secondary initiative affects the ability to manage stress levels (such as stress management programs). A tertiary initiative focuses on the treatment and healing of individuals, for example EAPs and counselling (Day & Randell, 2014).

2.7.2 Workplace as a health resource

This component aims to improve the worker's well-being and increase their experience of work.

The primary intervention has to do with changing the workplace to promote well-being by formulating recognition programs or leadership training. Secondary intervention increases one's resources to assist in improving the worker's ability to manage demands in the workplace, such as through skills programs. Tertiary intervention is the treatment of health problems to improve the mental or physical state of workers (Day & Randell, 2014).

2.7.3 Comprehensive healthy workplace model

The authors propose a theoretical framework that entails a holistic approach, consisting of psychosocial and physical factors. It includes components described below (and also illustrated in Figure 2.1). (Day & Randell, 2014)

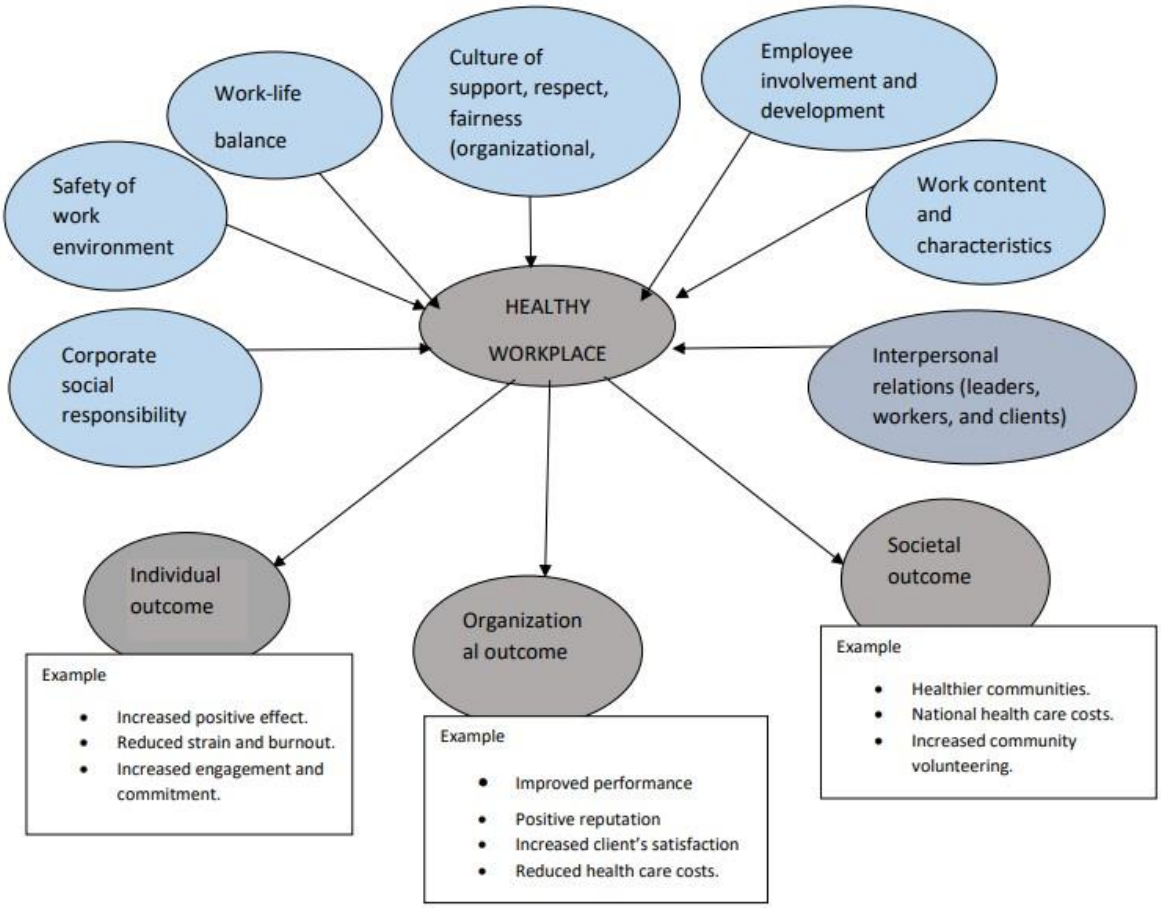


Figure 2 1 Comprehensive healthy workplace model. Reproduced from Kelloway and Day (2005a).

- Developing a culture of support, fairness, and respect

This initiative promotes support, respect, and fairness in the work environment, via tools (such as written policies for respect), and training managers to enhance equity and fairness in the workplace.

- Creating employee involvement and development

This initiative enhances workers' involvement in empowerment and decision-making at work (such as having open-door policies).

- Providing and promoting a physically and psychologically safe environment This initiative aims to protect and sustain the well-being of workers through legislation (such as the Occupational Health and Safety Act 85 of 1993).

- Developing and promoting positive interpersonal relationships

This initiative promotes social support from managers to subordinates and a good relationship between employees.

- Ensuring appropriate and fair work content and characteristics

This initiative ensures fair distribution of work among workers and applies work equity in the workplace.

- Ensuring positive work-life balance

This initiative aims to achieve a balance between work life and personal life, such as by implementing flexible hours and assisting female employees with childcare in the workplace.

2.8 SUMMARY

This chapter, has discussed measuring the psychosocial work environment,the COPSOQ II domains, the physical and psychosocial effects experienced by PHC nurses. Furthermore, it looked at prevention and management of psychosocial hazards for PHC nurses. Lastly, a description of how to build a psychologically healthy workplace was illustrated.

The following chapter examines the research design and methodology.

CHAPTER THREE

RESEARCH DESIGN AND METHOD

3.1 INTRODUCTION

This chapter describes the overall strategy used to conduct a study on the psychosocial work environment of PHC nurses in the northern sub-district of the City of Ekurhuleni. The research design and methodology was discussed in detail to meet the objectives of the study. Furthermore, ethical integrity was discussed in this chapter.

3.2 RESEARCH DESIGN

Gray, Grove & Sutherland (2017) define research design in a quantitative study as a method used to answer a research question, taking into consideration the timing of data collected, and implementation taken by the researcher. A quantitative descriptive cross-sectional design and survey method was used in the study.

3.2.1 Quantitative descriptive study

Nieswiadomy & Bailey (2018) define descriptive studies as a description of phenomena or the relationship between variables examined. In the context of the study, a self-administered questionnaire was used for the survey to realise the purpose of the study, to investigate how primary health care nurses experience their psychosocial work environment in a sub-district of the City of Ekurhuleni.

3.2.2 Cross-sectional study

A cross-sectional study is designed to study some phenomena at a specific point in time (Kumar, 2019). In the context of the study, all the information was collected at the same time from the same participants.

3.3 RESEARCH METHOD

The methodology is the blueprint of the study; it outlines how the study will be carried out (Hemming and Feliciano, 2015). A research method refers to systems used by a researcher to structure the study and carry out the relevant investigation for the study (Polit & Beck, 2020).

3.3.1 Study setting

The study setting is the location where the researcher conducts the study (Given, 2014). The study was conducted in the district called the City of Ekurhuleni (COE). It is located and interconnected to the north of South Africa's economic capital, the City of Johannesburg, and to the east of the capital city, the City of Tshwane. The COE is divided into three managerial sub-districts: the north, east, and south districts as shown in Figure 3.1 below. The setting of the study was in eight primary health care facilities in the north sub-district of the COE. These PHC facilities operate from 08:00 to 16:00 on weekdays. Some have maternity units and emergency units that operate 24 hours a day. Services provided in PHC facilities include care for chronic conditions (HIV and Aids, TB, hypertension, diabetes, etc.), mother and child services, emergency units, and community outreach.

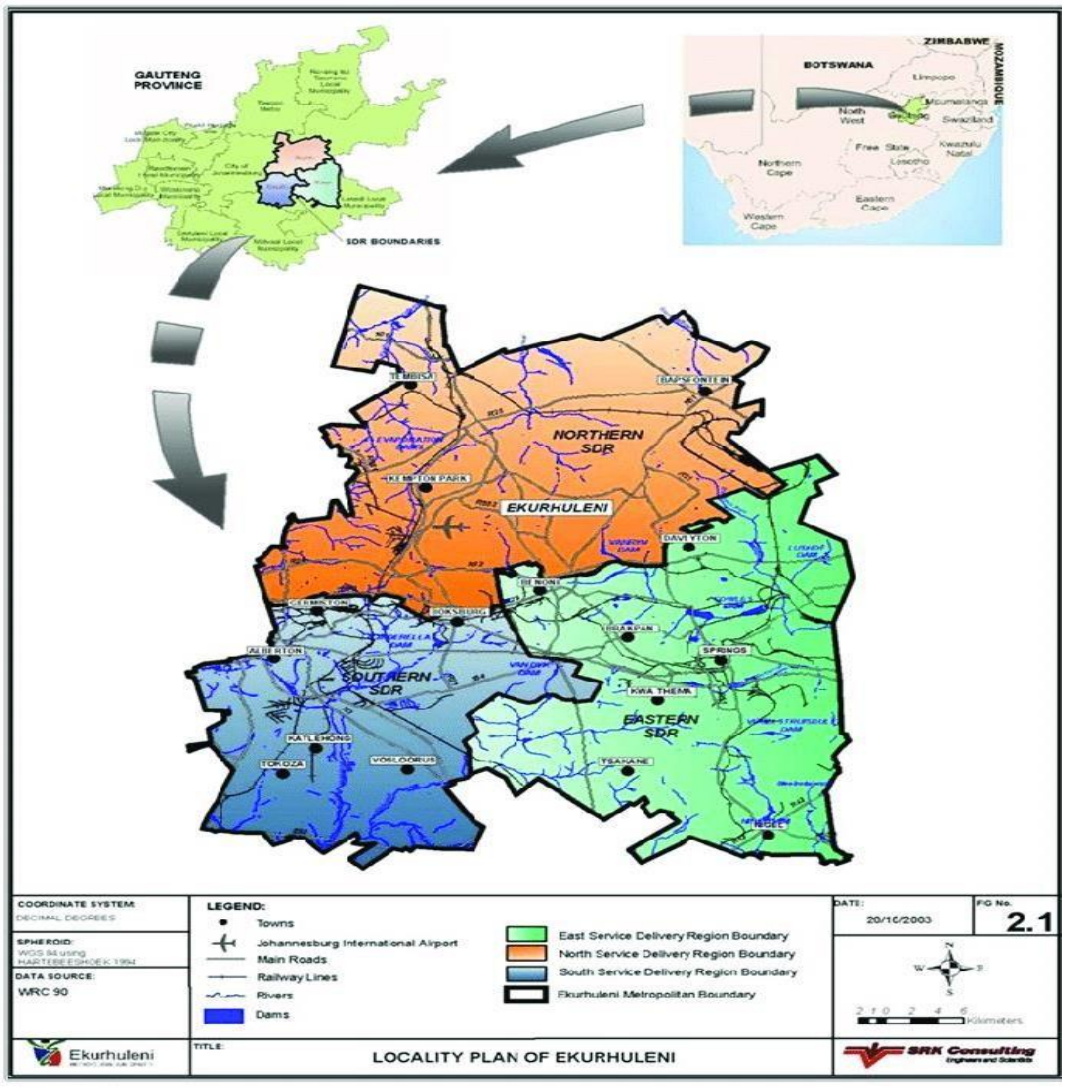


Figure 3.1 Locality of the City of Ekurhuleni including the three sub-districts (https://www.docslib.org/doc/1107694/profile-city-of-ekurhuleni)

3.3.2 Study population

A quantitative descriptive cross-sectional design and survey method was used in the study. Nieswiadomy & Bailey (2018) define a population as a complete set of people that has common characteristics of interest to the researcher. The north sub-district of the City of Ekurhuleni has 28 primary health care facilities, and the capacity of professional nurses is different in each facility. It was not feasible to include all clinics and nurses in Ekurhuleni in this study. Therefore, the population was narrowed down to the accessible population, which refers to all the qualified and permanent professional nurses working in the following eight primary health facilities in the northern sub-district of the City of Ekurhuleni, listed in Table 3.1

Table 3.1 Primary health care facilities

Primary health centres (Clinic ID)	**Total number of PNs**	**PHC headcount per quarter (Oct/Nov/Dec 2023: According to the District Health Information System (DHIS)**
A	12	12 550
B	11	11 912
C	18	31 002
D	15	17 838
E	14	10 673
F	18	19 254
G	14	19 327
H	20	32 225
TOTAL	**122**	**154 781**

The total number of PHC nurses selected was 122. These facilities fall under the northern sub-district of Ekurhuleni. They were chosen because of a higher PHC headcount for every quarter (facilities with a minimum of 10 000 patient headcount per quarter), which illustrates the busyness of these facilities, as seen above, table 3.1.

3.3.3 Sample, Sampling, and Sample size

- Sample

A sample is a subdivision of the population (Polit & Beck, 2020). Sampling refers to the researcher's process of selecting a subset of the population to obtain information

regarding the phenomena in a way that represents the population of the study (Nieswiadomy & Bailey, 2018).

- Sampling and sample size

Sampling refers to the process of selecting a subset of individuals or items from a larger population to represent that population (Creswell,2018). In this study, a total sampling method was used, to identify the entire population of PHC nurses in COE who were practising in eight PHC facilities in the northern subdistrict of the City of Ekurhuleni. Total sampling, also known as census sampling, is a method where the entire population under study is included in the sample (Cohea, Manion, & Marrison, 2017). The sample size was (N=122). On the basis that this was a self-administered questionnaire, the sampling method is described as a convenient sampling process since participants were PHC nurses who were there on duty during the data collection process.

- Inclusion and exclusion criteria

Potential participants were qualified PHC nurses registered with SANC, actively working within the eight selected primary health care facilities in the northern subdistrict. Assistant and enrolled nurses were excluded from the study.

3.3.4 Data collection

3.3.4.1 Data collection instrument

Data was collected using a self-administered questionnaire that consists of two sections: Copenhagen Psychosocial Questionnaire (COPSOQ II) developed by the NRCWE in Copenhagen, Denmark (NFA, 2011).

Section one: socio-demographic data: age, years of practice, gender, and the department of work.

Section two: consists of mainly closed- ended questions that represent seven domains:

- Demands at work (3 questions)
- Work organisation and job content (4 questions)
- Interpersonal relations and leadership (5 questions)
- Work/individual interface (2 questions)
- values at workplace level (2 questions)

- Health and well-being strains (3 questions)
- Offensive behaviour (4 questions).

The COPSOQ II responses were rated on a 5 point-Likert (0,1,2,3,4) scale.

- Never/hardly ever=0, Seldom=1, Sometimes=2, Often=3, Always=4 or very small extent=0, Small extent=1, somewhat=2, Large extent=3, Very large extent=4
- Some of the dimensions consist of two questions, which are scored individually, and the total score then goes up to eight.

Table 3.2 below shows the six COPSOQ II domains and psychosocial dimensions, with one example of a question from each.

Table 3.2 COPSOQ II: Domains and Dimensions

DOMAINS X7	NO	PSYCHOSOCIAL DIMENSIONS OF COPSOQII, AND EXAMPLES
1.Demands at work	**1**	**Quantitative work demands** Do you get behind with your work?
	2	**Work pace** Is it necessary to keep working at a high pace?
	3	**Emotional work demands** Does your work put you in emotionally disturbing situations?
2.Work organisation and job content	**4**	**Influence on work** Can you influence the amount of work assigned to you?
	5	**New skill development** Does your work require you to take the initiative?
	6	**Meaningful work** Is your work meaningful?
	7	**Commitment to workplace** Do you feel that your place of work is of great importance?
3. Interpersonal relationships	**8**	**Predictability** Do you receive all the information you need to do your work well?
and Leadership (work environment)	**9**	**Appreciation & Recognition** Are you treated fairly at your workplace?
	10	**Role clarity** Does your work have a clear objective?
	11	**Leadership quality** To what extent would you say that your Immediate superior is good at work planning?
	12	**Social support from superiors** How often do you get help and support from your nearest superior?
4.Work/ individual interface	**13**	**Job satisfaction** How pleased are you with your job everything is taken into consideration.

	14	**Work/family conflict** Do you feel that your work takes so much of your time that it has a negative effect on your private life?
5.Values at the workplace level	**15**	**Management/worker trust** Does the management trust the employee to do their work well?
	16	**Justice & Respect** Is the work distributed fairly?
6.Health & Wellbeing	**17**	**Self-rated health** Rate your health in general.
	18	**Burnout** How often have you felt worn out?
	19	**Stress** How often have you been stressed?
7. Offensive Behaviour	**20-23**	**Sexual harassment, Threats of Violence, Physical Violence and Bullying** Have you been exposed to undesired sexual attention at your workplace? If yes, scale responses are *yes daily, yes weekly, yes monthly, yes a few times, and no*. If yes, from whom? Colleagues *(Col),* Manager *(Man),* Subordinates *(Sub),* Patients (*Pat)*

Section Three of the questionnare is an open-ended section for general comments from the participants regarding the psychosocial work environment.

3.3.4.2 Validity and reliability of the instrument

Validity is established when the instrument measures what it is intended to measure (Polit & Beck, 2020). Criterion validity was tested during the construction of the original tool (NFA, 2011). The Cronbach Alpha for COPSOQ II in English was found to be between 0.50 and 0.89. The construct validity was confirmed by the correlation analysis and factor analysis (NFA, 2011).

Reliability is the degree of consistency with which the instrument measures an attribute (Polit & Beck, 2020). The COPSOQ II has been used in South Africa, in a study conducted by Jansen van Rensburg (2015), to investigate the psychosocial work environment of ministers in the Dutch Reformed Church in the Western Cape and KwaZulu-Natal. As stated earlier, the study by Masuku (2019) used the COPSOQ II and was also conducted in South Africa.

To ensure reliability, a pre-test of the instrument was conducted in ten PHC nurses who were not part of the final study from a clinical setting not included in the research identified facilities. The purpose was to investigate whether the study is feasible and to detect possible flaws in the methodology (Brink, Van der Walt & Jansen van Rensburg, 2015). Out of 10 PHC nurses, only five PHC nurses completed the questionnaire, due to the workload and the timing for distribution of questionnaires. They could not complete the tool.

The process allowed the researcher to have an idea of the duration for completion of the questionnaire. It allowed the researcher to make necessary adjustments in the data collection process that involved the distribution of questionnaires. However, no amendments were made to the questionnaire since the questionnaire has been used in two other studies in the South Africa context.

3.3.4.3 Data collection process

Data collection is a process of acquiring participants and gathering information (Gray, Grove & Sutherland, 2017). Data collection began after approval was granted by the Graduate Research Committee of the School of Therapeutic Sciences, and ethical clearance and approval were given to the researcher by the City of Ekurhuleni and Wits Human Research Ethics Committee.

3.3.4.4 Participant recruitment

A meeting was scheduled with the heads of clinic services and clinic managers to explain the purpose of the study and ask for their support and assistance. All aspects of the study were explained.

Due to the COVId-19 pandemic and related social distancing restrictions it was not possible to directly address the potential participants in a meeting. The researcher relied on the clinic supervisor and the managers to make the PHC nurse aware of the study. However, the researcher on visiting the facilities, did have an opportunity of explaining to individual PHC nurses that were there at the time of data collection. Data was collected in each participant's natural setting from June to August 2022. Questionnaires were distributed at the facilities. Some facilities opted to have nurses

fill in the questionnaires immediately, taking 15 to 20 minutes of their time. The respondents were asked to put questionnaires in a sealed box in each facility, which was then placed in a manager's office. The sealed boxes were collected by the researcher.

Debriefing and counselling were available, as mentioned on the information leaflet, for any emotional discomfort experienced during data collection. There were no emotionally traumatic situations reported during data collection.

3.4 DATA MANAGEMENT

Data management was done using STATA 18 (Standard Edition). The dataset was checked for duplicates using Participant Number, to which none were found. Participant responses were compared with the Copenhagen scale to check if no values inserted were out of range. Variables presenting as strings (Age, Clinic ID, Gender, Years of experience, Department, Sexual harassment, Threats of violence, Physical violence, and Bullying) were encoded and thus converted to numeric variables whilst retaining their value labels. Tables and figures were used to present the descriptive data of the study.

3.4.1 Measures

3.4.1.1 Primary Outcome Variable

Participants' ages and years of experience were used to represent demographic data for inferential statistics. Age and years of experience were included in the descriptive and inferential statistics. For descriptive statistics, the variables were both analyzed in the condition they were collected but were transformed into a dichotomous variable for inferential statistics. This was done to limit sparse data as the sample size is n=80.

Age was collected as an ordinal variable with 5 levels (1 = Under 30, 2 = 30 to 39, 3 = 40 to 49, 4 = 50 to 59, and 5 = Above 60). Age was transformed into a dichotomous variable labeled younger than 40 years and 40 years and older.

Figure 3.2 below shows how the variable age variable was mutated.

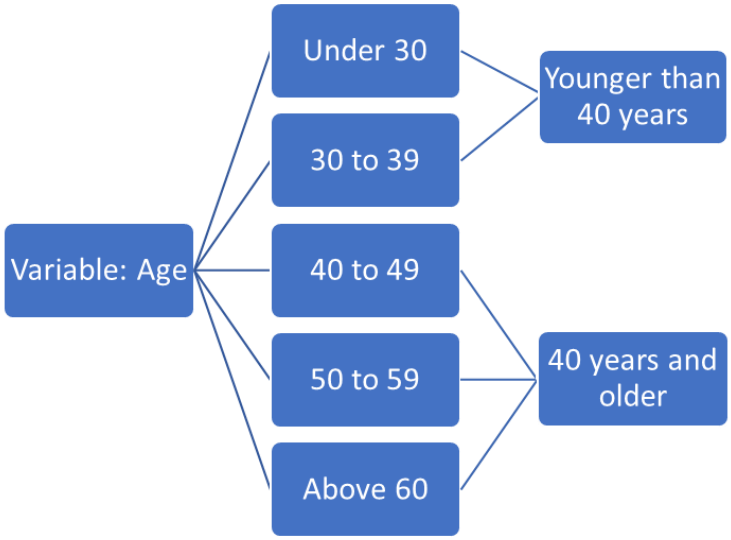


Figure 3.2 Schematic diagram of Age

Years of experience were also collected as an ordinal variable with 4 levels (1 = Less than 1 year, 2= 1-5 years, 3 = 5-10 years, and 4 = Above 10 years). Years of experience were transformed into a dichotomous variable labeled 10 years and younger, and above 10 years.

Figure 3.3 below, shows how the variable years of experience variable was mutated.

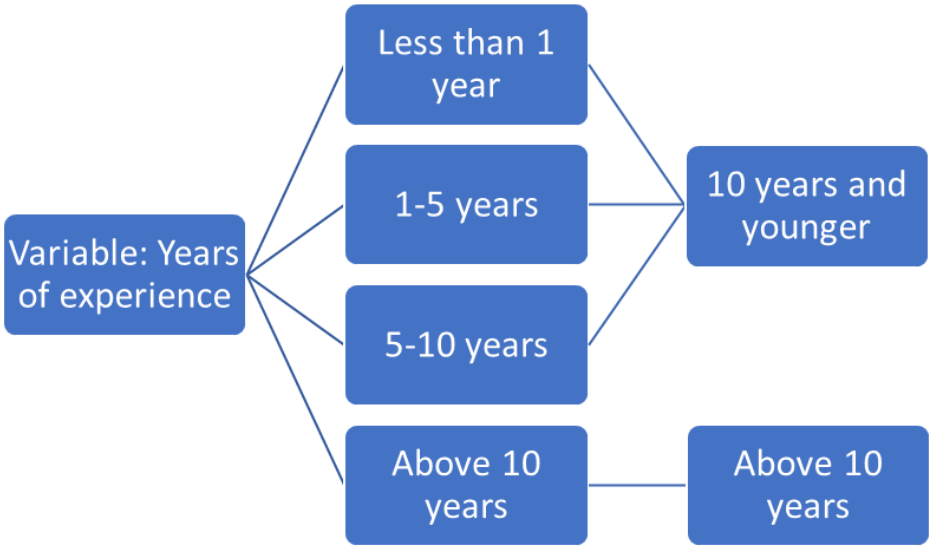


Figure 3.3 Schematic diagram of years of experience

3.4.1.2 Independent Variable

The dimensions within the Copenhagen scale were used as independent variables. The responses per dimensions ranged between 0 to ≤ 8. Through the application of the Scoring system for COPSOQ II listed in Table 3.3, responses were color-coded as green, yellow, and red. Almost all the domains were ordinal variables except job satisfaction which was a dichotomous variable with response green and red only.

The dimensions representing domains 1-6 were 19 and listed as follows: quantitative work demands, work pace, emotional work demands, influence on work, new skills development, meaningful work, commitment to the workplace, predictability, appreciation & recognition, role clarity, leadership quality, social support from superiors, job satisfaction, work or family conflict, management worker trust, justice respect, self-rated health, burnout, and stress. All these dimensions representing domains 1-6 were included in the descriptive statistics and the inferential statistics.

3.5 DATA ANALYSIS

Table 3.3 below shows the interpretation and scoring system of the COPSOQ II questionnaire, for the first six domains with 19 dimensions. The seventh domain was analyzed separately. Each of the responses was scored individually and added all together to make up the dimension score (NFA, 2011).

Table 3.3 Scoring system for COPSOQ II (NFA/Arbejdmiljo Instituttet, 2011)

Quantitative work demands	0	1	2	3	4	5	6	7	8
Work pace	0	1	2	3	4	5	6	7	8
Emotional work demands	0	1	2	3	4	5	6	7	8
Influence on work	0	1	2	3	4	5	6	7	8
New skill development	0	1	2	3	4	5	6	7	8
Meaningful work	0	1	2	3	4	5	6	7	8
Commitment to the workplace	0	1	2	3	4	5	6	7	8
Predictability	0	1	2	3	4	5	6	7	8
Appreciation & recognition	0	1	2	3	4	5	6	7	8
Role clarity	0	1	2	3	4	5	6	7	8
Leadership quality	0	1	2	3	4	5	6	7	8
Social support from superiors	0	1	2	3	4	5	6	7	8
Job satisfaction			0	1	2	3			
Work/family conflict		0	1	2	3	4	5	6	
Management/worker trust	0	1	2	3	4	5	6	7	8
Justice & respect	0	1	2	3	4	5	6	7	8
Self-rated health			0	1	2	3	4		
Burnout	0	1	2	3	4	5	6	7	8
Stress	0	1	2	3	4	5	6	7	8

Coding: GREEN = Good/low risk, YELLOW = Medium risk, RED = High risk.

After the questionnaires were completed, RED was classified as high risk, deemed unacceptable in the working environment, meaning that an improvement plan is necessary to reduce the risk.

YELLOW was classified as a medium risk; reduction measures should be in place to lower the risk to a tolerable level.

GREEN was classified as low risk; it is considered acceptable, and the controls in place should be maintained and sustained.

COPSOQ II is structured into two structures, domains and psychosocial dimensions. Domain is a category of factors or concepts that are being measured or assessed. These domains typically represent different aspects under investigation Each dimension consists of several items or questions that respondents answer to provide information about their perceptions and experiences related to that aspect of the work environment.

3.5.2 Descriptive statistics

The research data was presented according to the COPSOQ II tool used to collect data (using 3 sections).

Section one: Demographics data.

Section two: Description of COPSOQ II dimensions.

All the variables in the dataset were categorical (ordinal or dichotomous). Data was described as, proportions, percentages, and sums. Two descriptive summary tables were made, for demographic characteristics and the COPSOQ II responses. The demographic characteristics table included the following variables: Age, Gender, Years of Experience, Department, and Clinic ID. The Copenhagen response table included 19 dimensions from the first 6 domains listed as follows: quantitative work demands, work pace, emotional work demands, influence on work, new skills development, meaningful work, commitment to the workplace, predictability, appreciation & recognition, role clarity, leadership quality, social support from superiors, job satisfaction, work or family conflict, management worker trust, justice respect, self-rated health, burnout, and stress.

Domain 7 (Dimensions 20-23) was described using graphical methods and table of Offensive behaviour which also described data as, proportions, percentages, and sums.

Section three: **Open ended statement Comment section**

The open-ended question were first analyzed using the Quantitative content approach to identify emerging themes. Statements were read to identify recurring key words to identify meaningful patterns words which were coded and grouped into themes.

Thereafter, the sentiment analysis methodology consisting of a two-step approach was applied.

In the first step, data were entered into the Microsoft Excel 2021, Office 365, add-on package (Azure Machine Learning). The data set comprised of survey comments of the respondents who opted to participate in the open-ended section of the survey. The data had two variables, the participant number and the comment made by each respondent. Furthermore, the data was stored as a Microsoft Excel document.

The second step entailed calculation of the sentiments score. The Azure Machine Learning (Azure ML) package analysed the entire comment (paragraph or sentence) each responded made to understanding the opinion expressed by it and provides a sentiment score ranging from 0 to 1. These scores were further broken down by the researcher into either positive, neutral or negative as per the table 3.4 below.

Table 3.4 Comments categorized by the sentiment scores obtained from Azure ML

Sentiment	**Sentiment Score**
Negative	0 to 0.39
Neutral	0.40 to 0.59
Positive	0.60. to 1.00

3.5.2 Inferential statistics

Bivariable analyses were employed to identify the association between socio-demographic data and domains that score negatively and positively indicative of the perceived psychosocial work environment. Two tables were created, the first one with age against 19 domains and the second one with years of experience against the 19 domains. Both the independent variables (age and years of experience) were transformed from ordinal variables to dichotomous variables to limit data sparsity. This was done due to the sample size being n=80 and the majority of the domains of the Copenhagen scale were ordinal variables.

a Pearson Chi-square test (χ^2 test) was used as the test for association and expressed by the formulae: $\chi^2 = \sum \frac{(O_i - E_i)^2}{E_i}$

Where more than 20% of the cells had an expected frequency of <5 a Fisher's Exact Test was done, expressed by the formulae:

$$P = \frac{(a+b)! \cdot (c+d)! \cdot (a+c)! \cdot (b+d)!}{a! \cdot b! \cdot c! \cdot d! \cdot (a+b+c+d)!}$$

3.6 ETHICAL CONSIDERATIONS

3.6.1 Institutional clearances

The research protocol was submitted to the Post Graduate Research Committee of the School of Therapeutic Sciences to grant permission. Ethical clearance was obtained from the University of the Witwatersrand Health Science Research Ethics Committee.

The researcher also obtained permission from Ekurhuleni Health District Committee, the Head of the Health Department, the eight clinics that were selected, and the Gauteng Department of Health.

No permission is required to use the COPSOQ II questionnaire, as indicated on the website (NFA, 2011).

3.6.2 Participant consent and privacy

An information letter was handed out to all participants to explain the purpose of the study and inform them that they could withdraw at any time, and that there are no incentives for taking part. Completed questionnaires were interpreted as informed consent, as explained in the information letter.

Privacy and confidentiality were ensured by not including the personal names of the respondents on the questionnaire, and a quiet room was used when data were collected. In the final research report, the names of the PHC facilities are not reflected.

3.6.3 Avoidance of psychosocial harm and risk

Debriefing and counselling were available, as mentioned on the information leaflet, for any emotional discomfort experienced during data collection.

3.6.4 Respect and dignity

This involves providing options for participation, allowing participants to withdraw at any time without consequence, and respecting their choices throughout the research process. Questionnaires were dropped off and distributed to the facilities for respondents to complete the questionnaires without being pressurised. Some facilities opted to have nurses fill in the questionnaires immediately, and the researcher did explain that they may withdraw at any time if there is any form of emotional discomfort.

3.7 SUMMARY

In this chapter, the research design and method were described, as well as the study setting, population, sample, and sampling method. The data collection tool (COPSOQ II), its validity and reliability, and the data analysis method were discussed. The ethical considerations were laid out. The next chapter discusses the research results.

CHAPTER FOUR

RESULTS AND DISCUSSION OF FINDINGS

4.1 INTRODUCTION

Chapter Three highlighted the research methodology applied. Chapter 4 presents two components, results and the discussion. The first component is the results section presented in three sections. The first section is the socio-demographic profile of the participants. The second and the third section are according to the objectives of the study. The second section presenting the description of the psychosocial environment using the COPSOQ II. The third section is the presentation of the inferential results indicating the association between the socio-demographic data and domains that score as negatively and positively indicative of the perceived psychosocial work environment.

4.2 RESEARCH RESULTS

4.2.1 Section One: Response Rate and Socio-Demographic Profile

4.2.2.1 Response rate

A total population sampling strategy was adopted to include all the (N=122) PHC nurses from the eight primary health care facilities in the northern sub-district of the City of Ekurhuleni. Of the one hundred and twenty-two (122) questionnaires distributed, (n=80) were completed and returned, yielding a response rate of (65.5%).

4.2.2.2 Section one: Socio-demographic results

Table 4.1 below shows a summary of the participants' socio-demographic data. The characteristics presented are: age, gender, years of experience, type of department and Clinic allocated identity letter for confidentiality.

Table 4.1 Overall summary of Socio-demographic data (n= 80)

Variables		**Frequency**	**Percentage (%)**
Age	Under 30	9	11.25%
	30-39	**29**	**36.25 %**
	40-49	23	28.75%
	50-59	18	22.50%
	Above 60	1	1.25 %
Gender	Female	**70**	**87.50%**
	Male	10	12.50%
Years of experience	Less than 1 year	2	2.50%
	1-5 years	10	12.50%
	5-10 years	20	25.00%
	Above 10 years	**48**	60.00%
Department	Acute cases	18	22.50%
	Chronic conditions	**32**	**40.00%**
	Community outreach	1	1.25%
	Mobile services	2	2.50%
	Mother and child	24	30.00%
	Other	3	3.75%
Clinic ID	A	13	16.25%
	B	8	10.00%
	C	6	7.50%
	D	5	6.25%
	E	8	10.00%
	F	9	11.25%
	G	11	13.75%
	H	**20**	**(25.00%)**

The results in Table 4.1 above indicate:

- Total survey by age

The total survey responses were highest for the 30–39 age group 29 (36.25 %). The under 30 years of age accounted for 9 (11.25%) and above 60 years of age 1(1.25%). The study shows that the research data was represented by older and younger respondents across all five age groups.

- Total survey by gender

The majority of the primary health care nurses (87.50%) were female (n=70), and 12.50% (n=10) were males.

- Participants and the research setting

The results of this study show that (n=80) PHC nurses from six departments within eight PHC clinics participated in the study.

- Total survey by experience

Across all four working experience groups, the results show that, (48, 60.00%) of the respondents have more than 10 years of professional experience, which is the highest working experience group (>10 years). The analysis indicates that most of the respondents have extensive experience in the nursing profession.

- Total survey by the department

Across all departments, most of the participants were from the chronic diseases department at (n=32; 40.00%) and the lowest from the community outreach department at (n1; 1.25%) and the Mobile Clinics Department at (2; 2.20%) and "Other" departments at 3.75% (n=3). The low response rates noted are consistent with the low number of staff members allocated in these services.

- Total survey by Clinic ID

Clinic H (25% n=20) had the highest total survey respondents, followed by A (16,2%; n=13) and G (13,7%; n=11), and was 300 % higher than Clinic D (6.2% n=5), which had the lowest total surveys, at five. Across all eight clinics, total surveys ranged from 5 to 20.

4.2.2. Section Two: Description of the Psychosocial Work Environment of PHC Nurses

Section two present the descriptive results emanating from the questions asked for the first objective of the study which is description of the psychosocial work environment using the COPSOQ II scale.

The results in this section has two parts. The first part is the responses to close ended questions asked in relation to the seven domains presented in section 4.2.2.1. The seven domains are 1=Demands at work. 2= Work organization and job content. 3=Interpersonal relations and leadership.4 = Work/individual interface. 5=Values at workplace level. 6= Health and well-being strains and 7=Offensive behavior. The first part was analyzed using STATA 18 (Standard Edition).

The second part section 4.2.2.2 is presentation of the results of the general open ended question responses about the psychosocial environment. The open-ended questions were first analyzed through quantitative content analysis by means of thematic analysis and coding. Sentiment analysis was conducted using Microsoft Excel 2021, Office 365 add-on package Azure Machine Learning to identify determine the emotional tone of the responses and themes were classified as positive, negative or neutral.

4.2.2.1 Part one: descriptive statistics of the COPSOQ II scale domains

4.2.2.1.1 Domains 1-6 results

Table 4.2 below, shows the responses to the COPSOQ II scale domains 1-6 which determines the level of risk of each dimension using colour-coded schemes as indicated below. A colour coded RED was classified as high-risk and deemed unacceptable in the working environment; changes and improvements are necessary to reduce the risk. YELLOW was classified as a medium risk; reduction measures should be in place to lower the risk to a tolerable level. GREEN presents low risk; results are considered acceptable, and the controls in place should be maintained and sustained (Arbejdsmilij0 Institute, 2011).

Table 4.2 COPSOQ II results: Domains 1-6 and 1-19 dimensions

DOMAINS		DIMENSIONS	GREEN RESPONSE	YELLOW RESPONSE	RED RESPONSE	TOTAL N=80
1.Demands at work	1	Quantitative work demands	26 (32.50%)	26(32.50%)	28(35.00%)	80 (100%)
	2	Work pace	15(18.75%)	10 (12.50%)	28 (35.00%)	80 (100%)
	3	Emotional work demands	23 (28.75%)	8 (10.00%)	49 (61.25%)	80 (100%)
2.Work organisation and job content	4	Influence on work	52 (65.00%)	13 (16.25%)	15 (18.75%)	80 (100%)
	5	New skill development	68 (85.00%)	5 (6.25%)	7 (8.75%)	80 (100%)
	6	Meaningful work	77 (96.25%)	00 (00%)	3 (3.75%)	80 (100%)
	7	Commitment to workplace	52 (65.00%)	17 (21.25%)	11 (13.75%)	80 (100%)
3.Interpersonal relationships and Leadership (work environment)	8	Predictability	42 (52.50%)	14 (17.50%)	24 (30.00%)	80 (100%)
	9	Appreciation & Recognition	38 (47.50%)	16 (20.00%)	26 (32.50%)	80 (100%)
	10	Role Clarity	58 (72.50%)	15 (18.75%)	7 (8.75%)	80 (100%)
	11	Leadership quality	36 (45.00%)	19 (23.75%)	25 (31.25%)	80 (100%)
	12	Social support from superiors	30 (37.50%)	25 (31.25%)	25 (31.25%)	80 (100%)
4. Work/ individual interface	13	Job satisfaction	44 (55.00%)	00 (00%)	36 (45.00%)	80 (100%)
	14	Work/Family conflict	17 (21.25%)	9 (11.25%)	54 (67.50%)	80 (100%)
5. Values at the workplace level	15	Management/ Worker Trust	57 (71.25%)	12 (15.00%)	11 (13.75%)	80 (100%)
	16	Justice & Respect	33 (41.25%)	23 (28.75%)	24 (30.00%)	80 (100%)
6. Health & Wellbeing	17	Self-rated Health	31 (38.75%)	32 (40.00%)	17 (21.25%)	80 (100%)
	18	Burnout	3 (3.75%)	4 (5.00%)	73 (91.35%)	80 (100%)
	19	Stress	3 (3.75%)	10 (12.50%)	67 (83.75%)	80 (100%)
Overall summary			**12/19= (63.16%)**	**1/19= (5.26 %)**	**6/19= (31.58%)**	**19/19= (100%)**

- *Dimensions coded Red: needing immediate attention.*

The results in Table 4.2 show that all the three (3) dimensions in the Demands at work domain were coded red; (1) one out of two of the Work individual interface and (2) two out of three in the Health and wellbeing domain. Of the 31.58% which is (6 out of 19) dimensions coded red Burnout was the highest risk at 73 (91.25%), followed by Stress at n=67(83.75%) then Work pace at 55(68.75%).

- *Dimensions coded Yellow : medium risk needing some attention.*

Yellow coded are those that are rated as medium risk and needing some attention. Only one dimension out of the total of 19 (5.26%) was scored to be medium risk. Self-rated health dimension of the Health and wellbeing domain scored the highest at 32 (40.00%).

- *Dimensions coded Green: low risk or good*

The results in Table 4.2 showed that all the dimension in (50%) of the domains which is (n=3 out of /6) domains of COPSOQ 11 namely : Work organization and job contents domain, Interpersonal relationships and Leadership work environment domain and Values at the workplace domains were rated as green which is low risk or good. Work/ individual interface domain consists of two dimensions however, only Job satisfaction was also rated as low risk or good.

The results further show that show that of the 12 out of 19 (63.15%) were scored as green most of the participants reported Meaningful work to be the lowest risk at 77(96.25%) followed by Role clarity 58(72.50%, and Management/Worker trust at 57 (71.25%).

4.2.2.1.2 Summary of the scores of all survey responses

Figure 4.1 below, offers a visual representation of the data detailed in Table 4.2, encapsulating the COPSOQ II outcomes across 19 dimensions of dimension 1-6. This figure illustrates the distribution of risk levels within the survey findings, presented both in terms of frequency and percentage, derived from the analysis of 1,520 individual responses. This total number of responses is the result of surveying 80 participants across the 19 dimensions of the COPSOQ II. This approach provides a detailed insight into the prevalence of various risk level among the individual participants.

The predominant score observed among individual participants was classified as 'low risk.' Nonetheless, the identification of 'high-risk' responses in more than one-third of cases indicates substantial segments within the work environment that may be contributing to adverse psychological effects among nurses.

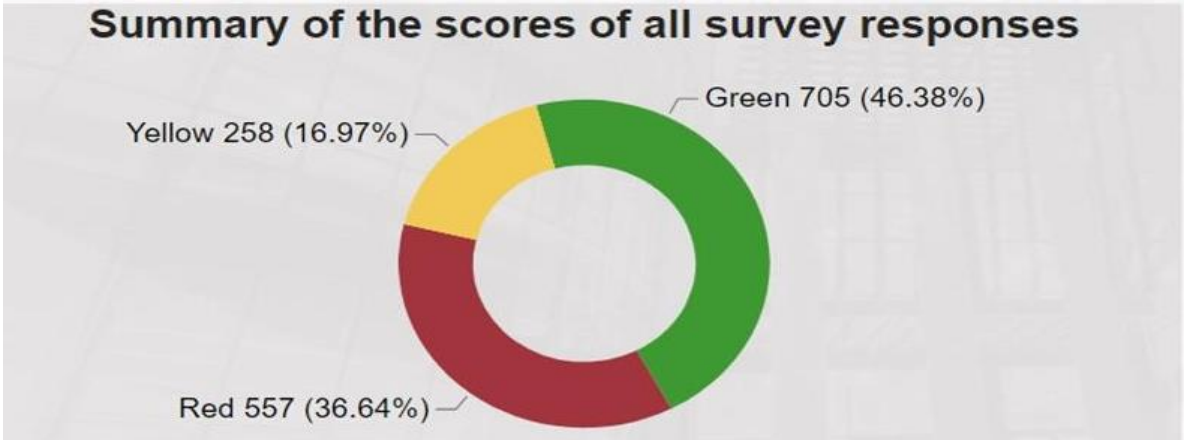


Figure 4.1 Section two: COPSOQ II overview (n=80

4.2.2.1.3 Number of scores for domains 1-6

As shown below in Figure 4.2, the W*ork organisation and Job content* domain has the highest ratio of low-risk (good) scores at 78% (249 green out of 320 questions and responses), followed by *values at Workplace* at 56% (90 green out of 160), and *Interpersonal relationship and leadership* at 51% (204 green out of 400).

In sequential order, the survey responses related to health and Well-being, Work/individual interface, and Demand at work domains are mostly classified as high risk and have the highest ratio of high-risk scores (65%, 56%, and 55% respectively), calculated as a percentage of the number of high-risk scores divided by total survey questions per domain.

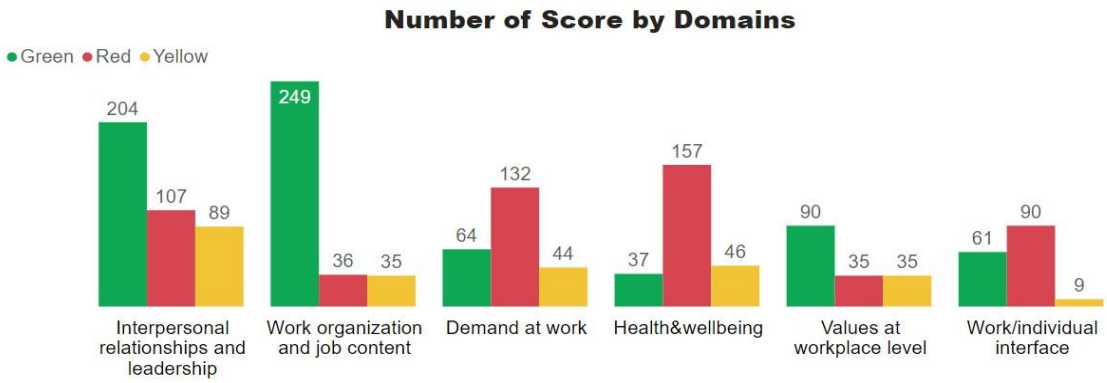


Figure 4.2: Number of scores for domains

4.2.2.2.1 Domains 7: Offensive behaviours results

The last four closed ended questions of the COPSOQ (20 to 23) cover the questions of the offensive behaviour domain and include: sexual harassment, threats of violence, physical violence, and bullying. Table 4.3 show a record of 69 offensive behaviours in this survey. Most of the offences were committed by patients 56 (81.16). The highest offensive behaviour in this study is threats of violence 32(46%), followed by bullying 25(36%). Sexual harassment and physical violence both accounted for 6(9%).

Table 4.3 Offensive behaviour Domain (N=80)

DIMENSIONS	HOW OFTEN?				BY WHOM?											
	Yes a few times	Yes daily	Yes weekly	Yes monthly	Colleague	Manager	Sub-ordinates	patients	Col+Pat	Col+Man	Col+Man+Pat	Man+Pat	Man+Sub+Pat	Col+Man+Sub+Pat	Sub+Pat+col	% Total =69 offences
20. Sexual Harassment	3	0	0	3	0	0	0	**6**	0	0	0	0	0	0	0	**6(9%)**
21. Threats of violence	**16**	0	2	14	0	0	0	**30**	0	0	0	1	0	0	1	**32(46%)**
22. Physical violence	3	0	0	3	0	0	0	**6**	0	0	0	0	0	0	0	**6(9%)**
23. Bullying	**15**	1	2	7	0	4	3	**14**	0	0	1	1	0	1	1	**25(36%)**
TOTAL	**37**	**1**	**4**	**27**	**0**	**4**	**3**	**56**	**0**	**0**	**1**	**1**	**0**	**1**	**2**	**69(100%)**

- Staff offended according to gender and offence distribution.

Figure 4.3 below, has two pie charts. The pie chart on the left right is an illustration of the distribution of offensive behaviours. Whilst the pie chart of the right shows the staff offended according to gender. The results for the latter shows that it was mostly female 32(82%) that experienced offensive behaviour.

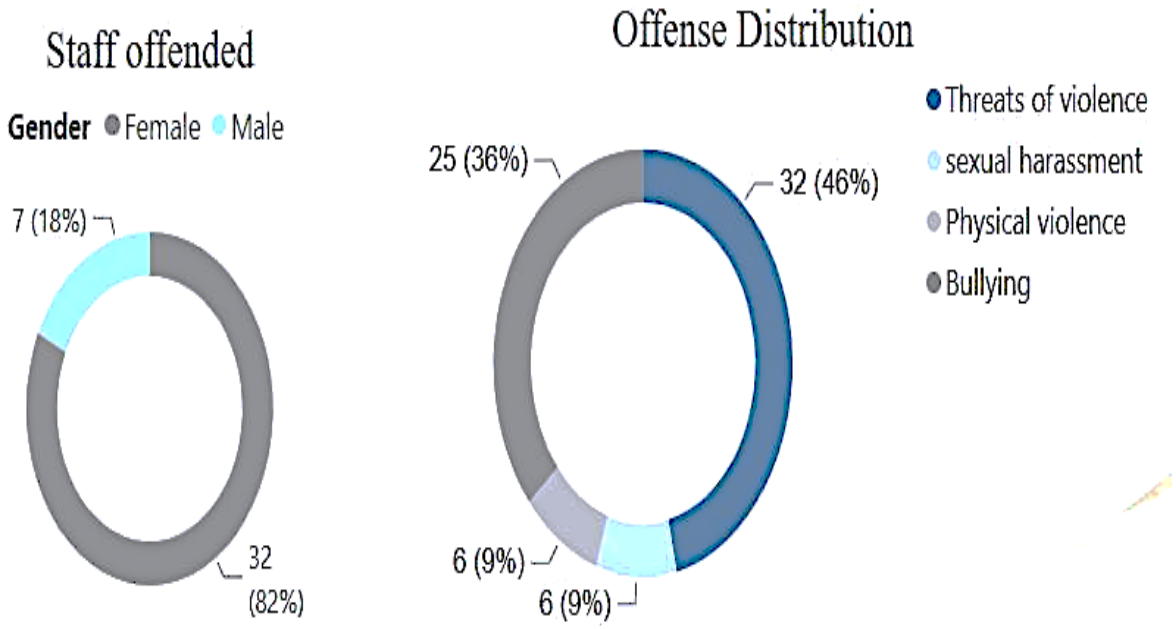


Figure 4.3 Staff offended according to gender and offence distribution.

- *Staff offended by age*

Figure 4.4 below, illustrates the respondents offended according to different age groups. The results show that, reports of behaviour offences were higher in the 30-39 age group 14(36.00%) compared to the other age groups. The least reported were in the 40-49 age group 6(15.00%).

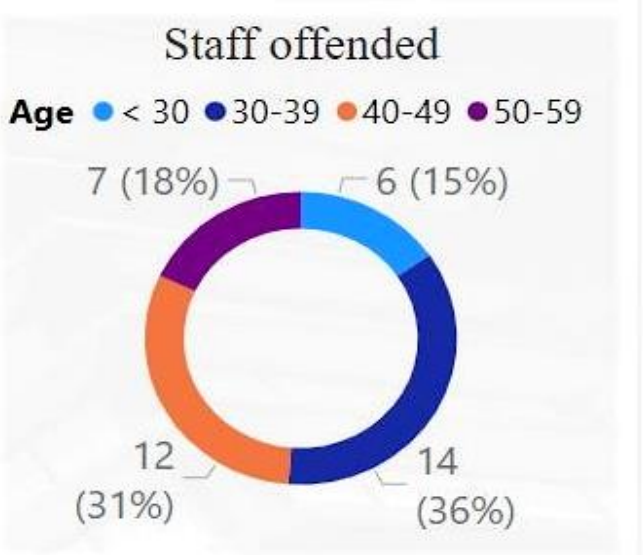


Figure 4.4 Staff offended by age.

4.2.2.1.2 Open-ended question findings

Sentiment analysis

Sentiment analysis was conducted to determine the sentiment tone expressed by the respondents. Secondly identify statements that could be classified as positive, neutral and negative and lastly develop themes from the respondent comments in order to determine the overall area of interest.

Figure 4.5 below shows the overall distribution of sentiment analysis of the general comment of the respondents. The majority of the comments received were negative (76%; n=21), while positive and neutral accounted for (n=3; 14%) and (n=2; 10%) respectively.

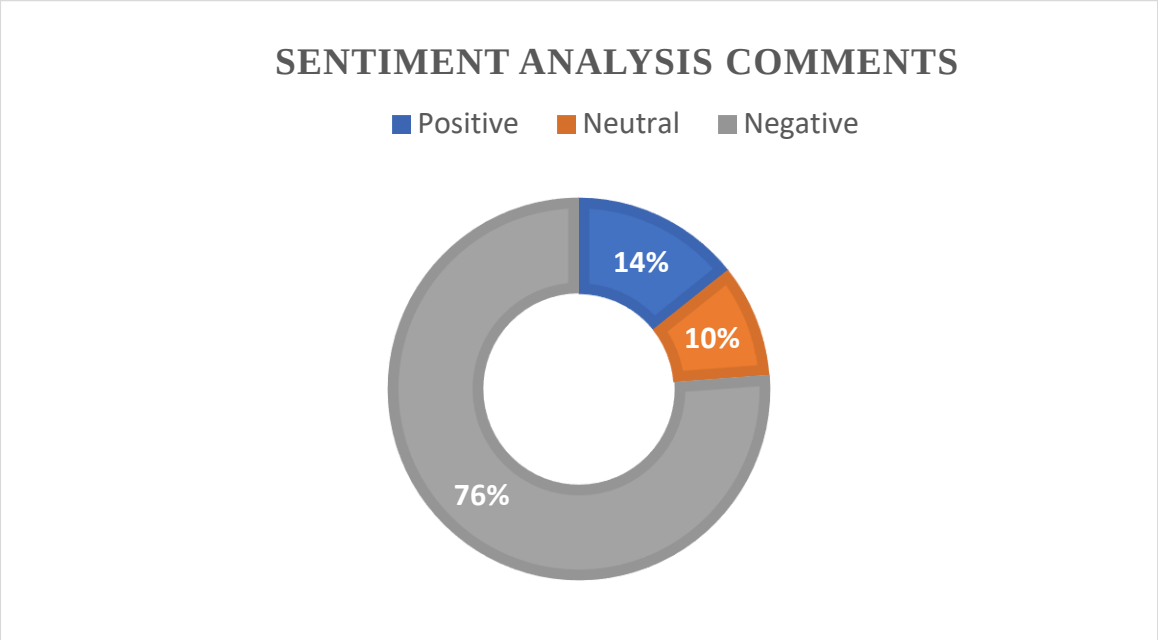


Figure 4.5 overall sentiment analysis comments.

Table 4.4 below shows three (3) comments (one positive, one neutral and one negative) extrapolated through stratified random sampling, stratifying by sentiment type (positive, neutral and negative) using the Azure ML scoring system for comments. As previously stated on the methodology the sentiment scores were computed using the Azure ML from Excel Microsoft, Office 365. The scores were an output of a machine learning algorithm that analysis sentences as a whole and produce a score ranging from zero to one, zero being classified as negative and one being classified as positive.

Table 4.4 scoring of comments.

Comments	**Sentiment score**
Being a nurse is the best, you get to help people. something I love doing	0.912932
How are we supposed to render services if we are forever out of stock on medication, However, nurses are super heroes of the health sector.	0.460815
The workload that we have is too much, we get home tired and never get to spend time with our families.	0.085734

Table 4.5 below shows that the overall sentiment score of the respondents (26%; n=21) was negative with an average sentimental score of 0.26. The analysis indicates that the overall feedback from participates feedback was highly negative since the cut-off point of negative is 0.39 neutral and positive scores are 0.40 – 0.59 and 0.60 to 1.00 respectively.

Table 4.5 Sentiment Scores

Survey participants	**Individual sentiment**	**Sentiment Score**
1-3 (n=3 =14.29%))	positive	0.6646
	positive	0.9129
	positive	0.6286
4-5 (n=2; 9.52%	neutral	0.5161
	neutral	0.4608
6-21 (n=16; 76.19%)	negative	0.2142
	negative	0.0390
	negative	0.0737
	negative	0.0664
	negative	0.3312
	negative	0.0114
	negative	0.1322
	negative	0.0128
	negative	0.0986
	negative	0.0857
	negative	0.3190
	negative	0.0384
	negative	0.3401

	negative	0.2921
	negative	0.2476
	negative	0.0232
(n=21 ; 100%)	**Average**	**0.2623**

This section focuses on the responses to the open-ended question general comments about the psychosocial work environment, which were first analysed through qualitative content analysis to determine the emerging themes then sentiment analysis conducted to determine the emotional tone of the responses and classified as positive, negative or neutral.

Twenty-one (26%) participants out of (n=80) opted to respond. Three (3) themes were derived from the responses and further classified as positive, negative or neutral as shown in Figure 4.6.

- Professional recognition and job satisfaction
- Workload and staffing issues
- Workplace environment and support

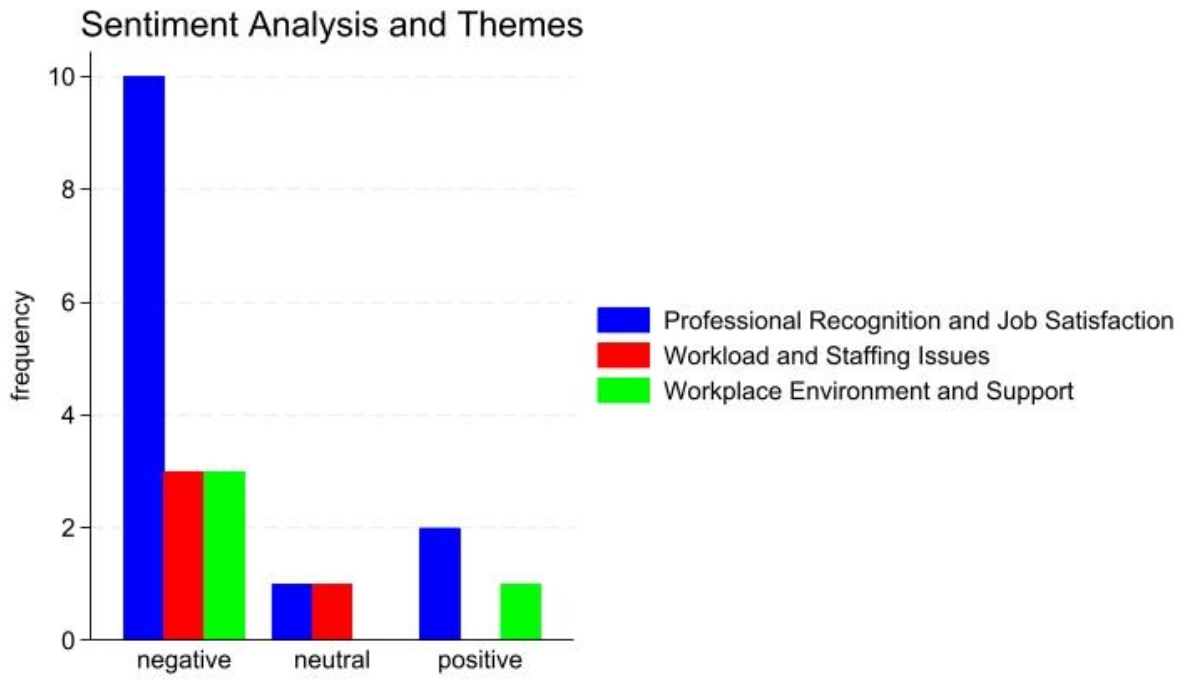


Figure 4.6 Analysis of the themes.

- **Professional recognition and job satisfaction**

This theme highlighted concerns related to lack of recognition, work/life balance, and low morale due to shortage of nurses. The comments on this theme were mostly negative compared to other themes.
Respondents expressed concerns of being undervalued and not being recognized.

One of the respondents wrote ‘’our profession is not taken seriously, we are underpaid and working conditions are the worst”

There was another comment that indicates issues related to the quantitate work demand and work pace. These could have an impact on job satisfaction ‘’We are expected to work beyond our means, see a lot of patients daily with shortage of staff, but we are underpaid at the same time, we are tired and overwhelmed”.

PHC nurses also presented comments suggestive of work/family conflict ‘*’Our workplace is totally not healthy, it affects our production and personal life, we find it hard to focus more on our family responsibilities. Our children also need attention from us”.*

- **Workload and staffing issues**

Comments addressed lack of resources, poor infrastructure, and the impact on the well-being of PHC nurses were also mentioned.

The comments were reported to be negative. The respondents expressed and complained about high job demands in their workplace and lack of resources.
‘*’The workload that we have is too much, we get home tired and never get to spend time with our families”*
”*Nursing is no longer regarded as a profession in this country. Not even national is concerned about nurses, I am just expected to deliver services without any materials, or equipment, in a very unsafe and stressful environment, with a very high demand from patients, a lot of shortage of staff and I must just work”.*
‘’Lack of resources and poor infrastructure …needs attention please”.

''Our job is very stressful, we really need the support from the top management, they need to hire people. We suffer from stress and burnout because of the working conditions".

''Always overwhelmed and work under pressure, due to the shortage of staff, lack of equipment, no medication. Patients are also a problem, they are disrespectful towards clinicians and are always impossible".

- ***Workplace environment and support***

The third theme identified encompass comments that expressed lack of recognition and support, psychosocial effect, and concerns about safety, stress, and high patient demands.

The respondents expressed the need for support from top management.

''*Management must do their job, they must come and monitor the people that they have employed, so that they know whether we are performing well or not".*

Furthermore, respondents have expressed psychological effects based on their work environment.

''It's so sad that the patients are always protected and have weights to complains about nurses, but there is no one protecting the nurses on cases when the patients are verbally and physically abusive".

''Our job is very stressful, we really need the support from the top management, they need to hire people. We suffer from stress and burnout because of the working conditions"

''The nursing I'm experiencing, is not the nursing that I ordered. I'm always tired, drained and I hope to move to private sector soon because ''wow".

The above presented results show some of the statements extrapolated to identify emerging themes.

4.2.3. Section Three: Association Between the Socio-Demographic Data and Domains of The COPSOQ 11

The second objective of the study which was to determine the association between the socio-demographic data and domains that score as negatively and positively indicative of the perceived psychosocial work environment, are presented in this

section. Bivariable analysis was employed to investigate the association between socio-demographic data (years of experience and participants age) and perceived psychosocial work environment (Domain 1 to 6; 19 Dimensions). Variables with a probability value ≤0.1 were deemed statistically significant and denoted with the sign *. In cases where there were no accompanying test statistics, probability values were obtained using a Fisher's exact test.

4.2.3.1 Association between age and COPSOQ II responses

Table 4.6 below, shows results of bivariate analyses that was conducted using a Pearson Chi-square test (χ^2 test) as the test for association and a Fisher's Exact was conducted wherein more than 20% of the cells had an expected frequency of <5 to assess the association of age on COPSOQII responses. Table 4.4 below, shows results of bivariate analyses that was conducted using a Pearson Chi-square test (χ^2 test) as the test for association and a Fisher's Exact was conducted wherein more than 20% of the cells had an expected frequency of <5 to assess the association of age on COPSOQII responses. Pace ($\chi2$= 5.78, p = 0.056), Work or family conflicts ($\chi2$= N/A, p = 0.030) . These findings shed light on the relationship between participants' age and the psychosocial dynamics work pace and work or family conflicts.

Table 4.6 Association between age and COPSOQ II responses

Domains	**Dimensions**		**Younger than 40**	**40 years and older**	**Statistic**	**p-value**
			N=38	N=42		
Demands at work	Quantitative work demands	Green	15 (39.47%)	11 (26.19%)	Chi2(2)= 2.88	0.24
		Yellow	9 (23.68%)	17 (40.48%)		
		Red	14 (36.84%)	14 (33.33%)		
	Work pace	Green	3 (7.89%)	12 (28.57%)	Chi2(2)= 5.78	0.056 *
		Yellow	6 (15.79%)	4 (9.52%)		
		Red	29 (76.32%)	26 (61.90%)		
	Emotional work demands	Green	12 (31.58%)	11 (26.19%)	N/A	0.79
		Yellow	3 (7.89%)	5 (11.90%)		
		Red	23 (60.53%)	26 (61.90%)		
Work organisation and job content	Influence on work	Green	25 (65.79%)	27 (64.29%)	Chi2(2)= 2.24	0.33
		Yellow	8 (21.05%)	5 (11.90%)		
		Red	5 (13.16%)	10 (23.81%		
	New skills development	Green	34 (89.47%)	34 (80.95%)	N/A	0.64
		Yellow	2 (5.26%)	3 (7.14%)		
		Red	2 (5.26%)	5 (11.90%)		
		Green	37 (97.37%)	40 (95.24%)	N/A	1.00

	Meaningful work	Yellow	N/A	N/A		
		Red	1 (2.63%)	2 (4.76%)		
	Commitment to the workplace	Green	27 (71.05%)	25 (59.52%)	Chi2(2)= 1.23	0.54
		Yellow	7 (18.42%)	10 (23.81%)		
		Red	4 (10.53%)	7 (16.67%)		
Interpersonal relationships and Leadership (work environment)	Predictability	Green	20 (52.63%)	22 (52.38%)	Chi2(2)= 0.85	0.65
		Yellow	8 (21.05%)	6 (14.29%)		
		Red	10 (26.32%)	14 (33.33%)		
	Appreciation & Recognition	Green	19 (50.00%)	19 (45.24%)	Chi2(2)= 3.27	0.19
		Yellow	10 (26.32%)	6 (14.29%)		
		Red	9 (23.68%)	17 (40.48%)		
	Role Clarity	Green	25 (65.79%)	33 (78.57%)	N/A	0.29
		Yellow	10 (26.32%)	5 (11.90%)		
		Red	3 (7.89%)	4 (9.52%)		
	Leadership quality	Green	19 (50.00%)	17 (40.48%)	Chi2(2)= 3.63	0.16
		Yellow	11 (28.95%)	8 (19.05%)		
		Red	8 (21.05%)	17 (40.48%)		
	Social support from superiors	Green	18 (47.37%)	12 (28.57%)	Chi2(2)= 4.29	0.12
		Yellow	12 (31.58%)	13 (30.95%)		
		Red	8 (21.05%)	17 (40.48%)		
Work/ individual interface	Job satisfaction	Green	20 (52.63%)	24 (57.14%)	Chi2(1)= 0.16	0.69
		Yellow	N/A	N/A		
		Red	18 (47.37%)	18 (42.86%)		
	Work or family conflict	Green	8 (21.05%)	9 (21.43%)	N/A	0.030 *
		Yellow	8 (21.05%)	1 (2.38%)		
		Red	22 (57.89%)	32 (76.19%)		
Values at the workplace level	Management worker trust	Green	28 (73.68%)	29 (69.05%)	Chi2(2)= 0.24	0.89
		Yellow	5 (13.16%)	7 (16.67%)		
		Red	5 (13.16%)	6 (14.29%)		
	Justice respect	Green	14 (36.84%)	19 (45.24%)	Chi2(2)= 0.60	0.74
		Yellow	12 (31.58%)	11 (26.19%)		
		Red	12 (31.58%)	12 (28.57%)		
Health & Wellbeing	Self-rated health	Green	15 (39.47%)	16 (38.10%)	Chi2(2)= 0.02	0.99
		Yellow	15 (39.47%)	17 (40.48%)		
		Red	8 (21.05%)	9 (21.43%)		
	Burnout	Green	2 (5.26%)	1 (2.38%)	N/A	0.60
		Yellow	1 (2.63%)	3 (7.14%)		
		Red	35 (92.11%)	38 (90.48%)		
	Stress	Green	1 (2.63%)	2 (4.76%)	N/A	0.14
		Yellow	2 (5.26%)	8 (19.05%)		
		Red	35 (92.11%)	32 (76.19%)		

4.2.3.2 Association of years of experience and COPSOQ II responses

Table 4.7 below, shows a bivariable analyses that was conducted to assess the association of years of experience on the Copenhagen responses. The subsequent

dimensions exhibited a significant association with participants' years of experience : Social support from superiors (χ2= 4.89, p-value = 0.087), Stress (χ2= N/A, p-value = 0.0.89). These findings highlight the connection of socio-demographic trait (years of experience) and the psychosocial work dynamics role clarity and stress.

Table 4.7 Association of years of experience and COPSOQ II responses

Domains	Dimensions		10 years and younger	10 years and older	Statistic	p-value
			N=32	N=48		
Demands at work	Quantitative work demands	Green	13 (40.62%)	13 (27.08%)	Chi2(2)= 1.61	0.45
		Yellow	9 (28.12%)	17 (35.42%)		
		Red	10 (31.25%)	18 (37.50%)		
	Work pace	Green	6 (18.75%)	9 (18.75%)	Chi2(2)= 0.49	0.78
		Yellow	3 (9.38%)	7 (14.58%)		
		Red	23 (71.88%)	32 (66.67%)		
	Emotional work demands	Green	10 (31.25%)	13 (27.08%)	N/A	0.70
		Yellow	2 (6.25%)	6 (12.50%)		
		Red	20 (62.50%)	29 (60.42%)		
Work organisation and job content	Influence on work	Green	21 (65.62%)	31 (64.58%)	Chi2(2)= 2.15	0.34
		Yellow	7 (21.88%)	6 (12.50%)		
		Red	4 (12.50%)	11 (22.92%)		
	New skills development	Green	28 (87.50%)	40 (83.33%)	N/A	0.89
		Yellow	2 (6.25%)	3 (6.25%)		
		Red	2 (6.25%)	5 (10.42%)		
	Meaningful work	Green	31 (96.88%)	46 (95.83%)	N/A	1.00
		Yellow	N/A	N/A		
		Red	1 (3.12%)	2 (4.17%)		
	Commitment to the workplace	Green	21 (65.62%)	31 (64.58%)	Chi2(2)= 0.30	0.86
		Yellow	6 (18.75%)	11 (22.92%)		
		Red	5 (15.62%)	6 (12.50%)		
Interpersonal relationships and Leadership (work environment)	Predictability	Green	17 (53.12%)	25 (52.08%)	Chi2(2)= 0.14	0.93
		Yellow	5 (15.62%)	9 (18.75%)		
		Red	10 (31.25%)	14 (29.17%)		
	Appreciation & Recognition	Green	16 (50.00%)	22 (45.83%)	Chi2(2)= 1.66	0.44
		Yellow	8 (25.00%)	8 (16.67%)		
		Red	8 (25.00%)	18 (37.50%)		
	Role Clarity	Green	22 (68.75%)	36 (75.00%)	N/A	0.52
		Yellow	8 (25.00%)	7 (14.58%)		
		Red	2 (6.25%)	5 (10.42%)		
	Leadership quality	Green	17 (53.12%)	19 (39.58%)	Chi2(2)= 2.32	0.31
		Yellow	8 (25.00%)	11 (22.92%)		
		Red	17 (53.12%)	19 (39.58%)		
	Social support from superiors	Green	16 (50.00%)	14 (29.17%)	Chi2(2)= 4.89	0.087 *
		Yellow	10 (31.25%)	15 (31.25%)		
		Red	6 (18.75%)	19 (39.58%)		
	Job satisfaction	Green	18 (56.25%)	26 (54.17%)	Chi2(1)= 0.03	0.85

Work/ individual interface		Yellow	N/A	N/A		
		Red	14 (43.75%)	22 (45.83%)		
	Work or family conflict	Green	6 (18.75%)	11 (22.92%)	Chi2(2)= 3.02	0.22
		Yellow	6 (18.75%)	3 (6.25%)		
		Red	20 (62.50%)	34 (70.83%)		
Values at the workplace level	Management worker trust	Green	22 (68.75%)	35 (72.92%)	N/A	0.94
		Yellow	5 (15.62%)	7 (14.58%)		
		Red	5 (15.62%)	6 (12.50%)		
	Justice respect	Green	12 (37.50%)	21 (43.75%)	Chi2(2)= 0.83	0.66
		Yellow	11 (34.38%)	12 (25.00%)		
		Red	9 (28.12%)	15 (31.25%)		
Health & Wellbeing	Self-rated health	Green	13 (40.62%)	18 (37.50%)	Chi2(2)= 0.82	0.66
		Yellow	11 (34.38%)	21 (43.75%)		
		Red	8 (25.00%)	9 (18.75%)		
	Burnout	Green	1 (3.12%)	2 (4.17%)	N/A	0.84
		Yellow	1 (3.12%)	3 (6.25%)		
		Red	30 (93.75%)	43 (89.58%)		

4.3 DISCUSSION

4.3.1 Section One: Response Rate and Socio-Demographic Profile

4.3.1.1 Response rate

Based on the total population sample, of one hundred and twenty-two (122) questionnaires distributed, (n=80) PHC nurses completed the questionnaire, yielding a response rate of (65.5%). The observed response rate is surprisingly high compared to three other studies conducted in the South African context. In a study by Mashadza (2019) focusing on the relationship between person-environment fit and job stress, the response rate was 57%, Masuku's study (2019) among Johannesburg emergency nurses had a response rate of 56.5%. A study by Jansen van Rensburg of Dutch Reform Church ministers had a much lower response rate of 33.3%.

4.3.1.2 Socio-demographic profile

In this study, most of the respondents were females, and the highest response was from the age group 30-39.

Most respondents (60%) have extensive nursing experience of more than 10 years and it occurred across all eight clinics. Experience in nursing plays a vital role in clinical practice, and enhances optimal patient care (Alzghol, 2014). Newly qualified nurses are at risk of anxiety, depression and burnout due to minimal work

experience, hence managers and nurses who have extensive experience need to empower them (Mason, O'Keeff & O'Hara, 2012). Masuku (2019) had a high response from the age group 30-39, and the study in Slovenia by Starc (2018) had a high response rate of participants between 31 and 40, suggesting that they are flexible and active age group in the nursing workforce.

4.3.2 Section two: Description of the Psychosocial Work Environment of PHC Nurses

4.3.2.1 High risk dimensions that need immediate attention: Red code colour

The high-risk areas, depicted in red, are of significant concern. The results showed that six (6) out of the 19 dimensions domains were coded red which is indicative of areas perceived to be needing immediate attention. Of the six dimensions needing immediate attention, interestingly is that all three dimensions of the domain Demands at work, were perceived as high risk needing immediate attention. The three dimensions are namely: Quantitative work demands, Work pace and Emotional work demands.

Two dimensions needing immediate attention: Burnout and Stress are from the Health and wellbeing domain. The last dimension needing immediate attention and Work/ family conflict is from the Work/Individual interface domain.

4.3.2.1.1 Demands at work domain

Work demands are conditions that require effort, in relation to physiological and psychological cost (Riedal & Thomas, 2019). Diehl et al. (2021) define quantitative demands as the amount of work and the time pressure that employees face in their jobs. On the other hand, emotional demand is the amount of emotional energy needed to cope with stressful or disturbing situations or dealing with people's feelings (Bur et al., 2019). Bur et al (2019) described Work pace as a rate at which duties have to be performed. Workload, high paces, and emotional demands are factors in a work that needs immediate attention since they can predispose the workers to stress, and burnout in the workplace (Roelen, Van-Hoffen & Waage, 2018).

Findings from a study among health care workers in a study conducted in Germany amongst nurses reported quantitative demand as a higher risk than emotional

demand (Wagner et al., 2019). Similarly, in a study conducted in Ghana in (2016) Quantitative work demand was reported as needing immediate care. The nurse-patient ratio was 1:542, with nurses working under strenuous and intense time pressure and poor working conditions (Kokoroko & Sanda, 2019).

In our study all three dimensions of the Demands at work domain, Emotional work demands dimension had a higher score (61.25%) compared to the Quantitative work demands domain score of (35%). Noted is that Work pace also had the same score as Quantitative demands which is (35%). Noted is the correlation between Work pace and Quantitative work demand. In the setting where the study was conducted the patient ration for PHC nurses is 1:30. The results show that although all three dimensions of the Demands at work were coded as needing immediate attention, however, PHC nurses rated emotional demands as higher risk than quantitative demands and work pace. The results in our study correlates with a similar study conducted in South Africa. In Masuku (2019) the risks of Emotional work demand were reported as higher than the other dimensions. In the Demands at work domain.

Dimensions needing immediate attention are of significant concern. The prevalence of Burnout, Stress, Emotional work demands, Quantitative demands, as well as the Work pace, suggests that respondents are operating under conditions that may adversely affect their mental health and overall well-being. These findings resonate with the research conducted by Zarei et al. (2019), which provides empirical evidence of the adverse effects of such working conditions on nurses' mental health and overall well-being. Zarei et al. (2019) study underscores the significant correlation between high stress levels, increased emotional demands, and the fast-paced nature of nursing work with the prevalence of burnout among nurses.

Zaghini et al (2019) suggest that high quality social support may decrease the negative effects of job demands on burnout since recognition, appreciation, and social support from managers may put job demands in a different perspective.

4.3.2.1.2 Health and wellbeing domain

Burnout and stress are two dimensions of Health and wellbeing that were scored as needing immediate attentions. Both dimensions Burnout (91.25%) and Stress

(83.75%) had the highest scores compared to the other dimensions in the same Red category. Burnout remains as a very challenging factor in the health care system (Zarei et al., 2019). Burnout has been studied globally due to an increased number of stress inducing factors in the workplace (Reyes et al., 2018). Burnout has been defined by Maslach as a psychosocial syndrome of emotional exhaustion, depersonalisation, and reduced personal accomplishments (Ayaslier et al., 2022).

It is evident in our study that burnout was the most reported high-risk factor for PHC nurses in the study setting. Studies done among nurses from China, Pakistan and South Africa reported personal stressors as one of the contributing factors to high levels of burnout, they find it difficult to balance work and family responsibilities (Khamisa et al., 2017). A study done in Spain by Reyes et al. (2018) shows that the most affected dimension of burnout is low personal accomplishment followed by emotional exhaustion. Masuku (2019) classified burnout as the highest risk needing attention for emergency nurses in South Africa. A study of PHC nurses in Iran by Camos et al. (2019) showed that the incidence of burnout was very high (52, 9%), and emotional exhaustion was the leading cause of burnout. Emotional exhaustion becomes greater with age, position at work due to stress, and job dissatisfaction (Campos et al., 2019). There is a relationship between emotional exhaustion, depression, individual personality characteristics and anxiety (Campos et al., 2019).

Stress affects the emotional, psychosocial and physical balance, and personality. Due to PHC nurses' line of work, they are exposed to a wide range of relationships with patients and their families, which may lead to different stressful situations (Starc, 2018).Deng et al. (2019) defines work-related stress as a response to extrinsic stimuli in a workspace, and divides it into two categories: challenge stress (an individual feels that they can overcome the stress, and has greater job development such as work responsibilities and work load) and hindrance stress (an individual feels that they cannot overcome the stress, and so it prevents job development such as job organisation and role clarity). In our study PHC nurses have reported stress as a high-risk factor in the workplace. The study done by Khamisa, Oldenburg & Ilic (2015) done in South Africa among nurses supports that the South African health system is overburdened where nurses are unable to meet the demands of their work,

and this can be a stress trigger in the workplace. that the A study conducted among nurses in the primary and secondary health care sectors in Slovenia confirmed that there is a high risk of work-related stress when nurses experience shortages of staff and offensive behaviour (Starc, 2018).

4.3.2.1.3 Work Individual Interface domain

Work-family conflict is the only Work individual interface dimension that was rated as needing immediate attention. Galleta et al. (2019) stated that there are two types of conflict between work and family. Work-family conflict is when job pressure has an effect on the responsibilities of family life, and family-work conflict is when family life influences work. Bur et al. (2019) further stated that work and personal commitments can exacerbate an employee's stress levels, particularly in situations where there's a deficiency in domestic or social support, as observed in single-parent households. It is evident that, according to gender roles, females are more family orientated and responsible for home maintenance (Zang, Rasheed & Lagnan, 2019). Nursing tends to be a female-dominated profession, and female nurses are more prone to high levels of work-family and family-work conflicts (Zhang, Rasheed & Laqnan, 2019). A study among nurses in four Italian hospitals had a higher response rate from females, at 58% (Galleta et al., 2019). Similarly in this study, there were 70 (87.5%) female participants and 10 (12.5%) male participants.

4.3.2.2 Medium risk dimensions needing some attention: Yellow code colour

4.3.2.2.1 Health and well-being.

Self-rated health 32 (40.00%) is the only dimension of Health and well-being that was rated medium risk and require attention. The other two dimension of the Health and well-being domain were rated as high risk; Burnout (91.25%) followed by stress (83.75%) and these two were the highest in all the 12 dimensions rated as needing immediate attention.

Medium risk areas, underscore the mixed experiences among nurses regarding factors such as self-rated health. These findings suggest that respondents are not coping well with their health in the workplace, especially that in our study, the other two dimensions in the health and wellbeing domain were coded red, needing

immediate attention. This may lead to various health issues such as cardiac problems, high blood pressure, diabetes mellitus, and musculoskeletal disorders (Wood, 2015). Poor health outcomes can result in negative consequences such as stress, absenteeism, a high rate of staff turnover, and the onset of mental conditions like burnout (Johnston et al., 2016).

Ejlertsson et al. (2018) found that the well-being of health care providers is the most discussed factor nationwide in Sweden. In addition, in their study of Swedish primary health care providers found rising levels of work-related stress, and high levels of job demands, as well as mental, psychological, and physical health problems among nurses (Ejlertsson et al., 2018). Physical hazards, such as musculoskeletal disorders (MSDs), are common occupational health problems among nurses due to awkward posture. MSDs may result in work limitations, higher absenteeism, and job dissatisfaction (Soylar & Ozer, 2018). Furthermore, nurses are exposed to chemical hazards such as cleaning agents through inhalation, which may lead to possible respiratory airway problems or hypersensitivity (Mohanty, Kubi & Mohanty, 2019). In our study fewer respondents, (40%) rated low Self rated health compared to Masuku's (2019) study wherein the hospital emergency nurses rated their health as poor at (57%). However, this does not mean that this does not warrant immediate attention since the other dimensions in the Health and wellbeing domain were coded rate meaning this needs urgent attention.

4.3.2.3 Low risk dimensions considered as acceptable or good : GREEN coded colour

The low-risk areas, indicated by green are considered acceptable and no additional controls are needed except to maintain and sustain the existing controls. In our study, certain aspects of the PHC nurses environment was perceived as being positive. Noted is that in this study domains were categorized into two parts. Domains 1-6 and the second category is domain 7. In the first 1-6 domains section, the results showed that in 3(50%) of the domains, all the dimensions were rated as low risk. In the fourth domain Work/individual interface, the Job satisfaction dimension was rated as a low risk.

Meaningful work was rated as low risk by the majority (96.25%) of the respondents in our study. Similarly, in Masuku (2019) in a study conducted in South Africa

amongst emergency nurses Johannesburg Hospitals viewed their profession as meaningful and valuable. Ghislier et al. (2017) define Meaningful work as a job that gives workers a platform to express their potential and to achieve their goals in the workplace.

The second to fourth dimensions rated by most respondents as low risk is New skill development (85%); Role clarity (72.50%) and Management worker trust (71.25%). Bur et al. (2019) regards these dimensions as crucial for job satisfaction and could potentially contribute to professional growth and fulfilment among nurses, In line with Bur et al (2019) supposition, Job satisfaction in our study was rated as low risk by more than half (55.00%) of the respondents. Ahmed et al. (2019) supports the assertion that these dimensions have a greater influence on job satisfaction, increased job motivation, and determination. Management/worker trust is another dimension that contributes to job satisfaction since it refers to the belief or confidence that one party has in the reliability, integrity, and honesty of another party (Mayer, Davis & Schoorman, 2019). Dirks & Ferrin (2019) further elaborates that trust is essential for building and maintaining effective relationships, whether they are personal or professional, and it plays a crucial role in various aspects of life, including teamwork, and leadership. The results in our study show that most (71.25%) PHC nurses rated this dimension positively. The trust between nurses and management enhances their psychological well-being, potentially fostering a proactive attitude among nurses, leading them to go the extra mile for their patients, feel empowered, and foster stronger trust among their colleagues (Huang et al., 2021). Thus, it may positively influence the delivery of quality patient care.

Areas recognized as low-risk areas represent strengths within the psychosocial work environment that can be leveraged to address other areas that might be at higher risk. As highlighted by Bur et al. (2019), fostering and maintaining these positive aspects is vital for sustaining a healthy work environment, particularly in high-stress occupations such as nursing. Furthermore, these results can serve as a benchmark for other regions or healthcare institutions aiming to evaluate and improve their own psychosocial work environments.

Although our results show that the dimensions in the Interpersonal relationship and leadership were rated as low risk, it is important to note that some were rated low by less than half of the respondents. Appreciation and recognition (47.50%), Leadership quality (45.55%) and Social support from superiors (37.50%). The results imply that the results showed be analysed in totality and taking into consideration the percentage of respondents. For example with regards to the Appreciation and recognition domain, adding the medium risk (20.00%) responses to the Red code that requires urgent attention results in (52.50%) not rating as a low risk. This implies that the results should be interpreted with caution.

4.3.2.4 Offensive behaviour

Threats of violence, physical violence, sexual harassment, and bullying

Liu et al. (2019) defines workplace violence as cases of abuse, threats or assaults that take place in a working environment, affecting safety and well-being. It also includes offensive behaviours such as sexual harassment, and bullying. Workplace sexual harassment is described as unwanted sexual attention in a work environment (Adams et al., 2019). Zachariadou et al. (2017) describe bullying as aggressive behaviour in a workplace, which may be expressed by violence and harassment.

Offensive behaviours have a greater impact on the work organisation (such as high absenteeism rates, staff turnover, and lack of trust). Moreover, they affect the mental, psychological and physical well-being of nurses, and the quality of health care services (Liu et al., 2019).

A study in Saudi Arabia by Alsaleem et al. (2018) reported that threats of violence were common among health care providers at 58%. In addition, the research study conducted in China also reported high rate of threats of violence at 92%, and physical violence at 81% (Liu et al., 2019). In our study, threats of violence are a common offensive behaviour as the highest total offensive behaviour at 32 (46.38%), followed by bullying at 25 (36.23%), and lastly, physical violence at 6 (8.7%). It is evident that patients were the main perpetrators of offensive behaviours, which occurred mostly a few times and monthly. In relation to the study by Masuku (2019) Bullying was the most reported offence, with a total of 41 (56%) respondents out of 91 nurses, followed by threats of violence. Furthermore, acts of physical violence

and sexual harassment were the least reported. Both studies, offensive behaviours were perpetrated by patients which occurred mostly a few times and monthly.

Offensive behaviours have been increasing over the years, yet the incidences have been underreported (Jatic et al., 2019). PHC nurses face these offenses from both patients and colleagues (Adams et al., 2019). In this study, patients are predominately the perpetrators of these offensive behaviour.

4.3.2.5 Open ended question discussion

The overall sentiment score of the respondents (26%; n=21) was negative with an average sentimental score of 0.26. The analysis indicates that the overall feedback from participates feedback was highly negative. The sentiments were categorized according to themes namely; Professional recognition and job satisfaction, Workload staff issues and Workplace environment and support.

Professional recognition and job satisfaction

This theme highlighted concerns lack of recognition, work/life balance, low morale due to shortage of nurses. The comments on this theme were mostly negative compared to other themes.

Respondents expressed concerns of being undervalued and not being recognized.

‘’Our profession is not taken seriously, we are underpaid and working conditions are the worst”.

‘’We are expected to work beyond our means, see a lot of patients daily with shortage of staff, but we are underpaid at the same time, we are tired and overwhelmed.” Lack of appreciation and recognition in the workplace was one of the limitations of practice for PHC nurses in a study in Brazil (Ferreira, Perico & Dias, 2017). Weiss & Tapen, (2015) further stated that nurse empowerment contributes to appreciation and recognition, decision making, and self-determination, implying that reduction measures should be used to lower the risk to a tolerable level to avoid job dissatisfaction. In addition, Khonou & Maselesele (2016), identified a correlation between nurses' salaries and their overall well-being, highlighting a widespread desire among nurses for enhancements in both their working conditions and remuneration.

PHC nurses also experience work/family conflict ‘*’Our workplace is totally not healthy, it affects our production and personal life, we find it hard to focus more on our family responsibilities. Our children also need attention from us”.*

Workers who indicate substantial levels of work-family conflict are prone to encountering job dissatisfaction and significantly higher rates of burnout, with estimates reaching up to 12 times greater, as well as experiencing two to three times more instances of depression, in contrast to those maintaining a healthier work-life balance (WHO, 2017). Achieving work-life balance entails fostering a supportive and nurturing work environment where employees can effectively manage their professional duties alongside personal responsibilities. This equilibrium fosters enhanced employee loyalty, job satisfaction and productivity (Galleta et al., 2019).

Workload and staffing issues

Comments addressed lack of resources, poor infrastructure, and the impact on the well-being of PHC nurses are also mentioned. The comments were reported to be negative. The respondents expressed and complained about high job demands in their workplace and lack of resources.

The job demands of nurses in South Africa are inherently stressful, as they are expected to meet the needs of the patients, manage heavy workloads, and navigate professional and interpersonal conflicts. Failure to meet these demands may result in illnesses and psychological distress (Khamisa et al, 2017). Moreover, they expressed concerns about lack of resources such as shortage of nurses, equipment, and support.

The study by Venter et al. (2017) also supports that South Africa has a shortage of critical care resources and trained health care professionals, often leading to the imperative of inter-facility transfers to address the needs of patients requiring additional care. In addition, Halcomb, Smyth & McInnes (2018) stated that recruitment and shortage of nurses has become a problem worldwide.

Workplace environment and support

These comments expressed lack of recognition and support, psychosocial effect, and concerns about safety, stress, and high patient demands.
The respondents expressed the need for support from top management. Karlsson et al. (2019) suggest that Nursing leadership has the potential to strengthen the professional nurses' commitment to remaining in their roles by addressing their needs for recognition, fostering a supportive work environment, facilitating competence development, and promoting opportunities for professional growth and advancement.

Furthermore, respondents have expressed psychological effects based on their work environment. The study by Zuma (2021) highlighted the importance of counselling and debriefing for health care professionals with severe psychological effects. Due to a high rate of crime in South Africa, nurses have reported that social security and behavioural offences in the workplace are factors that lead to stress and anxiety, as they are restricted from working to their full potential and affects the level of job satisfaction (Khamisa, Oldenburg & Ilic, 2015).

4.3.3 SECTION THREE: INFERENTIAL RESULTS DISCUSSION

In this study, demographic characteristic age was associated with work pace and work or family conflicts. While the demographic characteristic years of experience were associated with social support from superiors and stress in the COPSOQ II responses. There are no studies investigating the specific association of demographic characteristics and the COPSOQ II responses.

Whilst viewing the COPSOQ II responses independently with the demographic traits selected, the findings were in line with previous studies showing that the is either a correlation or an association between the variables. Working experience was significantly associated with occupational stress with nearly half of the 265 participants aged 6-10 years of experience having severe stress (Ur-Rehman, 2018).

Job performance tends to decrease with advancing age, while younger individuals typically exhibit higher levels of job performance. However, an inverse relationship

was observed when age and job performance where older-aged respondents performed better than younger-aged respondents if the work was on-site further concluding that the two variables are associated (Hamouche & Parent-Lamarche 2023).

Furthermore, when comparing repetitive task sat work the job performance amongst the older group was significantly lower than the younger group (Gilles et al., 2022).

Viewing age as a mediating factor between work-family conflict and job satisfaction, there was a negative effect between work-family conflict and life satisfaction with the strength of association increasing directly with age among the participants (Yuan et al., 2022).

These findings suggest that demographic factors like age and years of experience may play a significant role in shaping various aspects of individuals' experiences within the workplace environment. Specifically, they imply that different age groups and levels of experience may perceive and navigate work pace, work/family conflicts, social support from superiors, and stress differently. Therefore, different tools and supports might be a way to make sure that people in workplace remain productive and healthy. This study investigated the presence of an association and did not further aim to identify the strength or the direction of the effect.

4.4 SUMMARY

In this chapter, the research findings were presented using descriptive figures and tables. Sociodemographic data (age, gender, years of experience, department) was analysed along with 19 dimensions from the COPSOQ II questionnaire including questions about offensive behaviour. Sentiment analysis was applied for the open-ended comment section. Lastly, inferential analysis was applied to determine association between socio-demographic data and COPSOQ II domains.

In the following chapter, the summary of the study, limitations, recommendations, and conclusion will be discussed.

CHAPTER FIVE

SUMMARY OF THE STUDY, MAIN FINDINGS, LIMITATIONS, RECOMMENDATION AND CONCLUSION

5.1 INTRODUCTION

The previous chapter dealt with the presentation of the results and the discussions supported by similarities and conclusions from the literature. In this final chapter, a summary of the study, the main findings and the description of the limitations is presented. Recommendations for clinical practice, nursing education and research are presented.

5.2 SUMMARY OF THE STUDY

5.2.1 Purpose of the study

The purpose of the study was to investigate how PHC nurses working in South Africa, specifically in a sub-district of the City of Ekurhuleni describe their psychosocial work environment.

5.2.2 Objectives

The objectives of the study were to:

- Describe the psychosocial work environment of primary health care nurses in a sub-district of the City of Ekurhuleni.
- Determine the association between the socio-demographic data and domains that score as negatively and positively indicative of the perceived psychosocial work environment.

5.2.3 Summary of the methodology

A quantitative descriptive, and cross-sectional design was implemented in this study. A total population sampling strategy was used. The sample size consisted of (N=122) PHC nurses practising in the eight selected PHC facilities in the northern sub-district of the City of Ekurhuleni

A self-administered Copenhagen questionnaire (COPSOQ II) was used for data collection. For the descriptive section, ddata management was done using STATA 18 (Standard Edition). Tables and figures were used to present the descriptive data of the study.

The general comments regarding the psychosocial work environment were first analysed using the quantitative content analysis method to identify emerging themes and then through sentiment analysis process using Microsoft Excel 2021, Office 365 add-on package Azure Machine Learning to identify to determine the themes emotional tone of the responses and were classified as positive, negative or neutral.

For the analytic component, Bivariable analysis was conducted using a Pearson Chi-square test (χ^2 test) and a Fisher's Exact test to identify the association between socio-demographic data and domains that score negatively and positively indicative of the perceived psychosocial work environment.

5.3 SUMMARY OF THE MAIN FINDINGS

5.3.1 Section one: Response rate and demographic data

In this study, of the one hundred and twenty-two (122) questionnaires distributed, (n=80) were completed and returned, yielding a response rate of (65.5%). Most participants (87, 5%) were females. The highest response was from the age group 30-39 (36%), followed by the age group 40-49 (29%). The analysis indicates that most respondents (60%) have more than ten years of professional nursing experience. The majority of the respondents (40%) were working in the chronic department and the lowest response was from the community outreach team (1.25%).

Work organisation and Job content domain is the only domain that achieved more than 75% of the low-risk score across all age groups and the work/individual interface, and health and well-being are the only domains with a high-risk score of 50% and above across all age groups.

5.3.2 Section Two: Description of the Psychosocial Work Environment of PHC Nurses

5.3.2.1 COPSOQ II: Domain 1-6

In this study, the dimensions that were at high risk (RED) and needed immediate attention were emotional and quantitative demands, work pace, burnout, stress, and work/family conflicts.

Dimension that was at medium risk (YELLOW), needing reduction measures to be put in place to lower the risk to a tolerable level, was self-rated health.

Dimensions that were classified as good (GREEN), with control measures in place that should be maintained and sustained, were predictability, role clarity, management/worker trust, commitment to the workplace, influence on work, meaningful work, commitment to work, appreciation & recognition, leadership quality, job satisfaction, justice and respect, social support from superior, and new skills development.

COPSOQ II: Domain 7

Out of 80 respondents, 39 (48, 8%) reported offensive behaviour in the work environment. The highest-reported offensive behaviour was threats of violence (46,4%), followed by bullying (25, 36,2%), and lastly physical violence (6 or 8,7%).

Open-ended questions comment section.

Twenty-one (26%) of the (n=80) respondents opted to participate in the open-ended section of the survey. Three themes emerged from the results namely: professional recognition and job satisfaction, workload and staffing issues and work environment and support. Professional recognition emerged as the mostly negative theme and no positive response were identified for workload and staffing issues. The thematic analysis results are consisted with COPSOQ II scale domains outcome. All the dimensions in the Workload demand domain that correlates with the Workload and Staffing theme were all coded red warranting immediate attention. The same can be said with Professional recognition and job satisfaction. Both were coded as low risk however, noted is the lower percentage (47.5%) and (55%) respectively which is slightly above half of the respondents. The results further showed that most of the

comments were negative (76%) and the average sentimental score was 0.26 indicating highly negative perception about the psychosocial environment.

5.3.3 Section Three: Association Between the Socio-Demographic Data and Domains of The COPSOQ II

The bivariable analysis results showed associations between specific variables. Age was notably linked to Demands at work (specifically work pace) and Work/Individual interface (particularly work or family conflicts). Meanwhile, years of experience showed associations with Interpersonal relationships and Leadership (specifically role clarity), as well as Health and well-being (notably stress levels) based on the COPSOQ II responses.

5.4 VALUE OF RESEARCH FINDINGS

The aim of occupational health nursing is to establish and maintain a conducive work environment, foster employee well-being, and mitigate the risk of injuries and illnesses within the workplace (Acutt and Hattingh, 2016). In Ekurhuleni, primary healthcare (PHC) nurses have characterized their work setting as one marked by high job demands, work-family conflicts, and diminished health status. A significant proportion reports experiencing elevated levels of stress and burnout, along with instances of patient-related threats of violence and bullying.

The implementation and facilitation of a Comprehensive Healthy Workplace program is imperative. Such a program will prioritize the creation of a positive work environment for nurses, uphold both the physical and psychological safety of workers through legislative frameworks like the Occupational Health and Safety Act 85 of 1993, and foster a harmonious balance between professional duties and personal life.

5.5 LIMITATIONS OF THE STUDY

The study was limited to eight selected PHC facilities in the northern sub-district of the City of Ekurhuleni, as they were the busiest compared to other facilities. Therefore, the findings should not be generalised to other PHC facilities in the City of Ekurhuleni.

The COPSOQ II questionnaire is perceived as a time-consuming tool, as it takes about 15 to 20 minutes to complete. Hence, a response rate of (65%) indicating reluctance to participate from mor than (30%) of the PHC nurse.

During the period of data collection, COVID-19 pandemic restrictions prevented the researcher from addressing the potential participants. The only feasible strategy at the time was to drop off questionnaires in an envelope and rely on unit managers to make the PHC nurses aware of the study. This could be the reason for a lower response rate in the study.

The results from the COPSOQ II survey cannot be generalized and should be interpreted with caution since it was noted that some of the domains coded as low risk had scores that indicated less than half of the respondents positively agreeing to that.

5.5 RECOMMENDATIONS

The recommendations below are based on the research results of the study.

5.6.1 Health service management

According to the Occupational Health and Safety Act, 85 of 1993 as amended, sections 8 and 16, it is the responsibility of the employer and management to protect the workers and maintain and sustain a healthy and safe work environment that is free from harm. Policies and guidelines for health and safety should be in place in all the facilities in COE, and control measures need to be maintained to minimise the risks of hazards in the workplace. Nkomazana et al. (2015) added that support from the superior or management should be prioritised in all levels of the health care system.

The recommendations are as follows:

- Initiate and implement a comprehensive healthy workplace program addressing the high-risk factors reported by PHC nurses such as high job demands, management of stress and burnout in the workplace and finding a balance

between work and family responsibilities, executed by management, a health and safety committee in each facility, occupational health nurse practitioners, and PHC nurses based on their needs and the risks identified in all the facilities.

- COE needs to develop policies to deal with offensive behaviour to protect nurses from threats of violence especially from patients, sexual harassment, and bullying in the workplace. Offer debriefing and counselling to those who were exposed to them.

5.6.2 Recommendation for Clinical Practice

According to the Occupational Health and Safety Act, 85 of 1993 as amended, section 14, it is the duty of the workers to take responsibility by reporting any hazards experienced in their work environment to their superiors and to follow all the health and safety rules, orders, and policies in place.

Rasheed, Younas & Sundas (2018) highlighted the value of self-awareness among nurses. Building self-awareness may aid nurses in recognising stressors in the workplace, improving interpersonal relationships with managers and other employees, and improving self-esteem. They become more compassionate and this enables higher quality nursing care (Rasheed, Younas & Sundas, 2018).

The recommendations are as follows:

- Health and well-being were one of the domains that needed immediate attention for PHC nurses (burnout, stress and self-rated). Effective Employee Assistant Programs should be in place to improve their mental health and sense of well-being through stress management and physical activities. Encourage nurses to make use of counsellors and psychologists employed in the facilities for easy accessibility.
- Occupational health nurses in the City of Ekurhuleni need to be more visible and active in the health care facilities. They need to identify the psychosocial hazards and the risks through health and medical surveillance, offer psychosocial support to those who are affected, and be advocates for PHC nurses at the management level.

5.6.3 Recommendations for nursing education

- Lack of resources (shortage of nurses) was one of factors reported to be a problem in COE facilities. The South African Nursing Council should motivate for more nursing training institutions to the Department of Health to decrease the burden on the health care system in South Africa.
- Nursing education should consider more uptake of undergraduate nursing students and retain them to alleviate the shortage of staff in the health care facilities.
- Meaningful work and new skill development was rated to be low risk for PHC nurses in COE, it is therefore significant that such measures should be sustained. Effective Continuing Professional Development (CPD) should be included in the curriculum of undergraduate nursing students and apply to qualified nurses in all the facilities, to highlight the importance of translating knowledge into practice, continuity of nursing research and leadership, and continuity in learning for newly qualified nurses, to increase staff morale, productivity and commitment in the workplace which leads to good quality nursing care.

5.6.4 Recommendations for further research

The study was based on PHC nurses in the northern sub-district of the City of Ekurhuleni. Therefore, it is recommended that similar studies should be done in other districts for additional evidence**.**

5.7 CONCLUSION

Literature has proven that nurses are exposed to different dynamics in the workplace, including physical or psychological hazards. PHC nurses described their psychosocial work environment to be a workplace with high job demands, and there was conflict between work and family responsibilities. In addition, they reported to have high stress levels and burnout, which needed immediate attention. Self-rated health is the only dimension reported to be at medium risk, which also needs some attention. PHC nurses rated domains such as work organization and job content, interpersonal

relationships and leadership, and workplace values as posing low risk. Furthermore, threats of violence and bullying from patients were the most reported offences in their workplace. Notably, sentiment analysis revealed PHC nurses highly negative perception about the psychosocial environment. Lack professional recognition and high job demands were the contributing factors to high stress levels in the workplace.

Moreover, these findings suggest that demographic factors like age and years of experience may play a significant role in shaping various aspects of individuals' experiences within the workplace environment. Different age groups and levels of experience may perceive and navigate work pace, work/family conflicts, social support from superiors, and stress differently.

Visibility and involvement of occupational health nurses and leadership in the City of Ekurhuleni may have a huge impact in the workplace. PHC nurses should be involved in the decisions concerning their health and safety at work. The research findings should raise awareness about the psychosocial hazards that nurses are exposed to in the workplace. Nurses perform a critical role every day under stressful conditions. They deserve to have a positive working environment like everyone else. It is hoped that these findings benefit the employers and nurses in the city of Ekurhuleni and other municipalities in creating a pleasant, healthy, and safe working environment.

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APPENDICES

Appendix 1:

INFORMATION LEAFLET FOR THE STUDY

STUDY TITLE: **The psychosocial work environment of primary health care nurses in the Northern sub-district City of Ekurhuleni.**

Good day colleagues

I am Theodora Motsumi, a Master's student in Occupational Health Nursing at the University of the Witwatersrand in Johannesburg. Conducting a research study is part of my requirement for my academics in order to obtain my Masters.

The aim of this study is to investigate the psychosocial work environment of nurses in the clinic setting, in order to identify the psychosocial hazards and risks.

To take part in the proposed study, you need to fill in a data collection instrument in a form of a questionnaire. Questionnaires will be distributed in all the facilities, all completed and uncompleted questionnaire will be asked to be put in a sealed box. The questionnaire will take 30 minutes of your time to be completed. The completion of the questionnaire will be seen as informed consent.

The study is totally voluntary, anonymity and confidentiality of information provided is ensured, as there are no personal information to be written on the questionnaire. The participant may withdraw at any time and has a right to refuse to take part without any penalty or explanation, and may submit a completed/not completed or blank questionnaire in a sealed box provided.

While completing the questionnaire, some questions may induce feelings of distress or participants may experience an emotional discomfort. If you experience any emotional discomfort or distress, a registered counsellor will be available for counselling. The registered counsellor is Dr Nokuthula Mafutha may be contacted on Cell: 0846307544, email: nokuthula.mafutha@wits.ac.za .

For any queries, you may contact my Supervisor, Dr Amme Tshabalala. If you need any clarity regarding the research you may contact me on the details below. The study result will be available to you once completed.

Thank you for the participation.

Yours sincerely

Theodora Motsumi

The Researcher: Theodora Motsumi, 1470802@students.wits.ac.za

The Supervisor: Dr Amme Mardulate Tshabalala, Amme.Tshabalala@wits.ac.za.

If you have concerns about your rights as a study participants or have any concerns over the way the study is being conducted, you may contact the HREC (medical): Prof C Penny: Tel 011 717 2301, email clement.penny@wits.ac.za

Appendix 2:

PERMISSION LETTER TO THE HEAD OF DEPARTMENT OF CITY OF EKURHULENI

STUDY TITLE: **The psychosocial work environment of primary health nurses in the Northern sub-district City of Ekurhuleni.**

597 Maokeng ext1

Tembisa

1632

The Head of Department

City of Ekurhuleni

Department of Health and social development

Catlin St, Germiston

PERMISSION TO CONDUCT A STUDY IN THE CITY OF EKURHULENI

My name is Theodora Motsumi and I am an Occupational Health nurse master's degree student at the University of the Witwatersrand. A research study will be needed to complete my master's degree.

I am interested in doing a study in the psychosocial work environment of primary health care nurses of the City of Ekurhuleni, in which is my topic for the study.

I hereby ask for your permission to do the study among primary health care nurses in the City of Ekurhuleni. Data will be collected by means of a questionnaire.

The research proposal is attached for your perusal and information. The final research report which will be submitted for examination in the university.

Thank you for your time and consideration in this regard.

Yours faithfully

Theodora Motsumi

Appendix 3

Appendix 3

COPENHAGEN PSYCHOSOCIAL QUESTIONNAIRE (COPSOQ II)

STUDY TITLE: **The psychosocial work environment of primary health care nurses in the Northern sub-district City of Ekurhuleni.**

SECTION 1

SOCIO DEMOGRAPHIC DATA: tick one appropriate box under each heading.

AGE: **U**nder 30 ☐ 30-39 ☐ 40-49 ☐ 50-59 ☐ Above 60 ☐

GENDER: Female ☐ Male ☐

YEARS OF EXPERIENCE: less than 1 year ☐ 1-5 years ☐ 5-10 ☐ Above 10 years ☐

DEPARTMENT I WORK IN: tick one appropriate box under each heading.

MOTHER AND CHILD: ☐ OTHER: ☐

ACUTE CASES: ☐

CHRONIC CONDITIONS: ☐

MATERNITY WARDS: ☐

MOBILE CLINIC: ☐

COMMUNITY OUTREACH: ☐

SECTION 2

PSYCHOSOCIAL FACTORS AT WORK

(Information from the domains of the COPSOQ II short version in English, 2007)

The following questions are about your psychosocial work environment. Please choose the answer that fits to each of the questions.

Always	Often	Sometimes	Seldom	Never/hardly

1A. Do you get behind with your work? ☐ 4 ☐ 3 ☐ 2 ☐ 1 ☐ 0

1B. Do you have enough time for your work tasks? ☐ 4 ☐ 3 ☐ 2 ☐ 1 ☐ 0

1A. and 1B. Total number of points _____ **(between 0 and 8)**

Always	Often	Sometimes	seldom	Never/hardly ever

2A.Is it necessary to keep working at a high pace? ☐ 4 ☐ 3 ☐ 2 ☐ 1 ☐ 0

2B. Do you work at a high pace throughout the day? ☐ 4 ☐ 3 ☐ 2 ☐ 1 ☐ 0

2A and 2B Total number of points (between 0 and 8)

Always	Often	Sometimes	Seldom	Never/hardly ever

3A.Does your work put you in emotionally disturbing situations?

☐ 4 ☐ 3 ☐ 2 ☐ 1 ☐ 0

3B. Do you have to relate to other people's personal problem as part of your work?

☐ 4 ☐ 3 ☐ 2 ☐ 1 ☐ 0

3A. and 3B. Total number of points

_____ (between 0 and 8)

Always	Often	Sometimes	Seldom	Never/hardly

4A. Do you have a large degree of influence concerning your work?

☐ 4 ☐ 3 ☐ 2 ☐ 1 ☐ 0

4B. Can you influence the amount of work assigned to you?

☐ 4 ☐ 3 ☐ 2 ☐ 1 ☐ 0

4A. and 4B. Total number of points

_____ (between 0 and 8)

Very large extent	Large extent	Somewhat	small extent	Very small extent

5A. Do you have the possibility of learning

☐ ☐ ☐ ☐ ☐

new things through your work?

	4	3	2	1	0
5B. Does your work require you to take the initiative?	☐	☐	☐	☐	☐

5A. and 5B. Total number of points _____ (between 0 and 8)

	Very large Extent	Large extent	Somewhat	small extent	Very small extent
6A.Is your work meaningful?	☐ 4	☐ 3	☐ 2	☐ 1	☐ 0
6B. Do you feel that the work you do is important?	☐ 4	☐ 3	☐ 2	☐ 1	☐ 0

6A and 6B. Total number of points _____ (between 0 and 8)

	Very large Extent	Large extent	Somewhat	small extent	very small extent
7A. Do you feel that your place of work is of great importance?	☐ 4	☐ 3	☐ 2	☐ 1	☐ 0
7B. Would you recommend a good friend to apply for a position at your workplace?	☐ 4	☐ 3	☐ 2	☐ 1	☐ 0

7A. and 7B. Total number of points _____ (between 0 and 8)

	Very large Extent	Large extent	Somewhat	Small extent	Very small extent
8A. At your place of work, are you informed well in advance concerning for example important decisions, changes, or plans for the future?	☐ 4	☐ 3	☐ 2	☐ 1	☐ 0
8B.Do you receive all the information you need in order to do your work well?	☐ 4	☐ 3	☐ 2	☐ 1	☐ 0

8A and 8B. Total number points _____ (between 0 and 8)

	Very large extent	Large extent	Somewhat	Small extent	Very small extent
9A. Is your work recognized and appreciated by management?	☐ 4	☐ 3	☐ 2	☐ 1	☐ 0
9B. Are you treated fairly at your workplace?	☐ 4	☐ 3	☐ 2	☐ 1	☐ 0

9A. and 9B. Total number of points: ___

(Between 0 and 8 points

	Very large extent	Large extent	Somewhat	Small extent	Very small extent
10A. Does your work have a clear objective?	☐ 4	☐ 3	☐ 2	☐ 1	☐ 0
10B. Do you know exactly what is expected of you at work?	☐ 4	☐ 3	☐ 2	☐ 1	☐ 0

10A. and 10B.Total number of points: __

(Between 0 and 8 points)

	Very large Extent	Large extent	Somewhat	Small extent	Very small extent
11A.To what extent would you say that your immediate line manager gives high priority to job satisfaction?	☐ 4	☐ 3	☐ 2	☐ 1	☐ 0
11B.To what extent would you say that your immediate superior is good at work planning?	☐ 4	☐ 3	☐ 2	☐ 1	☐ 0

11A. and 11B.Total number of points: ___ (Between 0 and 8points)

Very large extent	Large extent	Somewhat	Small extent	Very small extent

12A.How often is your nearest superior willing to listen to your problems at work?

4	3	2	1	0

12B.How often do you get help and support from your nearest superior?

4	3	2	1	0

12A. and 12B. Total number of points: ___ (Between 0 and 8 points)

Very Satisfied	Satisfied	Unsatisfied	Very Unsatified

13. Regarding your work in general. How pleased are you with your job as a whole everything taken into consideration?

3	2	1	0

13. Number of points: _____ (Between 0 and 3 points)

The next two questions are about the way your work affects your private life and family life.

	Yes certainly	Yes to a certain degree	Yes but only very little	No, not at all
14A. Do you feel that your work drains so much energy that it has a negative effect on your private life?	☐ 3	☐ 2	☐ 1	☐ 0
14B. Do you feel that your work takes so much of your time that a negative effect on your private life?	☐ 3	☐ 2	☐ 1	☐ 0

14A. and 14B.Total number of points

___ (Between 0 and 6 points)

The next four question are not about your own job but about the whole company you work at

	Very large extent	Large extent	Somewhat	Small extent	Very small extent
15A. Can you trust the information that comes from the management?	☐ 4	☐ 3	☐ 2	☐ 1	☐ 0
15B. Does the management trust the employee to do their work well?	☐ 4	☐ 3	☐ 2	☐ 1	☐ 0

15A.and 15B. Total number of points: ____

(Between 0 and 8 points)

	Very large extent	Large extent	Somewhat	Small extent	Very small extent
16A. Are conflicts resolved in a fair way?	☐	☐	☐	☐	☐
	4	3	2	1	0
16B.Is the work distributed fairly?	☐	☐	☐	☐	☐
	4	3	2	1	0

16A. and 16B. Total number of points: ___

(Between 0 and 8 points

The following five questions are about your *own* health and well-being. Please do not try to distinguish between symptoms that are caused by work and symptoms that are due to other causes. The task is to describe how you are in general.

The questions are about your health and well-being during the last four weeks:

	Excellent	Very Good	Good	Fair	Poor
17. In general, would you say your health is:	☐	☐	☐	☐	☐
	4	3	2	1	0

17. Number of points: _____

(Between 0 and 4 points)

	All the time	A large Part of the time	Part of the time	A small part of the time	Not at all
18A. How often have you felt worn out?	☐ 4	☐ 3	☐ 2	☐ 1	☐ 0
18B. How often have you been emotionally exhausted?	☐ 4	☐ 3	☐ 2	☐ 1	☐ 0

18A. and 18B. Total number of points:

_____ (Between 0 and

	All the Time	A large Part of the time	Part of the time	A small part of the time	Not at all
19A How often have you been stressed?	☐ 4	☐ 3	☐ 2	☐ 1	☐ 0
19B. How often have you been irritable?	☐ 4	☐ 3	☐ 2	☐ 1	☐ 0

19A. and 19B. Total number of points:

(Between 0 and 8 points)

Yes , daily	Yes weekly	Yes monthly	Yes, a few times	No

20. Have you been exposed to undesired sexual attention at your workplace during the last 12 months? ☐ ☐ ☐ ☐ ☐

Colleagues	Managers/ Supervisor	Sub-ordinates	client/patients/ customers/

If, yes from whom? (You may tick off more than one) ☐ ☐ ☐ ☐

Yes daily	Yes weekly	Yes monthly	Yes few times	No

21. Have you been exposed to threats of violence at your workplace during the last 12 months? ☐ ☐ ☐ ☐ ☐

Colleagues	Managers/ Supervisors	Sub-ordinates	Clients/patient customers

If, yes from whom? (You may tick off more than one) ☐ ☐ ☐ ☐

	Yes daily	Yes weekly	Yes monthly	Yes a few times	No
22. Have you been exposed to physical violence at your workplace during the last 12 months?	☐	☐	☐	☐	☐

	Colleagues	Managers/ Spervisor	Sub-ordinates	Clients/patient customers
If, yes from whom? (You may tick off more than more)	☐	☐	☐	☐

Bullying means that a person repeatedly is exposed to unpleasantly or degrading treatment, and that the person finds it difficult to defend himself or herself against it.

	Yes daily	Yes weekly	Yes monthly	Yes a few times	No
23. Have you been exposed to bullying at your workplace during the last 12 months?	☐	☐	☐	☐	☐

	Colleagues	Managers/ Supervisor	Sub-ordinates	client/patient customers
If, yes from whom? (You may tick off more than one)	☐	☐	☐	☐

SECTION 3

Any comments: Pertaining to the psychosocial work environment in general

_____

_____

_____

_____

Appendix 4

Appendix 4

City of Ekurhuleni

GAUTENG PROVINCE
HEALTH
REPUBLIC OF SOUTH AFRICA

EKURHULENI HEALTH DISTRICT RESEARCH PERMISSION

Northern Sub-District City of Ekurhuleni

NHRD No: GP 2021 11 087

Res.eargb-E-c-Qje.c!-Nu.mbgx: 13/12/2021/03

Name of Researcher(s): Ms Theodora Motsumi

Division/Institution/Company: University of Witwatersrand

Date of review by the EHDRC: 10/12/2021

DECISION TAKEN BY THE EKURHULENI HEALTH DISTRICT RESEARCH COMMITTEE (EHDRC)

- This document certifies that the above research project has been reviewed by the EHDRC and permission is granted for the researcher(s) to commence with the intended research project.
- Facilities approved for the research: Ekurhuleni North clinics.

  Participants' rights and confidentiality must be maintained throughout the study period and when disseminating the findings.
- No resources (financial, material and human resources) from the health facilities will be used for the study. Neither the district nor the health facilities will incur any additional cost for the study.

The study will comply with Publicly Financed Research and Development Act 2008 (Act 51 of 2008) and its related regulations.

Title: The Psychosocial Work Environment of PHC Nurses in the Northern Sub-District City of Ekurhuleni

● The EHDRC must be informed in writing before publication or presentation of research findings and a copy of the report/publications/presentation must be submitted to the EHDRC e The district must be acknowledged in all the reports/publications generated from the research.

- The researcher will be expected to provide the EHDRC with

  Six monthly progress updates including any adverse events

  The final study report in electronic format

  Present the final research findings at the annual Ekurhuleni research conference if possible.

- The EDHRC reserves the right to withdraw the approval, if any of the conditions mentioned above have being breached

- The research committee wishes the researcher(s) the best of success.

Ms Thembani Masina

DEPUTY CHAIRPERSON: CITY OF EKURHULENI

Dated: 14/12/2021

Dr R. Hellerman.

CHAIRPERSON: GAUTENG DEPARTMENT OF HEALTH (EKURHULENI HEALTH DISTRICT)

Dated: /2021

Appendix 5

UNIVERSITY OF THE WITWATERSRAND, JOHANNESBURG	HUMAN RESEARCH ETHICS COMMITTEE (MEDICAL)

Office of the Deputy Vice-Chancellor (Research and Innovation)

TO:	Ms TM Motsumi School of Therapeutic Sciences Department of Nursing Education Medical School University E-mail: 1470802@students.wits.ac.za
CC:	Supervisor: Ms A Huiskamp and Dr A Tshabalala <Agnes.Huiskamp@wits.ac.za> and <HREC-Medical Research Office@wits.ac.za>
FROM:	Mr Iain Burns Human Research Ethics Committee (Medical) Tel: 011 717 1252 E-mail: Iain.Burns@wits.ac.za
DATE:	2022/03/15
REF:	R14/49
PROTOCOL NO:	**M210527** (This is your ethics application reference number. Please quote it in all enquiries, oral or written, relating to this study.)
PROJECT TITLE:	*The psychosocial work environment of PHC nurses in the northern sub-district of the City of Ekurhuleni*

Please find attached the Clearance Certificate for the above project. I hope it goes well and that an article in a recognized publication comes out of it. This will reflect well on your professional standing and contribute to Government funding of the University.

MSWorks2000/Iain0007/Clearscan.wps

UNIVERSITY OF THE
WITWATERSRAND
JOHANNESBURG

R49 Ms TM Motsumi

HUMAN RESEARCH ETHICS COMMITTEE (MEDICAL)
CLEARANCE CERTIFICATE NO. M210527

NAME: (Principal Investigator)	Ms TM Motsumi
DEPARTMENT:	School of Therapeutic Sciences Department of Nursing Education Medical School University
PROJECT TITLE:	*The psychosocial work environment of PHC nurses in the northern sub-district of the City of Ekurhuleni*
DATE CONSIDERED:	2021/05/28
DECISION:	Approved unconditionally
CONDITIONS:	
NOTE:	If contact information regarding student study participants is required, please contact the Registrar's office - <Nicoleen.Potgieter@wits.ac.za>
SUPERVISOR:	Ms A Huiskamp and Dr A Tshabalala
APPROVED BY:	Dr CB Penny, Chairperson, HREC (Medical)
DATE OF APPROVAL:	2022/03/15

This Clearance Certificate is valid for 5 years from the date of approval. An extension may be applied for.

DECLARATION OF INVESTIGATORS

To be completed in duplicate and **ONE COPY** returned to the Research Office secretariat on the 3rd floor, Phillip Tobias Building, Parktown, University of the Witwatersrand, Johannesburg.

I/we fully understand the conditions under which I am/we are authorized to carry out the above-mentioned research and I/we undertake to ensure compliance with these conditions. Should any departure be contemplated from the research protocol as approved, I/we undertake to submit details to the Committee. **I agree to submit a yearly progress report**. When a funder requires annual re-certification, the application date will be one year after the date when the study was initially reviewed. In this case, the study was initially reviewed in **May** and therefore reports and re-certification will be due in the month of **May** each year. Unreported changes to the study may invalidate the clearance given by the HREC (Medical).

Appendix 6

UNIVERSITY OF THE WITWATERSRAND, JOHANNESBURG

Private Bag 3 Wits, 2050
Fax: 027117172119
Tel: 02711 7172076

Reference: Mrs Sandra Benn
E-mail: sandra.benn@wits.ac.za

27 September 2023
Person No: 1470802
PAG

Miss TM Motsumi
597 Moremi Street, Maokeng
Ext 2
Tembisa
1632
South Africa

Dear Miss Theodora Motsumi

Master of Science in Nursing: Approval of Title

We have pleasure in advising that your proposal entitled *The psychosocial work environment of PHC nurses in the Northern Sub-District City of Ekurhuleni* has been approved. Please note that any amendments to this title have to be endorsed by the Faculty's higher degrees committee and formally approved.

Yours sincerely

Mrs Sandra Benn
Faculty Registrar
Faculty of Health Sciences