

**EMPLOYEE COMMITMENT TOWARDS SAFETY
MEASURES IMPLEMENTATION IN THE PUBLIC
HEALTH INSTITUTIONS**

NJ MBENGO

2017

**Employee Commitment towards Safety Measures Implementation in the Public
Health Institutions**

by

Nomatshawe Josette Mbengo

Submitted in fulfilment of the requirements for the degree

of

Doctor of Philosophy

In the Department of Business Management,
Faculty of Business and Economic Sciences at the
Nelson Mandela Metropolitan University

April 2017

Promoter: Prof NE Mazibuko

Co-promoter: Prof S James

DEPARTMENT OF ACADEMIC ADMINISTRATION
EXAMINATION SECTION
SUMMERSTARND NORTH CAMPUS
PO Box 77000
Nelson Mandela Metropolitan University
Port Elizabeth
6031



Enquiries: Postgraduate Examination Officer

DECLARATION BY CANDIDATE

NAME: Mbengo Josette Nomatshawe

STUDENT NUMBER: 194175390

QUALIFICATION: Doctor of philosophy

TITLE OF PROJECT: Employee Commitment towards Safety Measures
Implementation in the Public Health Institutions

DECLARATION:

In accordance with Rule G5.6.3, I hereby declare that the above-mentioned thesis is my own work and that it has not previously been submitted for assessment to another University or for another qualification.

SIGNATURE: _____

DATE: _____

ACKNOWLEDGMENTS

First and foremost, I thank the Almighty. It is indeed by God's grace that I completed this PhD degree.

I would sincerely like to thank the following people who contributed to making this thesis possible in their own special way:

- I thank my promoter, Prof. Noxolo Eileen Mazibuko, for her constructive criticism, expert advice, encouragement, patience, guidance and support throughout the study. I thank you for your motherly love and the attention you gave me. I feel loved and confident about myself because you stood by me.
- I thank Prof. James, for her constructive criticism, expert advice and support throughout this study.
- I thank Nasreen Adams, for her swift response with regard to the administrative aspects of the study.
- I am heartily thankful to my partner, Voke Blessing Akponah, for her time, patience, encouragement and support throughout the study. She motivated me to endure and keep going in order to complete this study.
- I sincerely thank the public hospitals in the Eastern Cape and KwaZulu-Natal. I thank the management and nurses for their co-operation and participation during the data collection stage of the study.
- I thank my beloved parents, for their advice, encouragement and prayers.
- I thank Anelisa, my daughter, for her support, love and understanding throughout my study.
- I thank my family members, who supported me in many ways. They understood me in my most difficult times throughout my study career.

TABLE OF CONTENTS

	PAGE
DECLARATION BY CANDIDATE	i
ACKNOWLEDGEMENTS	ii
LIST OF FIGURES	xvii
LIST OF TABLES	xviii
ABSTRACT	xx

CHAPTER ONE INTRODUCTION AND BACKGROUND TO THE RESEARCH

1.1	INTRODUCTION	1
1.2	PROBLEM STATEMENT	3
1.3	RESEARCH OBJECTIVES	4
1.3.1	Primary objectives	4
1.3.2	Secondary objectives	4
1.4	RESEARCH QUESTIONS AND HYPOTHESES	5
1.4.1	Research questions	5
1.4.2	Research hypotheses	6
1.5	PROPOSED THEORETICAL MODEL REGARDING EMPLOYEE COMMITMENT TO IMPLEMENTATION OF SAFETY MEASURES	7
1.5.1	Migration	9
1.5.1.1	Emigration	9
1.5.1.2	Immigration	10
1.5.2	Role considerations	11
1.5.2.1	Role conflict	11
1.5.2.2	Role ambiguity	11
1.5.3	Health environment	12
1.5.3.1	Physical environment	13
1.5.3.2	Work environment	13
1.5.4	Job identification	14

1.5.5	Resources	14
1.5.5.1	Technology and equipment	15
1.5.6	Work conditions	16
1.5.7	Administrative support	17
1.5.8	Employee commitment and safety measures	17
1.5.8.1	Employee commitment	17
1.5.8.2	Safety measures	18
1.5.9	Employee retention	19
1.5.10	Organisational performance	20
1.6	CLARIFICATION OF IMPORTANT CONCEPTS	20
1.7	PROPOSED RESEARCH DESIGN AND METHODS	21
1.7.1	Research paradigm	22
1.7.2	Population	23
1.7.3	Sampling	23
1.7.4	Data collection	24
1.7.4.1	Primary Data	25
1.7.4.2	Secondary Data	25
1.7.5	Questionnaire design	25
1.7.6	Pilot study	26
1.7.7	Data analysis	26
1.7.8	Reliability and validity of the measuring instrument	27
1.8	THE PURPOSE OF THE RESEARCH	28
1.9	SIGNIFICANCE OF THE RESEARCH	28
1.10	PRIOR RESEARCH	29
1.11	PLAN OF THE RESEARCH STUDY	30

**CHAPTER TWO
OVERVIEW OF EMPLOYEE COMMITMENT**

	PAGE
2.1 INTRODUCTION	32
2.2 COMMITMENT AS A CONCEPT	32
2.2.1 Commitment	32
2.2.2 Organisational commitment	33
2.2.3 Employee commitment	34
2.3 TYPES OF EMPLOYEE COMMITMENT	35
2.3.1 Affective commitment	35
2.3.2 Continuance commitment	37
2.3.3 Normative commitment	38
2.4 IMPORTANCE OF EMPLOYEE COMMITMENT IN THE WORKPLACE	39
2.5 BENEFITS OF EMPLOYEE COMMITMENT IN WORKPLACE	40
2.6 CHALLENGES OF EMPLOYEE COMMITMENT	41
2.6.1 Occupational stress	41
2.6.2 Demographic characteristics of employees	42
2.7 KEY FACTORS TO EMPLOYEE COMMITMENT	42
2.7.1 Concern for employees	43
2.7.2 Training	43
2.7.3 Fairness	44
2.7.4 Trust	44
2.8 SUMMARY	45

CHAPTER THREE
SAFETY IMPLICATIONS IN THE HEALTHCARE ENVIRONMENT

	PAGE
3.1 INTRODUCTION	46
3.2 BACKGROUND TO THE SAFETY AND HEALTHCARE ENVIRONMENT	46
3.2.1 Levels of healthcare nurses	48
3.2.2 Role of law in the healthcare environment	49
3.2.2.1 Unlawful laws in healthcare	50
3.2.2.2 Criminal law in the healthcare environment	51
3.2.3 Importance of health and safety in the public healthcare sector	51
3.2.3.1 Safety in the workplace	52
3.2.3.2 Lack of resources	53
3.2.3.3 Working conditions	54
3.2.3.4 Change of the system in the healthcare environment	55
3.2.4 Safety in the public healthcare environment	55
3.2.5 Safety measures in the healthcare environment	57
3.2.5.1 Roles and responsibilities of healthcare employers and employees	59
3.2.6 Hazards	60
3.2.6.1 Identification of health and safety hazards	61
3.2.6.2 Physical hazards	61
3.2.6.3 Psychological hazards	61
3.2.6.4 Promoting health and safety issues	62
3.2.7 Barriers in the healthcare environment	62
3.2.8 Implications of ethics in the healthcare environment	63
3.2.8.1 Codes of ethics in the healthcare workplace	63
3.2.8.2 The code of ethics for the doctor-patient relationship	63
3.2.8.3 Healthcare professionals' codes of ethics	66
3.3 SUMMARY	66

CHAPTER FOUR
THE IMPACT OF IMPLEMENTING SAFETY MEASURES IN THE HEALTHCARE ENVIRONMENT

	PAGE
4.1 INTRODUCTION	67
4.2 BACKGROUND AND ORIENTATION OF IMPLEMENTING SAFETY MEASURES IN THE HEALTH ENVIRONMENT	67
4.3 SAFETY MEASURES	75
4.3.1 Health and safety at the workplace	75
4.3.2 Availability of staff	76
4.3.3 Training, reporting and follow-up	77
4.3.4 Sharp injuries	78
4.3.5 Work environment	80
4.4 WORKPLACE VIOLENCE	81
4.5 WORKING CONDITIONS	83
4.6 FACTORS THAT HINDER THE IMPLEMENTATION OF SAFETY MEASURES	85
4.7 SUMMARY	86

CHAPTER FIVE
OCCUPATIONAL HEALTH BEHAVIOR

5.1 INTRODUCTION	87
5.2 BACKGROUND OF OCCUPATIONAL HEALTH BEHAVIOR	87
5.3 OCCUPATIONAL HEALTH HAZARDS	88
5.4 IMPORTANCE OF HEALTHCARE EMPLOYEES' WELL-BEING	91
5.5 CHALLENGES OF HEALTHCARE EMPLOYEES IN THE WORKPLACE	91

	PAGE
5.5.1 Job insecurity	92
5.5.2 Working hours	92
5.5.3 Implementation and control of safety measures in the workplace	93
5.5.4 Role of management towards health behaviour	94
5.5.5 Occupational stress	94
5.6 OCCUPATIONAL CULTURE IN THE HEALTHCARE ENVIRONMENT	96
5.6.1 Wellbeing of employees	96
5.6.2 Organisational culture	97
5.6.3 Types of organisational culture	100
5.7 ROLE OF ORGANISATIONS REGARDING HEALTH BEHAVIOR	101
5.8 SUMMARY	104

CHAPTER SIX

A MODEL FOR EMPLOYEE COMMITMENT TO THE IMPLEMENTATION OF SAFETY MEASURES IN THE PUBLIC HEALTHCARE INSTITUTIONS

6.1 INTRODUCTION	105
6.2 THE MODELLED INFLUENCES OF EMPLOYEE COMMITMENT TO THE IMPLEMENTATION OF SAFETY MEASURES IN THE PUBLIC HEALTHCARE INSTITUTIONS	105
6.2.1 Migration	107
6.2.2 Role considerations	110
6.2.2.1 Role conflict	111
6.2.2.2 Role ambiguity	111
6.2.3 Health environment	112
6.2.3.1 Physical environment	113
6.2.3.2 Work environment	113
6.2.4 Job identification	115

	PAGE
6.2.5 Resources	117
6.2.5.1 Technology	118
6.2.5.2 Equipment	119
6.2.6 Work conditions	120
6.2.7 Administrative support	122
6.3 EMPLOYEE COMMITMENT TO THE IMPLEMENTATION OF SAFETY MEASURES	123
6.4 THE MODELLED OUTCOMES OF EMPLOYEE COMMITMENT TO THE IMPLEMENTATION OF SAFETY MEASURES	126
6.4.1 Employee retention	126
6.4.2 Organisational performance	130
6.5 SUMMARY	132

CHAPTER SEVEN RESEARCH DESIGN AND METHODOLOGY

7.1 INTRODUCTION	133
7.2 PURPOSE OF THE STUDY	133
7.3 RESEARCH DESIGN AND METHODS	134
7.4 RESEARCH PARADIGM	135
7.4.1 Qualitative research method	135
7.4.2 Quantitative research method	136
7.4.3 Mixed methods research	137
7.5 SAMPLING	137
7.5.1 Population and sampling	139
7.5.2 Determining the sampling method	140
7.5.3 Sampling frame and sample size	143

	PAGE
7.5.3.1 Response rate and sample size	144
7.5.3.2 Missing data	144
7.6 DATA COLLECTION METHODS	144
7.6.1 Primary data	145
7.6.2 Secondary data	145
7.7 QUESTIONNAIRE DESIGN	146
7.7.1 Demographic profile of the respondents	149
7.7.2 Variables of the research instrument design	151
7.7.2.1 Migration	151
7.7.2.2 Role conflict	151
7.7.2.3 Role ambiguity	152
7.7.2.4 Health environment	152
7.7.2.5 Job identification	152
7.7.2.6 Resources	153
7.7.2.7 Work conditions	153
7.7.2.8 Administration support	153
7.7.2.9 Employee commitment	154
7.7.2.10 Safety measures	154
7.7.2.11 Employee retention	154
7.7.2.12 Organisational performance	155
7.8 THE CRITERIA FOR EVALUATING THE MEASURING INSTRUMENTS	158
7.8.1 Reliability	158
7.8.2 Validity	159
7.9 PRETESTING THE MEASURING INSTRUMENT	162
7.10 DATA ANALYSIS	163
7.10.1 Exploratory factor analysis	163
7.10.2 Descriptive statistics	164
7.10.3 Regression analysis	164
7.10.4 Correlation analysis	165

	PAGE
7.11 ETHICAL CONSIDERATIONS	165
7.12 SUMMARY	167

CHAPTER EIGHT
EMPIRICAL EVALUATION OF EMPLOYEE COMMITMENT TO THE
IMPLEMENTATION OF SAFETY MEASURES IN THE HEALTHCARE
INSTITUTIONS

8.1 INTRODUCTION	168
8.2 SUMMARY OF THE OBJECTIVES AND HYPOTHESES OF THE STUDY	168
8.3 DATA ANALYSIS RESULTS	171
8.3.1 Internal reliability of the instruments	172
8.3.2 Validity of the measuring instrument	173
8.3.2.1 The employees' perceptions of the influences of employee commitment to the implementation of safety measures(CSH)	174
8.3.2.2 Views of employees regarding commitment to the implementation of safety measures (CSH) in the health institutions	177
8.3.2.3 Views of employees towards outcomes of the commitment to implement safety measures (CSH)	178
8.3.3 Cronbach's alpha values of latent variables based on the results of factor analysis: Theoretical model	179
8.3.4 Descriptive statistical analysis	180
8.3.5 Reformation of hypotheses	186
8.4 REGRESSION ANALYSIS	193
8.4.1 The influence of employee' views on CSH related to safety compliance	194
8.4.1.1 The influence of migration, role considerations, health environment, organisational support, work conditions	

	PAGE
related to an enabling environment and work conditions	
related to benefits of CSH related to safety compliance	194
8.4.2 The influence of employees' views on CSH related to safety management	196
8.4.2.1 The influence of migration, role consideration, health environment, organisational support, work conditions related to enabling environment and work conditions related to benefits on CSH related to safety management	196
8.4.3 The influence of commitment to implementation of safety measures (CSH) on outcomes	197
8.4.3.1 The effect of CSH related to safety compliance and CSH related to safety management in the health institutions on employee retention	198
8.4.3.2 The effect of CSH related to safety compliance and CSH related to safety management in the health institutions on organisational performance	198
8.5 CORRELATION ANALYSIS OF THE HYPOTHESES	200
8.5.1 Correlation analysis	200
8.5.2 Findings on hypotheses	202
8.6 SUMMARY	210

CHAPTER NINE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

9.1 INTRODUCTION	211
9.2 SUMMARY OF THE STUDY	211
9.3 CONCLUSIONS OF THE RESEARCH PROBLEM OF THE STUDY	214
9.3.1 Presentation and conclusion to the research questions	217

	PAGE	
9.4	SUMMARY OF EMPIRICAL RESULTS AND MANAGERIAL IMPLICATIONS	224
9.4.1	Empirical findings and implications based on migration and employee commitment to the implementation of safety measures in public health institutions	226
9.4.2	Empirical findings and implications based on role considerations and employee commitment to the implementation of safety measures in public health institutions	226
9.4.3	Empirical findings and implications based on health environment and employee commitment to the implementation of safety measures in public health institutions	228
9.4.4	Empirical findings and implications based on organisational support and employee commitment to the implementation of safety measures in public health institutions	229
9.4.5	Empirical findings and implications based on work conditions related to an enabling environment and employee commitment to the implementation of safety measures in public health institutions	230
9.4.6	Empirical findings and implications based on work conditions related to benefits and employee commitment to the implementation of safety measures in public health institutions	231
9.4.7	Empirical findings and implications based on employee commitment to the implementation of safety measures (CSH) in the health institutions	231
9.4.7.1	Empirical findings and implications based on employee commitment to the implementation of safety measures (CSH) related to safety compliance	232
9.4.7.2	Empirical findings and implications based on employee commitment to the implementation of safety measures (CSH) related to safety management	233

	PAGE	
9.4.8	Empirical findings and implications based on employee commitment to the implementation of safety measures in public healthcare institutions and employee retention	234
9.4.9	Empirical findings and implications based on employee commitment to the implementation of safety measures in public health institutions and organisational performance	235
9.5	RECOMMENDATIONS ON EMPLOYEE COMMITMENT TO THE IMPLEMENTATION OF SAFETY MEASURES	236
9.5.1	Recommendations on migration	236
9.5.2	Recommendations on role considerations	237
9.5.3	Recommendations on health environment	239
9.5.4	Recommendations on organisational support	241
9.5.5	Recommendations on work conditions related to an enabling environment	243
9.5.6	Recommendations on work conditions (benefits)	244
9.5.7	Recommendations on safety compliance	245
9.5.8	Recommendations safety management	247
9.5.9	Recommendations on organisational performance	249
9.5.10	Recommendations on employee retention	250
9.6	CONTRIBUTIONS OF THE STUDY	251
9.7	LIMITATIONS TO THE STUDY	253
9.8	RECOMMENDATIONS FOR FUTURE RESEARCH	253
9.9	CONCLUSION OF THE STUDY	254
	REFERENCES	256
	ANNEXURE A: COVER LETTER	312
	ANNEXURE B: QUESTIONNAIRE	314
	ANNEXURE C: NATIONAL DEPARTMENT OF HEALTH LETTER	321

ANNEXURE D: NMMU RTI ETHICS APPROVAL LETTER	323
ANNEXURE E: EASTERN CAPE HEALTH DEPARTMENT APPROVAL LETTER	325
ANNEXURE F: KWA-ZULU NATAL DEPARTMENT APPROVAL LETTER	327
ANNEXURE G: LANGUAGE EDITING LETTER	329

LIST OF FIGURES

	PAGE
Figure 1.1: Theoretical model of employee commitment towards implementation of safety measures	8
Figure 3.1: Attributes of healthcare environment	48
Figure 6.1: The modelled influences and outcomes of employee commitment to the implementation of safety measures in the public health institutions.	107
Figure 7.1: Schematic diagram showing stages in selecting a sample	139
Figure 8.1: Theoretical model of employee commitment to the implementation of safety measures in the health institutions	170
Figure 8.2(a): The adapted model of the relationships among variables based on employees' views regarding CSH related to safety compliance	184
Figure 8.2(b): The adapted model of the relationships among variables based on employees' views regarding CSH related to safety management	185
Figure 8.3(a): The hypothesised model of views of employee commitment to implement safety measures related to safety compliance (CSH) 1	189
Figure 8.3(b): The hypothesised model of employees' views of commitment to the implementation of safety measures related to management	192

	PAGE
Figure 8.4(a): The hypothesised results of employees' views of commitment to implement safety measures related to safety compliance (CSH) 1	208
Figure 8.4(b): The hypothesised results of employees' views of commitment to the implementation of safety measures related to safety management	209
Figure 9.1: Empirical evaluation of the proposed influence and outcome of employee commitment to the implementation of safety measures related to safety compliance and safety management	225

LIST OF TABLES

	PAGE
Table 1.1: Factors impacting on safety measures in public health institutions	3
Table 7.1: Sample structure of the study	143
Table 7.2: Sample size and response rate	144
Table 7.3: Measuring instruments: Number of items per variable	148
Table 7.4: Demographic profiles of the Respondents	149
Table 7.5: Summary of employee commitment to the implementation of safety measures in the public healthcare institutions and measuring scale development	155
Table 8.1: Abbreviations of variables	172
Table 8.2: Cronbach's alpha values of measuring instruments: Theoretical model	173
Table 8.3: Factor loadings: Employees' views of migration, role considerations, health environment, job identification, resources, working conditions and administrative support	175
Table 8.4: Factor loadings: Employees' views of commitment to the implementation of safety measures (CSH) in the health institutions	178
Table 8.5: Factor loadings: Outcomes of commitment to The implementation of safety measures (CSH) in the health institutions	179
Table 8.6: Factor loadings: Cronbach's alpha coefficients of the latent variables based on the comprehensive exploratory factor analysis	180

	PAGE
Table 8.7: Descriptive statistics for each variable: general sample response per category	181
Table 8.8: Empirical factor structure: Influences and outcomes of employee commitment to the implementation of safety measures	182
Table 8.9: Regression analysis: The effect of Migration (MI), Role considerations (RC), Health environment (HE), Organisational support (OS), Work conditions related to an enabling environment (WC1-EE) and Work conditions (WC2-B) on CSH related to safety compliance (CSH-C)	195
Table 8.10: Regression analysis: The effect of Migration (MI), Role considerations (RC), Health environment (HE), Organisational support (OS), Work conditions related to an enabling environment (WC1-EE) and Work conditions (WC2-B) on safety management	197
Table 8.11: Regression analysis: the effect of CSH related to safety compliance and CSH related to safety management on employee retention	198
Table 8.12: Regression analysis: The influence of CSH related to safety compliance and CSH related to safety management on organisational performance	199
Table 8.13: Correlation matrix of variables of the study	202

ABSTRACT

Healthcare services are important to maintaining and improving the wellbeing of a country's citizens. Nurses are part of medical professionals who ensure that the health and wellbeing of patients are maintained, improved and restored. In order to ensure that nurses provide quality services to patients, healthcare institutions are required to address the health and safety needs within their institutions. This implies that public health institutions are required to protect the health and wellbeing of nurses by implementing safety measures within the institutions. The commitment towards the implementation of safety measures in public health institutions is crucial in order to protect the health of nurses, patients and their families. Should public health institutions neglect the implementation of safety measures, and safety management, it will lead to exposure to risks and hazards, high nurse turnover, an increase in costs and a decrease in profitability.

This study investigated employee commitment towards the implementation of safety measures in public healthcare institutions. Furthermore, this study investigated the influence of employee commitment towards the implementation of safety measures on employee retention and organisational performance. This study utilised questionnaires to gather primary data from a total number of 1400 nurses from public healthcare institutions located in the Eastern Cape and KwaZulu-Natal provinces. The primary data was subjected to five types of analysis, namely, reliability, exploratory factor analysis (EFA), descriptive statistics, multiple regression analysis and correlation analysis.

The empirical results of this study reveal that there is a relationship between migration, role considerations, health environment, organisational support, work conditions (enabling environment and benefits) and employee commitment to the implementation of safety measures related to safety compliance. Furthermore, the empirical findings of this study indicate that a significant and positive relationship exists between employee commitment to the implementation of safety measures related to safety compliance, and employee retention, and organisational performance.

In addition, the empirical findings reveal that there is a relationship between migration, role considerations (role conflict and role ambiguity), health environment, organisational support, work conditions (enabling environment and benefit) and employee commitment to the implementation of safety measures related to safety management. Furthermore, there is a relationship between employee commitment to the implementation of safety measures related to safety management, and employee retention, and organisational performance.

This study is fundamental as it developed a theoretical model on the perceptions of safety measures that can be utilised to identify and resolve the need for effective safety measures in public health institutions. Furthermore, this study provides useful information that can be applied as a systematic approach to inspire healthcare employees (nurses) towards a commitment to safety and health in the workplace. The government and healthcare institutions can utilise this study to understand safety compliance and safety management in the workplace. The strategies on safety compliance and safety management presented in this study can be implemented to minimise or prevent hazards in public health institutions.

CHAPTER ONE

INTRODUCTION AND BACKGROUND TO THE RESEARCH

1.1 INTRODUCTION

The subject of safety in the workplace has become so important that international conventions are in place to standardize, regulate and improve workplace conditions and services (Zwetsloot, 2003:201). Furthermore, safety and health in the workplace have become integral components to the sustainability of business for employers, employees, labour unions, governments and environmentalists, in general. Thus, a safe environment can enhance and optimise positive factors and motivation in the workplace. However, healthcare employees function in an environment that is considered to be one of the most hazardous occupational settings.

Nsubunga and Jaakkola (2005:773) suggest that employees are exposed to occupational hazards that can be broadly classified as biological or non-biological. Manyele, Ngonyani and Eliakimu (2008:159) concur that healthcare employees encounter diverse hazards in the workplace, due to their work-related activities. Equally, healthcare employees face numerous hazards in their workplace environment due to the fact that they work overtime, do not wear all the necessary personnel protective equipment, experience job-related pressure and work in multiple facilities. This implies that healthcare employees require safety and health measures to reduce their risk of acquisition of disease or injury because they are constantly in contact with patients who expose them to infections and injuries.

Bennet (2002), cited in Hughes and Ferret (2011:1) argues that employees need to be involved in the improvement of working conditions and should participate at all levels of the workplace to ensure that issues affecting their livelihoods are included in organisational development. However, working conditions are not as conducive as they should be, for example, Ndejjo, Musinguzi, Yu, Buregyeya, Musoke, Wang, Halage, Whalen, Bayezo, Williams and Ssempebwa (2015:1) maintain that morbidity and mortality among healthcare employees inevitably lead to loss of skilled personnel and adversely impact upon healthcare services which are already strained in many low and middle income countries. Conversely, there is lack of supervision, efficiency

and resources to implement safety measures in the healthcare environment. Dovlo (2004, 2005), for instance, describes the scarcity of human resources for health as a humanitarian resource crisis due to significant emigration of trained professionals, difficult working conditions, poor salaries, low motivation and the high risk of infectious disease, particularly HIV/AIDS. Therefore, there is a dire need for the effective implementation of safety measures in order to improve the healthcare system that is in place.

However, there is much to consider regarding the promotion of safety measures, yet, little has been done by public health institutions to implement what is already known. Employee commitment plays a vital role in the implementation of safety measures. This study aims at establishing the role of healthcare employees with regard to their commitment and vigilance in ensuring their safety and health in the workplace environment. Thus, their views can be considered when devising and carrying out safety and health measures in the workplace (Bennet, 2002, cited in Hughes & Ferret, 2011:1).

Furthermore, the realization of the improvement in the safety and health environment will ensure that healthcare employees are content and remain in the workplace environment. In other words, healthcare employees might be less tempted to leave their country for better economic benefits, safety and development, or other factors. Thus, Ndejjo *et al.* (2015:2) concur that there is a need to understand the predisposing factors for occupational hazards among healthcare employees in order to inform occupational health and safety policy, and programs for healthcare employees. However, even with a full complement of protective measures, workers may intentionally or unintentionally behave in ways that harm their health. According to Zwetsloot (2003:201), the subject of safety and health in the workplace covers a wide spectrum of issues. Table 1.1 shows some of these factors.

Table 1.1: Factors impacting on safety measures in public health institutions

FACTORS	SOURCE
Working with hazardous chemicals and minerals	Armour (2003:1)
Safety precautions, safety communication measures and personal protection equipment	Tan and Fitzgerald (2002); Henshaw, Gaffney, Madl and Paustenback (2007); Mearns, Whittaker and Flin (2002:641)
Psychological safety especially related to stress, fears and attitudes	Baer and Frese (2003)
Working with harmful workplace emissions	Profuno, Spini, Cucca and Pesanto (2003:465)
Harmful infrastructural constructions such as unsafe stairways, unsafely built structures and slippery floors	Mehta and Burrows (2001:57)

Ntshanga and Mabaso (2009:623) suggest that healthcare authorities do their utmost to create a conducive and safe working environment. Therefore, healthcare employees' training and education for compliance with important preventive measures are crucial in promoting healthy lifestyles and reducing morbidity and mortality. Thus, there is a need for high employee commitment, which will lead to high performance and employee retention in the healthcare environment. This study seeks to focus on the discipline of employee commitment towards safety and health measures in public health institutions.

1.2 PROBLEM STATEMENT

South Africa is currently experiencing a human resources crisis, which is limiting its ability to improve overall health system performance. There is an absolute shortage in the number of health professionals, and a grossly disproportionate distribution of human resources between public and private healthcare institutions. South Africa has a shortage of almost 80 000 healthcare professionals (Kimberly, 2014). The country also experiences problems related to the retention and recruitment of other qualified and senior healthcare workers/professionals in South African public healthcare institutions. Retention is a challenge due to most of these professionals either leaving to join the private sector or leaving the country for other destinations, both of which

they perceive to be better and safer work environments. Thus, the South African health sector has undoubtedly been hard hit by brain drain and it is struggling to recruit replacements for those healthcare professionals who have left.

Aside from the challenge of limited human resources, the inadequate infrastructural support, insufficient financial allocations for the maintenance of equipment, and a safe environment are also major restricting factors in the development of health services in the country. According to Coovadia, Jewkes, Barron, Sanders and McIntyre (2009), and Lloyd, Sanders and Lehmann (2010), the government has not yet made solid, concrete steps towards improving safety measures in the public health sector. The following questions arise with regard to the implementation of safety measures in the healthcare work environment:

- *Are employees committed to implementing safety measures in health institutions?*
- *What are the barriers to employee commitment to the implementation of safety measures in health institutions?*

1.3 RESEARCH OBJECTIVES

Primary and secondary objectives have been developed for this study.

1.3.1 Primary objective

The primary objective of the study is to examine and determine aspects that contribute to employee commitment to the implementation of safety measures in public health institutions.

1.3.2 Secondary objectives

The following secondary objectives were formulated to achieve the primary objective of the study:

- To develop a hypothetical model and review the literature pertaining to employee commitment and safety measures in public health institutions.
- To explore and describe the barriers to health and safety as a concern in the public health work environment.
- To provide managerial guidelines and recommendations for the improvement, implementation and monitoring of employee commitment towards health and safety measures in public health institutions.

1.4 RESEARCH QUESTIONS AND HYPOTHESES

This section presents the research questions and hypotheses of the study.

1.4.1 Research questions

The research questions of this study are based on the purpose and objectives of the study. The following research questions will be addressed in this study:

- Does the migration of employees impact upon employee commitment to the implementation of safety measures in public health institutions?
- Is the scope and responsibility of the job properly structured to promote employee commitment to the implementation of safety measures in public health institutions?
- Are job demands impacting employee commitment to the implementation of safety measures in public health institutions?
- Is the environment conducive to promoting commitment to the implementation of safety measures in public health institutions?

- Are employees obligated by professional registration and job specification to commit themselves to the proficient implementation of safety measures in the public health institutions?
- Are healthcare resources enabling and adequately provided to promote employee commitment to the implementation of safety measures in the public health institutions?
- Is administrative support sufficient to promote employee commitment to safety measures in the public health institutions?
- Will employee commitment to the implementation of safety measures promote employee retention in the public health institutions?
- Will employee commitment to the implementation of safety measures increase organizational performance in the public health institutions?

1.4.2 Research hypotheses

On the basis of the hypothetical model for employee commitment to the implementation of safety measures, which drives the focus of this study, the following research hypotheses are formulated:

- H¹: There is a relationship between migration and employee commitment to the implementation of safety measures.
- H²: There is a relationship between role considerations, as measured by role conflict and role ambiguity, and employee commitment to the implementation of safety measures.
- H³: There is a relationship between the health environment and employee commitment to the implementation of safety measures.

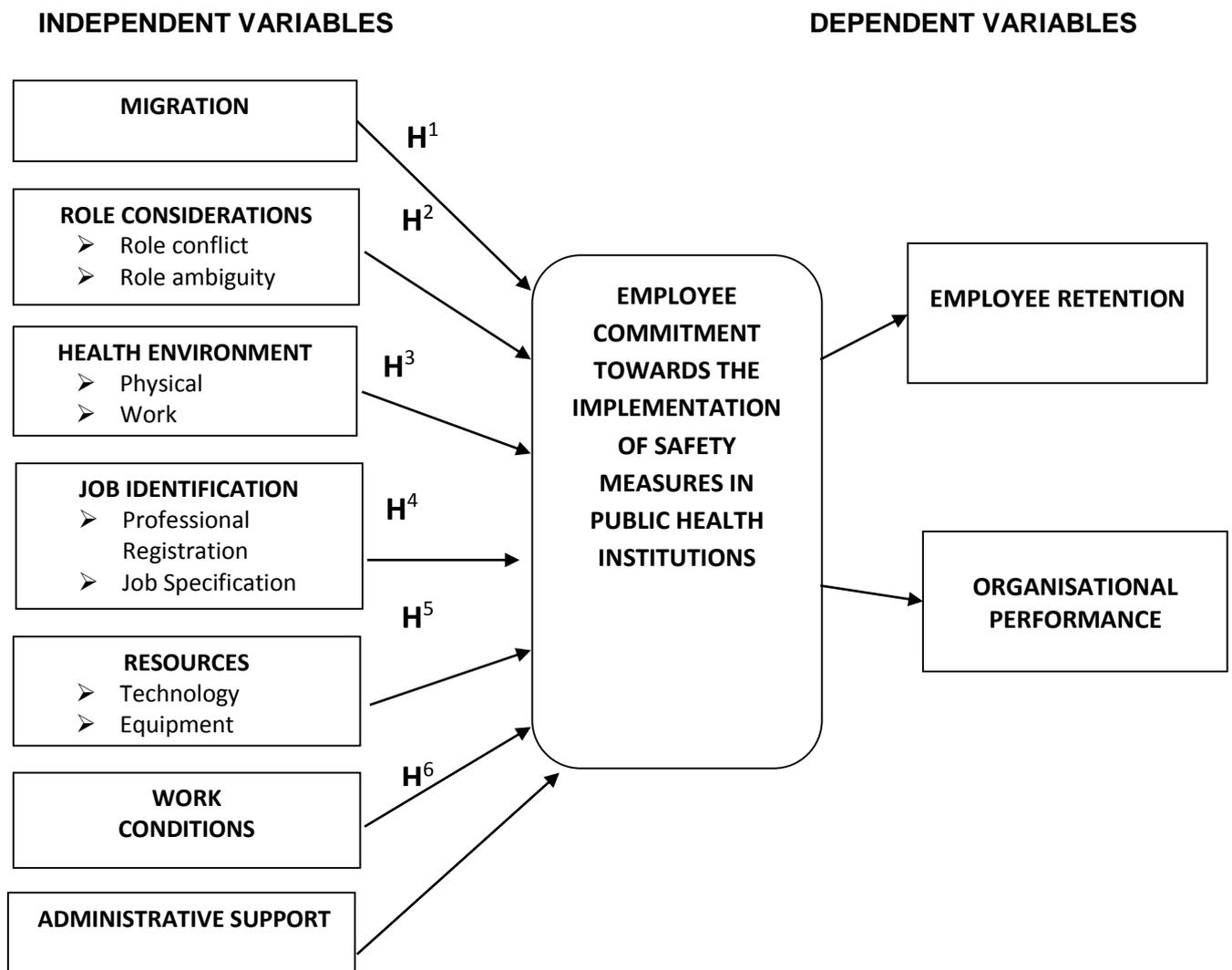
- H⁴: There is a relationship between job identification, as measured by professional registration and job specification, and employee commitment to the implementation of safety measures.
- H⁵: There is a relationship between resources and employee commitment to the implementation of safety measures.
- H⁶: There is a relationship between work conditions and employee commitment to the implementation of safety measures.
- H⁷: There is a relationship between administrative support and employee commitment to the implementation of safety measures.
- H⁸: There is a relationship between employee commitment to the implementation of safety measures and employee retention.
- H⁹: There is a relationship between employee commitment to the implementation of safety measures and organisational performance.

1.5 PROPOSED THEORETICAL MODEL REGARDING EMPLOYEE COMMITMENT TO THE IMPLEMENTATION OF SAFETY MEASURES

Secondary sources, particularly the models created by Baril-Gingras *et al.* (2006) and The Health and Safety Executive (2004), were analysed in this study. Research gaps were identified from these theoretical models, as the research findings reveal that occupational and safety measures have led to constraints. Furthermore, research has shown that improvement is required in order to meet workers' needs to safeguard their health and safety. Moreover, health and safety risks need to be controlled in order to minimize injuries or work-related ill health and increase stakeholder satisfaction. Based on an analysis of the secondary sources, the elements of supporting models were considered in developing a theoretical model for employee commitment towards the effective implementation of safety measures in public health institutions.

The proposed theoretical model for the study of employee commitment to the implementation of safety measures in public health institutions is depicted in Figure 1.1.

FIGURE 1.1: THEORETICAL MODEL OF EMPLOYEE COMMITMENT TOWARDS IMPLEMENTATION OF SAFETY MEASURES



Source: Researcher's own construction

The proposed theoretical model in Figure 1.1 indicates that employee commitment to the implementation of safety measures is responsive to seven sets of independent variables: migration, role considerations, health environment, job identification, resources, work conditions and administrative support. In addition, the model presented in Figure 1.1 indicates that employee retention and organisational

performance are dependent variables that are viewed and anticipated outcomes of employee commitment to the implementation of safety measures.

A discussion of all variables of the model follows

1.5.1 Migration

Migration refers to any movement from one place to another, for example, leaving one's country of origin with the intent of settling or living permanently in a foreign country (Kok, Gelderblom, Oucho & Van Zyl, 2006:125; Norkewicz & Paral, 2003:6; Jackson, 1986:5). South Africa has experienced an increased rate of migration in recent years, along with many other African countries. It is believed to be potentially damaging for the regional economy and is almost certainly detrimental for the wellbeing of the countries' communities. Human capital flight is the large-scale emigration of a large group of individuals who have technical skills and/or knowledge. This occurs as a result of two aspects related to countries and individuals, respectively.

1.5.1.1 Emigration

Elliot (2000:603) refers to emigration as the act of leaving one's country of origin with the intention to settle permanently in another. Similarly, Norkewicz and Paral (2003:6) define emigration as the act of leaving one's country or region with the intention to permanently settle in another. It is the same as immigration, but from the perspective of the country of origin. Emigration might also refer to movement away from a residential location within the same country. Kok *et al.* (2006:59) advocate that individual countries must face up to the reality of the emigration of highly educated and skilled southern Africans. Brain drain, or human capital flight, is the large-scale emigration of a large group of individuals with technical skills and/or knowledge. The reason for their emigration may be the social environment in source countries, that is, lack of opportunities, political instability or oppression, economic depression, health risks, and others. Even though the term originally referred to technology workers leaving a nation, the meaning has broadened to refer to the departure of educated or professional people from one country, economic sector or field, to another, usually for better pay or living conditions.

There are a number of reasons why people emigrate. These reasons can be divided into pull factors and push factors (Barninghausen & Bloom, 2011:485; Rutten, 2009:291). Examples of pull factor are better economic opportunities and the quest for a better life. These factors are the conditions that motivate workers to migrate and cause professionals in one developed country to move to another developed country. On the other hand, push factors are those issues and conditions that cause healthcare personnel to be dissatisfied with their work and careers in their home country. Examples of push factors are poor compensation, working and living conditions or limited career opportunities. These push factors cause healthcare workers to leave one developed country for another. Fears of political discrimination or poverty are further examples of push factors. Moreover, workers who are satisfied with their current employment, and thus unmoved by push factors, are unlikely to leave their home countries.

1.5.1.2 Immigration

According to Norkewicz and Paral (2003:6), immigration is the action of coming to live permanently in a foreign country. This process varies in the extent to which it is formalized. Differences in wage rate, for example, are usual in the case of economic migration. If the wages in the new country surpass the value of wages in the health worker's country of origin, he/she may choose to migrate as long as the costs are not too high. According to Kok *et al.* (2006:67), the cloud of skill flight hangs over all African countries as its citizens increasingly opt for better career opportunities. The poor working conditions experienced by health workers is a push factor, that is, inadequate work conditions drive migration flows. Thus, labour migration undermines the national health sector of the country. Therefore, the migration of healthcare workers/professionals in the public health sector is one of the factors that need investigation in order to discover solutions. In this regard, the purpose of this study is to find ways of minimizing the migration of healthcare workers/professionals in the South African public health sector.

1.5.2 Role considerations

In this study, role consideration refers to a situation in which every position should have a specified set of tasks or responsibilities. The specification of duties, or the formal definition of role requirements, is intended to allow management to hold subordinates accountable for specific performance and to provide guidance and direction to them (Rizzo, House & Lirtzman, 1970, cited in Land 2008:157). This study aims to assess the effect of role ambiguity and role conflict on employee commitment to the implementation of safety measures in the public health institutions. Healthcare workers, such as nurses, experience substantial role ambiguity and role conflict as they take on a managerial role, primarily as a result of inadequate role definition, unethical challenges, and the lack of prior insight into the case of managerial role.

1.5.2.1 Role conflict

Onyemah (2008:299) defines role conflict as a feeling of being torn in multiple directions, unable to find a way to make every role partner satisfied. According to Robbins and Coulter (2003:401), role conflict occurs when an individual is confronted by different role expectations. Macios (1998), as cited in Du Toit and Van Staden (2005:77), describes role conflict as when the roles of two or more statuses are irreconcilable. Role conflict, for the purpose of this study, refers to incompatible demands from various role senders or multiple roles held simultaneously.

1.5.2.2 Role ambiguity

Du Toit and Van Staden (2005:85) describe role ambiguity as the lack of clarity in the expectations associated with a specific role. Further, Slattery, Selvarajanb and Andersonc (2008:2268) define role ambiguity as a situation in which role expectations are not clearly specified. While Onyemah (2008:299) notes that role ambiguity is an employee's uncertainty about the expectations of different members in his or her role set. According to Slattery *et al.* (2008:2268), role ambiguity means that the norms for a specific position are vague, unclear and not correctly defined. For the purpose of this study, role ambiguity is defined as a situation when an employee is uncertain about

the expectations associated with a specific role due to the role definition being unclear or does not understand the assigned tasks.

High degrees of role ambiguity are associated with increased tension, anxiety, fear and hostility, decreased job satisfaction, and loss of self-confidence, which are often coupled with low productivity. This leads to feelings of guilt for not meeting the expectations of one's colleagues. Each and every health employee must be clear of the duties allocated to him or her so as to avoid unnecessary mistakes. If the health professional does the job accordingly, there will be no claims from the health department. Maximum performance and contentment will be the end result because the worker performs the duties for which he /she is trained. This also allows for a greater chance for the implementation of effective safety measures in the public healthcare institutions.

1.5.3 Health environment

Aguis (2010:1) suggests that environmental health encompasses those aspects of human health, including quality of life, that are determined by physical, chemical, biological, social and psychosocial factors in the environment. It also refers to the theory and practice of assessing, correcting, controlling and preventing those factors in the environment that can potentially adversely affect the health of present and future generations. Moreover, Aguis (2010:1) refers to environmental health services as those services that implement environmental health policies through monitoring and control activities. They also carry out this role by promoting the improvement of environmental parameters and by encouraging the use of environmentally friendly, and healthy, technologies and behaviours. They also play a leading role in developing and suggesting new policy areas. For the purpose of this study, the term health environment refers to those aspects of human health that comprise of diseases and injuries determined or influenced by factors in the environment.

1.5.3.1 Physical environment

Du Plessis and Rousseau (1999:316) refer to the physical environment as the tangible components of service delivery. The environment comprises all the physical and social conditions that surround a person and can influence that person's health. This is likely to increase job satisfaction and, consequently, to have a positive effect on employee commitment and quality of healthcare services in the evolving health system of South Africa. Reiling, Hughes and Murphy (2008:168) indicate that numerous researchers found a link between the physical environment (for instance, beds and rooms) and patient and employee effects (reduced stress and fatigue, and increased effectiveness in delivering care).

Therefore, the actual physical layout of an organization can create an environment conducive to the aspirations of the public professionals; this is vitally important to increasing employee retention. Zinhumwe (2012:192) further argues that evidence-based design (EBD) of the physical environment improves the safety of both hospital staff and patients by reducing the risk of hospital-acquired infections.

1.5.3.2 Work environment

Muller, Bezuidenhout and Jooste (2005:525) postulate that work environment comprises of the conditions, circumstances and influences that affect the organization's ability to achieve its objectives. Furthermore, work environment encompasses any physical, organizational or operational elements that have an impact on the work employees do, the amount of work they do and the standard they attain. Work environment involves physical and geographical location as well as the immediate surroundings of the workplace, such as construction site or office building. It involves other factors relating to the place of employment, such as the quality of air, noise level, and additional perks and benefits of employment such as free childcare, unlimited coffee, or adequate parking.

Janisse and Tallman (2001:1) state that the teams with the highest levels of physician and patient satisfaction are distinguished by rich interdependence, in which all team

members actively support each other on a daily basis. It is also noted that a healthy work environment benefits all employees and increases performance, employee satisfaction and, ultimately, patient care. Therefore, it is highly important to make the healthcare institution a great place to work. Therefore, when organisations improve their working environments in ways that promote health, absenteeism of nurses will decrease. In addition, Kraus (1994:51) suggests that output quality may be better in environments where workers feel safe from accidents and injuries.

1.5.4 Job identification

According to Muller *et al.* (2005:255), job identification includes items such as post level, personnel number, departmental location of the job, the person to whom the incumbent reports and the date on which the job description was last revised. In this study, job identification refers to a written document that summarizes the major duties and responsibilities of the position, job specifications and requirements to perform the job, as well as the working conditions.

Job identification is crucial in both public and private healthcare environments. Healthcare professionals, including nursing managers, and professional nurses, have to register with specific health boards in South Africa. The registered nursing professional, for example, is subject to the ethical codes of the Professional Association of Nurses and the Democratic Nursing Organization of South Africa and Hospersa, as well as the South African Nursing Council, which controls the standards of nursing practice (Du Toit, & Van Staden, 2005:162). Therefore, nurses are expected to carry out duties according to the post level and job description. Healthcare personnel uniform, name tags and bars according to different ranks should be clearly defined. This makes it easier for the patient, visitor and other healthcare workers to identify healthcare personnel according to their different roles.

1.5.5 Resources

According to Muller *et al.* (2005:478), resources include financial and information resources, materials, buildings, equipment and even intellectual property. Moreover, a source is perceived as a basis of supply, support or aid, especially one that can be

readily drawn upon when needed, as well as anything required to satisfy human needs (Schultz *et al.* 2003:240). Reilling *et al.* (2008:167) suggest that fundamental changes in healthcare processes, culture, and the physical environment are necessary to address problems and errors in healthcare, and serious safety issues; these need to be aligned, so that nurses and the resources that support them are set up for enabling safe care.

Reiling *et al.* (2008:167) further argue that the facility design of the hospital, for example, with its equipment and technology, has not generally taken into account the impact on the quality and safety of patients; yet, an excessive sum of money is and will be invested in healthcare facilities annually. Moreover, Mphande (2013:2) suggests that legal representatives are concerned that government resources might have been abused.

1.5.5.1 Technology and equipment

Schultz, Bagraim, Potgieter, Viegde and Werner (2003:240) refer to technology at the organizational level as a term used to describe the combination of human resources, raw materials and equipment that workers use to convert raw materials into finished goods and services. Du Plessis and Rousseau (1999:316) suggest that technology is an attempt to ascertain the quality of a firm by using modern technology during service delivery. There is a growing demand throughout the world for the use of more technological equipment in the delivery of health services.

The selection of the best available equipment often saves time and money, as a result of infrequent breakdowns. Simultaneous expenditures for spare parts, service and maintenance, selecting and procuring healthcare equipment that is appropriate, efficient and safe, remain a major challenge to the South African government. Therefore, health service planners, hospital administrators, physicians and other healthcare professionals need to understand the forces that control healthcare delivery systems. Therefore, it is imperative to understand the role of technology management in order to communicate it effectively to health policy makers. There is also a need for suitable infrastructural arrangements in order to make the role of technology more competitive and clinically efficacious. Du Toit and Van Staden (2005:173) note that

admission to a formal hospital setting means that, during the course of the treatment, a patient is exposed to highly sophisticated medical technology. This includes the use and adaptation of highly sophisticated health technology resources.

On the other hand, Reilling *et al.* (2008:167-168) suggest that the design of a facility or structure with its immovable and transferrable components can have a significant impact on human performance, especially on the health and safety of employees, patients and families. As a consequence, the effective management of technology directly contributes to improving patient health outcomes.

1.5.6 Work conditions

The Ali, Ali and Adan (2013:67) refers to work conditions as the conditions in which an individual or staff works, including facilities, services, comforts, conveniences, physical environment, stress and noise levels, degree of safety or danger, and many others. Parent-thirion, Vermeylen, van Houten, Lyly-Yrjananinen, Biletta & Cabrita (2012:160) refers to working conditions as the result of the interaction between a job, the work, the organisation and an individual. Furthermore, working conditions involve the working environment and the following aspects of an employee's terms and conditions of employment: training, skills and employability, health, safety and wellbeing, remuneration, working time and work-life balance.

The nature of the work conditions plays a role in persuading health personnel to leave or stay in their working environments. Work conditions, for the purpose of this study, refers to the conditions in which an individual or staff member works, including facilities, services, comforts, conveniences, physical environment, stress and noise levels, degree of safety or danger, and aspects of an employee's terms and conditions of employment.

Government, for example, has launched Revitalizing Health and Safety, a strategy intended to find new ways of improving work conditions by reducing workplace injuries and ill health. Furthermore, Pera and Van Tonder (2005:87) note that job satisfaction is essential for good staff relations. For example, if employees are exposed to appropriate working conditions, it will assist in fostering happiness and, in the process,

enhance their motivation. Therefore, it is crucial that work conditions be considered a priority in the public sector.

1.5.7 Administrative support

Perrine (2010) and Du Toit and Van Staden (2005:161) concur that administrative support refers to all assistance from human resources, clerical duties, procurement, information technology and payments sections to support the core functions of clinical healthcare in the workplace. Administrative personnel are responsible for securing resources (for example, personnel and supplies) necessary for the functioning of the professional personnel (Du Toit & Van Staden, 2005:161). The public health sector serves the majority of the population, but is chronically underfunded and understaffed. Hence, the shortage of staff has a negative impact on employee motivation. The worker faces an extremely high work load and high emotional demands due to the amount of responsibility each employee has. The aim of this study is to examine ways in which the efficiency of administrative support of healthcare personnel in the public health sector can be promoted and increased. Administrative support, in this study, is defined as all support from human resources, procurement, information technology and the payments section to support the core functions of healthcare institutions.

1.5.8 Employee commitment and safety measures

This section provides a series of comprehensive discussions on employee commitment and safety measures.

1.5.8.1 Employee commitment

Employee Commitment is defined as the psychological attachment felt by a person for the organisation (He, Li & Lai, 2011:596). Furthermore, employee commitment also entails the use of an individual skill and expertise for the advancement of the organisation. Furthermore, committed individuals believe in and accept organisational goals and values. Fiorito, Bozeman, Young and Meurs (2007:186) refer to employee commitment as one of the key determinants of organisational effectiveness and productivity. Furthermore, commitment refers to employees' willingness to exert

considerable effort on behalf of the organisation, and having a strong desire to maintain membership thereof (He, Li & Lai, 2011:596). In this study, employee commitment is characterized by a strong belief in and acceptance of the goals and values of the organisation. Furthermore, for the purpose of this study, employee commitment is defined as healthcare workers/professionals who are fully engaged in and adhere to the implementation of safety measures in the public healthcare sector.

Laschinger and Finegan (2005:6) as well as Lok, Westwood and Crawford (2005:6) note that employees are considered to be committed to their organizations if they show willingness to continue to be associated with their organization and make great efforts in achieving organizational objectives. In addition, committed employees can be described as follows: they work hard to improve themselves, increasing their value to the employer; they make personal sacrifices to ensure the organization's success; they are productive; they recommend their organization as a good place to work, as their organization's products and services are the best a customer can get; they have pride in their work and organization. In addition, they intend to stay in the organization, even when offered better incentives elsewhere. Hence, they are needed by organizations so as to achieve their goals and objectives in an efficient and effective way. Lockwood (2007:1) maintains that employees with the highest level of commitment perform better and are less likely to leave the organization.

1.5.8.2 Safety measures

Safety measures are the activities and precautions taken to improve the safety, health and welfare of people engaged in work or employment by reducing risks related to human health in the workplace (Alli, 2008:46; Oakes, 2009). According to NIDIECT (2016:1), employers are responsible for the health and safety of their employees and any visitors to their premises, such as customers, suppliers and the general public. In addition to these duties, there are regulations that deal with particular hazards, especially for industries where hazards are particularly high.

The Health and Safety Authority (2016:2) suggests that accidents, ill health and incidents generally arise from failures of control and involve multiple contributory elements. The immediate cause may be a human or technical failure, but such events

usually arise from organisational failings, which are the responsibility of management. Successful safety and health management systems aim to utilise the strengths of managers and other employees. The organisation needs to understand how human factors affect safety and health performance. Moreover, management, for example, are primarily responsible for safety and health management in the organisations.

1.5.9 Employee retention

Connell and Phillips (2004:7) refer to employee retention as an effort by a business to maintain a working environment that encourages current staff to remain with the company. In this study, employee retention is referred to as the ability of management to encourage employees to remain in the organization for a long period of time. Ellis (2013:6) reports that there is truth that there is a shortage of staff, as many health professionals are resigning and are not replaced. Many South African health employees leave for better jobs abroad, in spite of the high quality of training they have received.

In addition, Ellis (2013:6) reports that factors that influence employees' career intentions include: income, working conditions, risk of contracting infections, risk of injury at work, hours of work, work load and work-related stress. Furthermore, other factors that influence employees' career intentions are paid leave days, resources, personal growth and development opportunities, ongoing training opportunities, advancement and promotion opportunities, relations with co-workers and relations with supervisors. These are push factors that make healthcare professionals leave the country. These factors attract healthcare professionals to employment whilst other factors, reflect that the conditions of service in general are strong determinants of the movement of health employees.

Nurses are critical in the provision of health services because they work closely and continuously with the patient. It is critically important for the Department of Health to ensure that skilled health professionals, such as doctors, pharmacists and nurses, are retained and the staff turnover is appropriately managed. Muller *et al.* (2005:293) advocate that health and safety employees should be an important aspect of managing employment relations, and they deserve management's full commitment.

1.5.10 Organisational performance

For the purpose of the study, organisational performance is defined as an effort that encompasses the actual output of an organisation, as measured against its goals and objectives for survival and prosperity. Organisations are in dire need of highly committed employees so that they are able to achieve their goals and objectives in an efficient and effective way. Schultz *et al.* (2003:75) suggest the following as some of the factors that may affect performance in an organization: leadership, structure of working units, systems and procedures, enabling support, empowerment, an opportunity to perform, job design, employee commitment to the organization, rewards such as pay and benefits, and others. Against this backdrop, and for the success of the organization, it is important to acknowledge that employee commitment is vital for organisational performance in public health institutions. Therefore, employee commitment and organizational performance can be enhanced by a healthy and safe environment for employees.

1.6 CLARIFICATION OF IMPORTANT CONCEPTS

Commitment: Meyer and Herscovitch (2001:299) describe commitment as a stabilising force that acts to maintain behavioural direction when expectancy/equity conditions are not met and do not function. Further, Uygur and Kilic (2009:113) maintain that commitment encompasses the acceptance of organisational goals and strong belief in these goals; willingness to perform demonstrated efforts on behalf of the organisation; and having a definite desire to maintain organisational membership.

Safety climate: Lu and Yang (2011:330) define safety climate as the coherent set of perceptions that employees have regarding safety in the organisation. On the other hand, it is also a specific form of organisational climate. This describes individual perceptions of the value of safety in the work environment. DeJoy (1996:61) notes that the safety climate could serve as a guiding paradigm for cause and effect within the context of workplace safety.

Workplace safety: According to the Nonprofit Risk Management Center (2008), workplace safety refers to the prevention of injury and illness to employees and

volunteers in the workplace. Cagno, Giulio and Trucco (2003:227) suggest that the aim of an effective safety system is to prevent and/or minimize the occurrences of accidents and hazards that threaten individuals in the workplace. It is, therefore, vital that all factors that control employees' safety must be integrated from a holistic perspective, in order for this aim to be monitored and achieved. The research findings of a study conducted by Parboteeah and Kapp (2008) suggest that the lifestyle of an individual significantly affects their safety and health in the workplace. However, Rothmann (2011) states that the employer's general duty is clearly framed to provide a working environment that is safe and without risk to the health of its employees.

Public Health: Wilson & Keelan (2009:10) describe public health as the term given to a movement within public health that aims to make the field more accessible to the general public and more user-driven. Whilst, Winslow (1920:23) defines public health as the science and art of preventing disease, prolonging life and promoting health through the organized efforts and informed choices of society, public and private organizations, communities and individuals.

Healthcare workers: Healthcare workers are people operating in all branches of healthcare and whose primary goal is to provide medical care and the improvement of patients' health (World Health Organisation (WHO), 2006:1-2). Furthermore, Dal Poz, Drager, Kinfu and Kunjumen (2007:1) describe healthcare workers as people who intend to promote or improve the health of the population.

1.7 PROPOSED RESEARCH DESIGN AND METHODS

Zikmund (2003:65) describes research design as a master plan specifying the methods and procedures for collecting and analysing the necessary information. In addition, Gray (2009:131) defines research design as the overarching plan for the collection, measurement and analysis of data. Rajasekar, Philominathan and Chinnathambi (2013:5) define research methodology as a systematic way to solve a problem. It is also defined as a study of procedures through which research work is described and explained, and it entails predicting phenomena. Both the structure of the research problem and the plan of investigation used to obtain empirical evidence

on relations of the problem are expressed in a research design. Thus, a survey research design was adopted for this study.

1.7.1 Research paradigm

Creswell (2014:32) confirms that, in research, there are three available research methods for the researcher to follow: qualitative, quantitative, and mixed methods.

Qualitative research is an approach for exploring and understanding the meaning that individuals or groups ascribe to a social or human problem. The process of research involves emerging questions and procedures, data typically collected in the participant's setting, data analysis inductively building from particular to general themes, and the researcher interpreting the meaning of the data. The final written report has a flexible structure. This approach supports a way of looking at research that honours an inductive style, a focus on individual meaning, and the importance of rendering the complexity of a situation.

Quantitative research is an approach for testing objective theories by examining the relationship among variables. These variables, in turn, can be measured, typically on instruments, so that numbered data can be analyzed using statistical procedures. The final written report has a set structure: introduction, literature and theory, methods, results, and discussion. This approach supports notions based on assumptions about testing theories deductively, building in protection against bias, controlling for alternative explanations, and being able to generalize and replicate the findings.

Mixed methods research is an approach to inquiry that involves collecting both quantitative and qualitative data, integrating the two forms of data, and using distinct designs that may involve philosophical assumptions and theoretical frameworks. The core assumption of this form of inquiry is that the combination of qualitative and quantitative approaches provides a more complete understanding of a research problem than either approach alone.

In this study, the research design utilised is quantitative in nature. It will explore and measure the situation on the basis of statistical information, such as how employees

commit themselves to the implementation of safety measures in the public health institutions (Fidel 2008; Matveev, 2002). Furthermore, the quantitative research method is characterised by the utilisation of more representative respondent samples and it works well in conclusive research designs and strategies. These are applicable in this study, wherein information obtained from samples is representative of the population (Struwig & Stead, 2013:18). Leedy and Ormord (2001:101) suggest that the quantitative approach usually ends with confirmation of hypotheses that were tested. Therefore, on the basis of this notion, the fundamental purpose of quantitative research, in this study, was to test hypotheses.

1.7.2 Population

According to Gray (2009:148), a population can be defined as the total number of possible units or elements that are included in a study. Diamantopoulos and Schlegelmich (2000:10) and Frazer and Lawley (2000:10) define population as a group of elements sharing the same sentiment, for instance, the set of possible respondents for the research situation in which the researchers are interested. The health sector comprises of various categories of professional health employees within nine provinces in SA. These include medical doctors, nurses, dentists, pharmacists and paramedical staff, just to name a few and the most dominant ones. The population of this study consisted of nurses at all levels of public healthcare institutions from two provinces, namely, the Eastern Cape and KwaZulu-Natal in all levels of care hospitals.

1.7.3 Sampling

Tashakkori and Teddlie (2010:356) refer to sampling as the process of selecting a sample unit from a larger group or population of interest. Its purpose is to address the study's research. Singh and Masuku (2014:3) support this notion by maintaining that sampling is related to the selection of a subset of individuals from within a population in order to estimate the characteristics of the whole population. In addition, sampling procedures enable researchers to perform data collection faster and at a lower cost. Zikmund, Babin, Carr and Griffin (2013:392) maintain that the main alternative sampling plans may be grouped into two categories: probability techniques and nonprobability techniques.

Zikmund *et al.* (2013:392-393) refer to probability sampling as a sampling technique in which every member of the population has a known, non-zero probability of selection. The simple random sample, in which each member of the population has an equal probability of being selected, is the best-known probability sample. According to Zikmund *et al.* (2009:393), nonprobability sampling refers to a sampling technique in which units of the sample are selected on the basis of personal judgment or convenience; the probability of any particular member of the population being chosen is unknown. Probability sampling is normally used by quantitative researchers.

The simple random sample, in which each member of the population has an equal probability of being selected, is the best-known probability sample. In this study, a pilot study was conducted where a stratified random sample of 40 nurses of all levels – assistant nurses, senior assistant nurses, enrolled nurses, senior enrolled nurses and professional nurses – located in all five hospital categories employed by public in the South African provinces was selected from the target population. This would ensure that the final sampling frame was representative that the researcher wanted to include, on a pro-rata basis with the actual population.

Furthermore, Kumar (2005:151) specifies that researchers can utilise probability sampling, non-probability sampling and mixed sampling to select a sample from any given population. Therefore, of the non-probability sampling techniques, the convenience sampling method was utilised to select the sample unit within each strata. According to Etikan, Musa and Alkassim (2015:1), convenience sampling refers to a type of non-probability sampling that allows respondents to be considered in the study on the basis of accessibility, geographical proximity, availability, and willingness to participate.

1.7.4 Data collection

The data collection method entails the procedures, techniques and tools that will be used by the researcher when collecting data from the sampled participants.

1.7.4.1 Primary data

According to Babbie (2005), primary data can either verify or nullify secondary data as it is a timely source of current information. Primary data is, therefore, necessitated in any study. According to Collis and Hussey (2009), primary data is original data collected by the researcher from the source by means of conducting experiments, surveys, interviews or focus groups. Self-constructed and self-administered questionnaires were the tools used to collect the primary data for this study. The questionnaires were distributed to the respondents and were collected by the researcher. This method of data collection has proven to be a costly and tiresome exercise, as the respondents were too far apart geographically. Survey was conducted by means of a questionnaire that was distributed to and completed by various nurses of all levels employed in all hospital categories in the public health institutions within the two provinces, at different stages, with successful results.

1.7.4.2 Secondary data

Collis and Hussey (2009) note that secondary data is data that has already been collected and published by someone else. Therefore, it is data collected from an existing source, is historical and is already assembled. This data is primarily collected from publications, books, databases, reports and internal records. A comprehensive literature search was done using the NMMU Library's online databases, including EBSCO Host, Sabinet, Science Direct and Business Source Premier. Published books and journals were accessed as sources of secondary information.

1.7.5 Questionnaire design

A questionnaire is also referred as a set of questions used to gather information in a survey (Mavodza, 2010:110). In this study, the questionnaire was used to collect vast quantities of data from a variety of respondents. The questionnaire was designed in such a manner as to make it easy to generate knowledge on how committed employees are to the implementation of safety measures in public health institutions.

Section A of the questionnaire consisted of a series of questions on a nominal scale, meant for statements relating to the variables identified in this study: migration, role considerations, health environment, job identification, resources, work conditions, administrative support, employee retention and organisational performance. Self-developed instruments were used for those variables for which there were no pre-existing measuring instruments. A sufficient amount of self-developed items were provided so that, if some of these instruments proved to be unnecessary or unreliable, there were enough items available to complete the statistical analysis.

Section B of the questionnaire consisted of a nominal scale of measurement that dealt with variables that are non-numeric, or where the numbers have no value. In this study, demographical information which pertains to gender, age, race, educational level, position in the organisation and tenure were used on this nominal scale.

1.7.6 Pilot study

According to Gray (2009:579), a pilot survey is described as a small-scale survey carried out before a large-scale one in order to evaluate the processes and research tools, such as questionnaires, of the study. Pilot testing of the questionnaire was performed prior to the collection of data. A pilot study was conducted in the five hospital categories within the public health institutions located in two provinces, namely, the Eastern Cape and KwaZulu-Natal. The presence of the interviewer assisted to resolve some questions raised by the respondents, by clarifying the meaning of the items in the questionnaire. This improved the quality of the questionnaire and the respondents participated with confidence. The validity of the questionnaire and the reliability of the collected data were assessed through the pilot study. The questionnaire was administered to 40 respondents in two provinces; these respondents are not going to be part of the empirical survey.

1.7.7 Data analysis

For this study, data was analysed using the quantitative methods of data analysis. The techniques that were used allowed the researcher to summarize and express, quantitatively, the strengths of relationships. The analysis of the data was conducted

in four stages. First, Cronbach Alpha correlation coefficients that are calculated in order to perform and assess the internal reliability and consistency of the research instrument (questionnaire) with reference to the independent variables (migration, role considerations, health environment, job identification, resources, working conditions and administrative support) and the dependent variables (employee commitment, employee retention and organisational performance). Second, an exploratory factor analysis was performed to assess the discriminant and construct validity of the research instrument. Third, descriptive statistics was used to provide an overall, coherent and simple picture of a large amount of data using both frequency tables and means. The final data analysis stage comprises simple linear regression analysis, which made it possible for the researcher to measure the mathematical variance of the relationship between the independent variables and the dependent variables. The STATISTICA Version 12 computer programme was utilised to analyse the data in this study.

1.7.8 Reliability and validity of the measuring instrument

Joppe (2000), cited in Golafshani (2003:598), define reliability as the extent to which results are consistent over time. Further, an accurate representation of the total population under study is referred to as reliability and, if the results of a study can be reproduced under a similar methodology, then the research instrument is considered to be reliable. Heale and Twycross (2015:66) maintain that reliability relates to the consistency of a measure. Heale and Twycross (2015) further suggest that a participant completing an instrument meant to measure motivation should have approximately the same responses each time the test is completed.

Furthermore, Heale and Twycross (2015) suggest that an estimate of reliability can be achieved through different measures. McDaniel and Gates (2006:222) postulate that there are three types of reliability, namely, test-retest, equivalent forms and internal consistency. Internal consistency was utilised to assess the reliability of the measuring instrument used in this study. Internal consistency reliability refers to the extent to which items measure the same construct (Zeanah, 2012:243). Furthermore, Cronbach's alpha is used to measure the internal consistency reliability of the research instrument. Heale and Twycross (2015:66) refer to validity as the extent to which a

concept is accurately measured in a quantitative study. Furthermore, the validity of the measuring instrument ensures the correctness and credibility of the conclusion drawn from a study (Bryman, 2012:47). Golafshani (2003:598) suggests that validity determines whether the research instrument truly measures what it is intended to measure. In order to assess the validity of the measuring instrument in this study, content, construct, discriminant and convergent validity were utilised.

1.8 THE PURPOSE OF THE RESEARCH

The purpose of the study is to promote employee commitment to the implementation of safety measures in the public health institutions and to highlight the need for and benefits of safety in the work environment.

1.9 SIGNIFICANCE OF THE RESEARCH

The findings of the study will enable the public health institutions to identify the need for and make informed decisions about the adoption of effective safety measures so as to improve the healthcare system. The study will help to identify the different perceptions of healthcare employees (nurses) regarding the various safety measure hindrances that might obstruct the objectives of healthcare institutions. The study will help to establish the role of nurses with regard to their commitment and vigilance in ensuring their safety and health in the workplace. Improved healthy and safe environments will also make employees, especially registered professional nurses, content in the work environment and it might reduce the temptation to leave their country of origin for better economic benefits. This will result in minimal expenditure or reduced costs in training new health employees (nurses); in addition, organisational performance and productivity will be improved. The study will develop a comprehensive framework for the recommendations, guidelines and policies of safety measures in public health institutions.

1.10 PRIOR RESEARCH

An intensive review of literature was carefully carried out to investigate previous research that has been done on the subject of this study, in order to avoid duplication or to find a basis for improvement in the area of study. Several studies have found organizational factors to be the most significant predictor of safe work behaviors. Thus far, studies have shown that compliance with standard precautions was increased when employees felt that their institution had a strong commitment to safety and when institutions targeted interventions aimed at improving organizational support for employee health and safety. Also, safety culture has an important influence on the implementation of training skills and knowledge. However, the responsibility still lies with management to ensure that employees feel an obligation to employing health and safety measures in the workplace. This indicates that the focus is on management commitment to implementing health and safety measures in the work environment. An attempt has been made by various researchers, such as He *et al.* (2011), who conducted a study on safe climate and employee commitment, as well as customer satisfaction in the entertainment industry.

This study contributed to the theories of service climate and customer satisfaction rather than employee commitment. However, no empirical findings have thoroughly tapped into the influence of employee commitment to the implementation of safety measures in institutions within the health sector. Therefore, there is a gap in the literature regarding the influence on employee commitment to the implementation of health and safety measures in the workplace. This study also seeks to investigate the impact and benefits of employee commitment to the implementation of safety measures in health institutions.

1.11 PLAN OF THE RESEARCH STUDY

The study will be structured in the format outlined below:

Chapter One: Introduction and background to the research

This chapter outlines the problem statement, research objectives, research questions, hypotheses and methodology of the study.

Chapter Two: Employee commitment overview

This chapter explores and analyses various definitions and concepts related to employee commitment, and formulates a clear theoretical foundation of employee commitment in the workplace.

Chapter Three: Safety implications in the healthcare environment

This chapter provides an overview of safety implications in the healthcare environment.

Chapter Four: Impact of implementing safety measures in the healthcare environment

This chapter provides an investigation into and a discussion of the impact of implementing safety measures in the healthcare environment.

Chapter Five: Occupational health behaviour

This chapter presents an overview of the occupational health behaviour amongst nurses.

Chapter Six: A model for employee commitment towards the implementation of safety measures in public healthcare institutions

This chapter presents a model for employee commitment to the implementation of safety measures in public healthcare institutions. This chapter also provides the empirical findings of previous studies and results supporting the hypotheses formulated in this study.

Chapter Seven: Research design and methodology

The chapter provides a discussion of the research methodology that has been utilised to carry out the study.

Chapter Eight: Empirical evaluation of employee commitment to the implementation of safety measures in healthcare institutions

This chapter provides the empirical evaluation of employee commitment to the implementation of safety measures in healthcare institutions.

Chapter Nine: Summary, conclusions and recommendations

This chapter will present the summary, managerial implications, conclusions and recommendations of the study, based on the empirical findings thereof.

CHAPTER TWO

OVERVIEW OF EMPLOYEE COMMITMENT

2.1 INTRODUCTION

The aim of the study is to establish and explore theories and factors that could enhance employee commitment towards implementing safety measures in public healthcare institutions. In order to deal with the research gaps in this area, the current chapter explores and analyses various definitions and concepts related to employee commitment. In this regard, the chapter also works to formulate a clear theoretical foundation of employee commitment in the workplace. Furthermore, the chapter provides a brief outline of the importance of employee commitment and an explanation of the benefits and challenges of employee commitment in the workplace. Furthermore, this chapter assesses and evaluates role considerations as well as factors influencing employee commitment in the workplace.

2.2 COMMITMENT AS A CONCEPT

In order to develop a clear understanding of the core concept of this study, one has to define 'commitment' as a specific background to the healthcare environment.

2.2.1 Commitment

Various authors provide a variety of definitions for commitment. For instance, Meyer and Herscovitch (2001:301) and Dannhauser (2007:48) define commitment as a force that binds an individual to a course of action relevant to one or more targets. In this regard, Uygur and Kilic (2009:113) state that commitment encompasses the acceptance of, and a strong belief in, the organisational goals; and having a definite desire to maintain organisational membership. Furthermore, Martin (2006:45) posits that employee commitment entails the use of an individual's skill and expertise for the advancement of the organisation. From these definitions, it is clear that commitment benefits the organisation as well as the employee whose skill has been identified and used. In this regard, commitment has to be directed towards the organisational goals and, for that reason, it is complex.

It is apparent, from the discussion, that commitment plays a central role in the healthcare environment, due to the fact that employees become motivated and enhance their performance. Thus, the goals of the organisation will be attained through commitment. Moreover, employees become committed to the implementation of safety measures in the healthcare environment. Scholars identified two different types of commitment: organisational commitment and employee commitment, both of which are outlined below.

2.2.2 Organisational commitment

Berry (2010:74) defines organisational commitment as an individual's personal desire to remain with an organisation. Concurrently, Maheshwari, Bhat and Saha (2008:148), Kanchana and Panchanathan (2012:13) and Agyemang (2013:2) refer to organisational commitment as employees' loyalty to the organisation, and their willingness to work on behalf of the organisation. Further, Keskes (2014:260) and You, Huang, Wang, Liu, Lin and Tseng (2013:68) posit that organisational commitment is the strength that an individual recognizes, and participates in, in an organisation. This argument is positively linked to the experience of employee absenteeism at work.

According to O'Driscoll, Pierce and Coghlan (2006:386) and Riketta and van Dick (2005:490), a higher level of organisational commitment defines employee loyalty and could thus have positive consequences. Examples of these are increased employee performance, less absenteeism and reduced employee turnover for the organisation and individual, thus, positive productivity (Jasawalla & Sashittal, 2003:27; Brooks, 2002:566). The main drivers in organisational commitment, as suggested by Kanchana and Panchanathan (2012:35), are:

- A strong psychological attachment and acceptance of the organisation.
- A willingness to exert considerable effort on behalf of the organisation.
- A strong desire to remain in the organisation.

This discussion indicates that, when they are committed, employees become part of the organisation. Thus, employees increase their performance and participation, in addition to which they commit to safety measures in their healthcare environment.

2.2.3 Employee commitment

Having identified drivers to commitment, one wonders what these could be. He, Li and Lai (2011:596) posit that employee commitment is a psychological attachment, felt by a person to the organisation for which they work. He *et al.* (2011) further explain that committed individuals believe in and accept organisational goals and values. Moreover, Robinson (2003:1) views employee commitment as a one-dimensional construct that can be enhanced by a particular human resource policy. In conjunction with this notion, Martin (2006:40) states that the goal of employee commitment entails guaranteeing commitment to the organisation. This notion is based on the assumption that committed employees will be more satisfied, productive and adaptable. For this reason, according to Meyer and Herscovitch (2001:301), employee commitment is now widely recognised as being vital to the experience of work and organisational performance.

Employee commitment, in the context of this study, is characterized by a strong belief in and acceptance of the goals and values of the organisation. Furthermore, employees' willingness to exert considerable effort on behalf of the organisation, coupled with a strong desire to maintain membership of it, also adds value to employee commitment. This indicates that it is possible for employees in the healthcare environment to be committed and identify with the public healthcare institutions that they serve. Committed nurses, for example, will report to duty and have a desire to willingly perform their responsibilities (Bakker & Schafeli, 2008:147). Such commitment will encourage the nurses to work beyond their stipulated working hours, should the need arise.

Jafaragae, Parvizy, Mehrdad and Rafii (2012:478) report that a plethora of literature and research investigations in management texts and the social sciences have presented discussions and findings on employee commitment. In addition, there is a dearth of literature on professional commitment in nursing, and very few empirical

findings on the topic. According to Jafaragae *et al.* (2012:472), commitment is a term that is fundamental to nursing professions, and it has two distinct elements. This means that commitment in nursing refers to the loyalty of nurses, and their tendency to remain in the profession. It further refers to the ability of nurses to demonstrate a high level of professionalism regarding healthcare issues and challenges.

Commitment is perceived to be an important criterion for positive employee relations in healthcare institutions. In other words, commitment has a positive effect on job satisfaction, retention and the propensity to work long hours. This implies that committed nurses are more likely to provide quality care and treatment to patients. According to Jafaragae *et al.* (2012:472), nurses who are committed to their health institutions will show satisfaction in their jobs, and it will be clear that they intend to remain employed with their institution. Chang, Du and Huang (2006:172) postulate that the potential risks and hazards evident in the health environment have a negative impact on nurses' commitment of to their professions and to the institutions to which they belong. This implies that an unsafe health environment reduces the commitment level of nurses and increases their intention to leave. Furthermore, a high turnover rate of nurses has a negative effect on organisational effectiveness, productivity and organisational cost.

2.3 TYPES OF EMPLOYEE COMMITMENT

The different types of employee commitment include affective, continuance and normative commitment.

2.3.1 Affective commitment

Dannhauser (2007:48) refers to affective commitment as employees' emotional attachment to, identification with, and involvement in the organisation. Rhoades, Eisenberger and Armeli (2001:825) postulate that affective commitment is based on social exchange process and support from the organisation. Su, Baird and Blair (2009:139), however, emphasise that the degree of an employee's affective commitment is dependent upon their attitude towards the organisation, which may be influenced by their organisational environment.

Landry and Panaccio (2010:10) advance the definition of affective commitment by adding the aspect of attitudinal change of employees towards management within the organisation. In other words, employees become emotionally attached with their organisation and they seek to be involved in a work relationship with their supervisors on the basis of a sense of identification. Dannhauser (2007:173) supports the view that employees with strong affective commitment make a greater contribution to the accomplishment of the organisational goals. In other words, employers should regard their employees as the organisation's best asset, therefore, their care and support should be a priority. Employers should also know their employees so that there is interaction which influences commitment. There is also a significant impact on how employees view their work when they are respected by their employers. In this regard, nurses will be loyal to their environment, which will result in the efforts of employees extending beyond their job descriptions.

Employees are vital in an organisation and should be treated as its best assets by giving them support and making them a priority. Therefore, employers should know their employees. Furthermore, managers should ensure that the policies and goals of the organisation are clearly defined. The interaction between managers and employees can influence commitment and inspire increased performance.

Meyer, Allen and Smith (1993:538) argue that strong affective commitment to an organisation arises because employees share values with both the organisation and its members; it is therefore predicted to be positively associated with job performance. Moreover, people assume that in exchange for their commitment, they will get something of value from the organisation. Ooi, Safa and Arumugam (2006:37) established a positive association between employee participation and affective commitment. This means that the employee is crucial in an organisation. Therefore, much attention is required to get the best out of an organisation's employees. Thus, performance is increased and employees become involved in their organisation. Therefore, employees with high participation and affective commitment have greater work focus and make the organisation an essential part of their lives.

Mehta and Mehashwari (2013:7) suggest that if employees' affective commitment diminishes, the employees could leave the organisation and staff turnover could increase, thus affecting cost of employment and organisational stability. Similarly, destructive leadership is inversely related to workers' affective commitment, and positively related to the workers' intent to leave their organisation (Weaver & Yancy, 2010:104). Therefore, if affective commitment in employees does not exist, the organisation will experience a loss in suitable and exceptional employees who have significant talent. Therefore, employee commitment has to be monitored frequently in order to be sustainable.

Karia and Ahmad (2000:66) and Ooi *et al.* (2006:37) found organisational trust to be a significant predictor of organisational commitment and, specifically, affective commitment. The monitoring of affective commitment could be guided by organisational trust. Furthermore, Mayfield and Mayfield (2002:90) observed that communication mechanisms, work experience, and role clarity, are related to the feeling of belonging and trust which can further be linked to affective commitment (Brown, McHardy, McNabb & Taylor, 2011:6). Although, trust is not the only aspect related to affective commitment, it is still the most needed.

This indicates that, in order to enhance employee commitment, the quality of the healthcare environment needs to be increased. Moreover, staff health, safety, effectiveness, satisfaction and commitment are the output of improved quality. Employee behavior is influenced by the healthcare environment. Employee commitment is also influenced by the healthcare environment, which includes supervisor support, openness, communication, teamwork, quality of work spaces, and quality of patient space, amongst other factors. Therefore, from these factors, it is evident that employees commit themselves to the implementation of safety measures in the public healthcare environment.

2.3.2 Continuance commitment

Dixit and Bhati (2012:38) and Stinglhamber, Marique, Caesens, Desmette, Hansez, Hanin and Bertrand (2015:67) define continuance commitment as the costs associated with leaving an organisation. This indicates that continuance commitment is when an

employee feels that they are tied to the organisation rather than staying in an organisation. Moreover, continuance commitment is viewed as corresponding to external commitment and is reflected through the material benefits and rewards to be gained by employees (Clark, 2003:21). This could also happen in the case of healthcare workers/professionals who would like to escape from unsafe working conditions but are reluctant to incur any economic costs. Committed employees in public health institutions would have no choice but to faithfully adhere to the safety measures that are in place (Koocher & Keith-Spiegel, 2012:84).

2.3.3 Normative commitment

Argyris (1998:98) and Landry and Panaccio (2010:285) refer to normative commitment as a sense of loyalty to the organisation. Keskes (2014:26) described normative commitment as employees' feelings of moral obligation to an organisation, which pushes employees to remain in the organisation. Normative commitment can also be described as an individual's belief that one has a moral obligation to engage in a mode of conduct reflecting loyalty and duty in all social situations in which one has significant personal involvement. In this regard, particular investments offered to employees, such as bursaries, may oblige them to commit themselves to the organisation until the debt has been paid (Landry & Pannacio, 2010:385).

Finally, normative commitment is experienced as a sense of obligation to remain with the organisation (McMahon, 2007:2). Most healthcare employees, such as doctors who received bursaries from the government, may be obliged to serve in public healthcare facilities. Generally speaking, committed healthcare employees such as nurses, feel a sense of duty to work towards implementing safety measures in public health institutions. They do not think it would be right to oppose the organisation and these employees think it would be irresponsible to resist committing to the implementation of safety measures in public health institutions (Bauman & Skitka, 2012:3; Vance, 2006:48).

Vianen, Shen and Chuang (2010:906) view organisational commitment as enhancing performance. Highly committed healthcare workers/professionals are needed by

healthcare institutions in order to achieve their goals and objectives in an efficient and effective way (Asiedu, Sarfu & Adjei, 2014:290).

2.4 IMPORTANCE OF EMPLOYEE COMMITMENT IN THE WORKPLACE

Mehta and Maheshwari (2013:11) note that having highly committed employees is the key to sustainable competitive advantage in the current competitive business environment. The efficiency and productivity of human capital depends upon employee commitment. It is, therefore, the reason for any institution to consider its human resources as its most valuable asset in order to provide sustainable service delivery. In the fast-changing world there is so much competition that puts pressure on employees in terms of job security.

Cooper-Hakim and Viswesvaran (2005:241) and Mayera, Stanley and Parfyonovaa (2012:3) suggest that committed employees perform effectively and are good organisational citizens (Fedor, Caldwell & Herold, 2006:1). In addition, the organisations try to employ suitable employees in order to build sustainable organisations. Furthermore, the success of any organisation can be greatly enhanced by having the ideal employees (Davidson, 2003:206; Karatepe, Yorganci & Haktanir, 2009:713).

According to Kruger and Rootman (2010:60) and Maltin (2010:323), employees who are committed to the organisation for which they work are less likely to leave or be absent at work. There are a number of factors that influence the commitment of employees; these include, among others, working conditions, managerial abilities, employee participation, company policies, recognition and feedback. In my experience as an employee, these factors have an influence on employee commitment. Generally speaking, employee commitment improves quality and safety in the healthcare environment. Moreover, the commitment of employees in the healthcare environment is key to organisational excellence, quality and safety. Therefore, nurses commit to the implementation of safety measures in the public healthcare environment.

2.5 BENEFITS OF EMPLOYEE COMMITMENT IN THE WORKPLACE

Agyemang (2013:132) and Lockwood (2007:44) state that committed employees work harder and are more likely to go beyond the requirements and expectations of their work. Furthermore, Agyemang (2013:132) and Crabtree (2005:15) suggest that employees who are committed tend to feel that their work actually positively affects their physical and psychological wellbeing. Therefore, committed employees are highly energised and resilient in performing their duties; they are dedicated to their jobs, and work with persistence while showing a willingness to invest effort. Moreover, they exhibit strong work involvement, pride, excitement, and accept challenges from their work (Agyemang, 2013:132).

Highly committed human resources practitioners foster a high quality relationship with employees based on reciprocity and inter-dependence (Sun, Aryee & Law, 2007: 558). This notion is supported by Vance (2006:48) who maintains that a good relationship with co-workers is based on mutual cooperation amongst employees. However, employees, nurses in the context of this study, commit themselves to specific individuals, including their spouses, children, parents and siblings, as well as their employers, co-workers, supervisors and clients. Hence, their behavior is affected by their commitment (Agyemang, 2013:132).

In order to strengthen the affective commitment of employees, many organisations have adopted employee support programs. According to Hartwell, Steele, French, Porter, Rodman and Zarkin (1996:804), support programs for employees cultivate commitment. Grant, Dutton and Rosso (2008:914) maintain that organisations can cultivate commitment not only by enabling employees to receive support, but also by enabling employees to give support. For example, Grant *et al.* (2008:898) and Cascio (2003:54) suggest that employee support programs could be related to the empowerment of employees in how to manage childcare and elderly care. This indicates that the incorporation of support programmes at work could enhance safety measures in the healthcare environment.

In most cases, employees who are paid less, work hard or even choose to work overtime and commit themselves in order to earn extra income (Perez & Martinez, 2009).

Generally, higher levels of employee commitment can be generated by favourable working conditions, which can impact on employees' sense of wellbeing. The productivity and job satisfaction experienced by employees is enhanced by an improved healthcare environment. Job satisfaction and commitment are driving forces for nurses to provide quality care. Therefore, employee commitment is crucial in the workplace so that employees can implement safety measures in their healthcare environment.

2.6 CHALLENGES OF EMPLOYEE COMMITMENT

Cooper and Cartright (1994:455) and Rothman (2007:49-56) argue that challenges, or rather unfavorable job conditions, can affect employee health and wellbeing. Challenges in the work environment have a potential to hinder the commitment of employees; consequently, the goals and outcomes of the organisation will be poor.

2.6.1 Occupational stress

Spieslberger, Vagg and Wasala (2003:97) and Rothman (2007:37) define occupational stress as the negative mind-body arousal resulting from physical and/or psychological job demands. Vandenbergher, Benton, Michon, Chebat, Tremblay and Fils (2007:1177) suggest that the feelings of entrapment and disgruntlement that accompany a lack of alternatives may, over time, translate into stress symptoms in healthcare institutions. Occupational stress may have a negative impact on employees who, in the context of this study, are healthcare professionals. The negative factors related to occupational stress include health problems, declining levels of customer service, absenteeism, turnover, industrial accidents; substance abuse and purposefully destructive behavior, impaired performance or reduced productivity (Rothman, 2007:49-56). Maslach, Schaufeli and Leiter (2001:397) maintain that occupational stress may be explained in terms of the gender differences of employees. Whilst, Kunzel and Schulte (1986:303) maintain that occupational stress would be higher among younger rather than older employees.

According to Samson and Daft (2005:587), job insecurity can cause employees to feel more stressed and thus lower their commitment and enthusiasm to their organisation. In addition, employees face more ambiguity in their everyday activities, which increases the experience of job insecurity and has a negative effect on employee commitment. Therefore, in order to address the implementation of safety measures which relate directly to occupational stress in healthcare institutions, employers should increase employee commitment by providing a sense of stability in the workplace.

2.6.2 Demographic characteristics of employees

Demographic characteristics include, among others, the gender, age and marital status (be it married, divorced or single) of employees. Furthermore, demographic characteristics include employees with dependents, their years of service as well as their income and educational levels.

In this light, Zaliha-Hussin *et al.* (2005:14) note that female employees focus on maternity and paternity leave, flexible working time and free commuting vehicles, which might affect the organisation in many ways, such as costs. Furthermore, as stated by Vlassoff (2007:47), women employees may tend to disclose emotional and health problems more easily, and often experience more stress than men, which thus puts more strain on the organisation. According to Kaur, Sandhu and Kaur (2010:142), young employees have higher intentions to leave their organisation and have greater willingness to relocate than older employees, which can have a negative impact on employee commitment. Vance (2006:48) maintains that employees who are single parents are much more committed due to the responsibilities they have, such as being the sole providers for their dependents. However, they might leave the organisation if they are attracted by other organisations which offer them better opportunities and incentives.

2.7 KEY FACTORS TO EMPLOYEE COMMITMENT

The key drivers of employee commitment were identified by Bragg (2002:73), cited in Oliver (2010:20) and Coetzee (2005:37), as factors which include concern for employees, training, fairness and trust.

2.7.1 Concern for employees

Smit (2010:162) maintains that it is of utmost importance to treat employees with respect. Employees should receive training, development and support from their organisations. It is vital for nurses to keep abreast of new developments in terms of the healthcare system. Training allows employees to perceive being updated as an improvement in the quality of their employment. If the adopted training is tailored to meet the organisation's strategic plan and employees' learning needs, the employees may be highly committed and motivated to participate in the training. Moreover, customised learning and training that is made available to employees will create a sense of attachment to the organisation.

2.7.2 Training

Bhavna and Swati (2012:48) and Waleed (2011:1) define training as learning, opportunities and career development. Therefore, training and support enhance current job and future opportunities (Chambel & Sobral, 2011:161). Organisations provide training and development in order to ensure that employees have the necessary skills and knowledge to perform at their maximum potential. Furthermore, employees who received greater amounts of training that is relevant and useful to their assigned duties and jobs perceive the work environment to be more supportive (Narayan & Steele-Johnson, 2007:345). Concurrently, Wong and Sohal (2002:34) believe that the success of an organisation depends on the intelligence of the employee, together with their particular knowledge, abilities and good time management skills. Employees may have a greater desire and sense of obligation to remain in organisations when they view their managers and supervisors as supportive. Therefore, nurses could be more committed in the workplace as a result of their respective organisations considering their needs, including their need for safety.

2.7.3 Fairness

Brown (2007:113) defines fairness as equal treatment that is, receiving the same services and benefits as other people. Fairness is the one aspect of social environment that may be the predictor of employee outcomes (Scheneider, Salvaggio & Subirals, 2002:220; Mahal, 2012:89). Fairness implies the elimination of one's feelings, prejudices and desires in order to achieve a proper balance between interests that are conflicting. Further, Colquitt, Conloll and Wesson (2001:425) state that fair employment exchange would motivate employees to be positive and effective at work. Moreover, employees want to be treated and rewarded in a fair and equitable manner, regardless of age, gender, geographic location, sexual orientation, or other similarly defined categories. Hence, employees remain with their organisations due to the respect and fair treatment they receive, despite the fact that they may not receive incentives such as promotion.

2.7.4 Trust

In order for employees to be committed in the workplace, employers must create an environment of trust (Vance, 2006:2; Coetzee, 2005:1). Dannhauser (2007:54) maintains that successful leaders will restore employee trust, create spirit and pride, and build employee commitment in the workplace by creating an energising work environment. Such an environment includes the following characteristics: safety and security; encourages and rewards hard work by linking employee success; nurtures, involves and develops employees; explains major reasons for major decisions and acts on employee suggestions; strengthens the organisation's culture by reminding employees of the common bonds between them, so as to join them to the organisation.

Dannhauser (2007:54) pronounces that employers who trust their employees and have a good relationship with them are able to spend more time on their own development rather than on directly overseeing their employee on a continuous basis. According to Naiker (2008:12), trust is one aspect that could be used to increase employee commitment in order to achieve the following: build a sense of pride; demonstrate the importance of retaining employees; allow employees to participate in planning changes and allow them to make decisions that affect their work; trust

employees to do what is right; allow employees to make mistakes without fear or ridicule; allow employees to learn from their mistakes and not crucify them; provide a benefit package that meets employees' family needs and demonstrates pay equity (Naiker, 2008:12).

Furthermore, highly committed employees have more trust in the organisation for which they work than do employees with lower levels of commitment. Employees who are highly committed trust that the organisation will reward them with career prospects in future. Hence, employee commitment will have positive consequences for the individual's satisfaction with their progress and prospects (Lumley, Coetzee, Tladiyane & Ferreira, 2011:100). According to Lanphear (2001:38), as cited in Coetzee (2005), supervisors and managers play a critical role in building employee commitment. Furthermore, quality supervisors and managers are prime factors in retaining quality employees. Therefore, organisations should ensure that they select, train, evaluate and reward trustworthy managers.

2.8 SUMMARY

This chapter has provided a discussion of the definitions and concepts related to commitment. A brief outline of the importance of employee commitment was provided herein. The chapter also offered an explanation of the benefits and challenges of employee commitment in the workplace. Furthermore, role considerations and factors influencing employee commitment in the workplace have been assessed and evaluated in this chapter. The next chapter will provide a discussion of the safety implications in the healthcare environment.

CHAPTER THREE

SAFETY IMPLICATIONS IN THE HEALTHCARE ENVIRONMENT

3.1 INTRODUCTION

Chapter Two provided an overview of the concept of employee commitment and, by means of definitions, provided an outline of the environmental conditions that encourage a safe environment that will enhance employee commitment. A safe healthcare work environment is the desired goal globally but, at times, there are barriers that hinder this goal as hazards occur in the workplace. Hazards and barriers to a conducive work environment include conditions which affect the psychological, physical and socio-economic wellbeing of employees. Consideration should therefore be given to the impact of these aforementioned hazards on the health and safety as well as the commitment of employees to adhere to the legal and safety measures of the healthcare environment. This would have a direct impact on the preparation of a healthcare work environment that is suitable for the sustainability of the organisation. The current chapter provides an overview of safety-legal implications in the healthcare environment.

3.2 BACKGROUND TO THE SAFETY AND HEALTHCARE ENVIRONMENT

The health sector is an important part of the economy as it is allocated a significant budget from the government. One fundamental aspect of the budget is that employees must be paid reasonable salaries from it. The salaries of healthcare employees, for instance nurses, are to be on par with international health and performance standards so as to retain committed staff and contain staff turnover. Therefore, knowledgeable public practitioners with organisational skills are needed to effect health and safety changes, which will meet international healthcare safety standards, in the work environment (Griffiths, 2008:9).

Globally, safety and health are critical aspects need to be addressed in the healthcare work environment that. This responsibility of healthcare organisations includes the identification and removal of risks and hazards (Battles, Dixon, Borotkanics, Rabin-Fastmen & Kaplan, 2006:1555). Working conditions such as the lack of resources,

heavy workloads and unsafe working conditions are some of the frequently mentioned health hazards in the workplace (Oosthuizen, 2005:117). In addition, addressing the abovementioned hazards plays an important role in motivating healthcare employees to perform their assigned tasks and commit to safety in the workplace (Yu & Bang, 2013).

Healthcare authorities are to provide strict measures that are supported by the relevant laws, policies and guidelines to safeguard healthcare employees from risky and hazardous exposure. Furthermore, Kessler (2011:93) and LaMontagne, Keegel, Vallance, Ostry and Wolfe (2008:1) confirm that it is crucial for organisations to understand how employees view their work environment. Such information will assist management to address behavioural and work-related factors that could impede health and safety in the work environment. Kessler (2011:93) and LaMontagne *et al.* (2008:1) report that a poor work environment is one of many factors that affect employees' work-related commitment. The characteristics of a poor work environment include job stress, perceived harassment and violence, lack of control or input into the job, low supervisor and/or co-worker support, incivility, job insecurity and a compromised safety climate (Ali, Ali & Adan, 2013:67; WHO, 2016).

Currently, there are two healthcare sectors in South Africa, namely, the private and public healthcare sectors. Ruud, Srinivas and Toverud (2009:2) state that the public healthcare sector serves the majority of the population and experiences increased incidents of risk factors related to the healthcare workplace. Furthermore, Powell-Cope, Nelson and Patterson (2008:2) indicate that public healthcare institutions in South Africa are believed to have the majority of adverse events such as insufficient nurses, lack of medical equipment and supplies, poor delivery of quality healthcare and patient violence. This is generally attributed to the socio-economic and political environmental issues experienced by the country. By way of explanation, the researcher in this study provides a list of eight environmental attributes that could affect a healthcare worker's commitment to safety measures in the public healthcare sector. Figure 3.1 summarises the attributes of the healthcare environment. These attributes will be discussed in this study to highlight the possible influences on increased or limited safety commitment in the workplace.

Figure 3.1: Attributes of the healthcare environment



Source: Researcher's own construction.

This list of the attributes of the healthcare environmental will be discussed in greater detail, as a background to the discussions provided in the data analysis chapter of this study.

3.2.1 Levels of healthcare nurses

Nurses render various kinds of healthcare services to patients and, as such, they play a critical role in the wellbeing of patients (Barhem, Younies & Younis, 2010:19; Phillips, 2016:16). Nurses are healthcare professionals who have specific education and training, and are employed at a healthcare institution (Claassens, van Schalkwyk, du Toit, Roest, Lombart, Ernason, Beyers & Borgdorff, 2013: 2). The education and practice of nurses are regulated by the South African Nursing Council (SANC) through the Nursing Act (Act (33), 2005:30). Nurses are trained in three categories of nursing, namely, registered nurse, enrolled nurse and enrolled nursing auxiliary. Education and

training are offered at degree and diploma levels for registered nurses, and at the level of a certificate for enrolled nurses and nursing auxiliaries (Nursing Act, No. 33 2005). The names of practicing registered nurses are kept on an official SANC register, while those of the enrolled nurses and nursing auxiliaries are kept in the roll; all are annually renewed, at a fee. SANC is guided by the Nursing Act, No. 45 of 1944, which is currently revised to Act 45 of 25 (SANC, 2005).

In terms of the South African context, the allocation of duties and responsibilities is accorded by the Scope of Practice (Collin, Stein, Vawdrey, Stetson & Bakken, 2011:2). The difference between the responsibilities given to these different levels of practising nurses exposes these categories of nurses to different, but the same effect of, hazards in the workplace. In other words, nurses experience role ambiguity and conflict in relation to performing their duties. (Collin *et al.*, 2011:2). Registered nurses are the most senior nursing professionals and have the most responsibilities. Enrolled nurses and nursing auxiliaries are required to perform their roles and duties under the guidance of registered or professional nurses (SANC, 2016b). In addition, the roles and duties of nurses are allocated on the basis of their level of education and training.

3.2.2 Role of law in the healthcare environment

Healthcare professionals and nurses are regularly subjected to circumstances that may need legal guidance. The legal implications are the result of the different expected behaviours and performance standards laid down by the different healthcare professional bodies, such as the Medical and Dental Council and SANC, as well as by the ethical laws and constitutional mandates of the country (Ventola, 2014:491).

Law is generally created in order to establish the minimal standard of action required by individuals and organisations (Ramanathan, 2014:172). For example, besides the Constitution of the Republic of South Africa, 1996 – Chapter 2 and the Bill of Rights within the Constitution – nurses are bound by the Nursing Act, 45 of 25 (SANC, 2005), specifically the Regulation relating to the Acts and Omissions that specify the rules and regulations that must be adhered to by all nursing professionals. Any actions outside the boundaries of these laws are punishable and, therefore, care should be taken in interpreting and implementing these Acts (SANC, 2005:8). Other legal

healthcare prescriptions that affect nurses, as indicated by Dolamo and Peprah (2011:10), are the National Health Act (Act 61 of 2003) which provides the framework for a coordinated health system for the country, the Basic Conditions of Employment Act (Act 75 of 1997), the White Paper on Transforming Health Services Delivery (18340 of 1997) [Bathe Pele Principles] and the White paper for the Transformation of the Health System which describes the intended health services as a unified health system for delivering quality and comprehensive healthcare services to the citizens of South Africa.

The law becomes complex when one takes ethical issues into consideration. The healthcare sector is fraught with difficult situations that involve ethical dilemmas (Arvon, Sarpatwari & Kesselheim, 2015:967; Jennings, 2006:1). Ethical dilemmas have a potential to seriously undermine the nurses' confidence and their sense of value. Therefore, management is responsible for ensuring that healthcare nurses are knowledgeable about the laws, regulations, as well as the legal and ethical principles, which may include civil law, criminal law, tort reform, employment-related legislation, and safety in the workplace (Kumar, Gokhale, Jain & Mathur, 2013:2817).

3.2.2.1 Unlawful laws in healthcare

Negligence and intentional torts or laws are two basic healthcare laws (Ramanathan, 2014:173). The unintentional act, or omission of an act, that could negatively contribute to the health of the healthcare employee and/or patient is considered negligence. If a healthcare provider does not provide appropriate care, or withholds care, which results in damages to the patient's health, it is considered to be negligence. According to Miller (2006:605), intentional torts, such as assault and battery, for example, would be a surgeon performing surgery on a patient without his/her consent.

3.2.2.2 Criminal law in the healthcare environment

Ramanathan (2014:173) explains that criminal law is a category concerned with actions that are illegal based on court decisions. Similarly, it is the body of law that defines criminal offences, regulates the apprehension, charging, and trial of suspected persons, as well as the modes of treatment applicable to convicted offenders. It has to be proved, without a reasonable doubt of guilt, in order to convict someone of a criminal activity. According to Miller (2006:686), healthcare fraud are examples of criminal law. Buchbinder and Shanks (2007:347) describe intentional torts as assault, battery and invasion of privacy.

In this study, criminal law applies when the actions of nurses towards patients are deemed illegal, based on court decisions. The illegal actions may hamper the health of the patients involved; an example of this would be a situation in which a nurse administers medication without the consent of the patient. Another example is a nurse who does not give a level of care that is comparable with the standard of care established for a patient. This results in the nurse being absent from work due to court cases, thus, employee commitment decreases.

3.2.3 Importance of health and safety in the public healthcare sector

The public health sector has been compelled to focus on certain areas of clinical practice as a means to improve the health and wellbeing of its patients. A list of priorities to that effect has been developed by the Department of Health under the guidance of the Minister of Health. As indicated by the National Advisory Council on Nurse Education and Practice (NACNEP, 2010:13), the following items are the priorities that need to be addressed by the nursing profession:

- nursing education and training;
- resources in nursing;
- professional ethos and ethics;
- governance, leadership, legislation and policy;
- positive practice environments;

- compensation, benefits and conditions of employment; and
- nursing human resources for health.

At the core of these priorities are positive practice environments that will ensure the safety and quality care of patients. In order to ensure that nursing practitioners are equipped to address the disease and burden of the population, the profession needs to be advanced, remodelled and strengthened. The Nursing Education Training and Practice Strategy aims to regenerate the healthcare system in South Africa. Furthermore, the strategy seeks to secure nurses of high quality and who can contribute towards addressing the healthcare needs of the country's citizens. However, the country's ability to improve health outcomes and the performance of its health system is undermined by the shortage of nurses.

A great variety of hazards can be presented by many of the settings in which nurses carry out their jobs and the tasks that they perform (Parent-Thirion, *et al.*, 2012:160). Health and safety hazards exist in almost every workplace. Some hazards are easily identifiable and corrected while others may create extremely dangerous situations that could be a threat to employees (WHO, 2013). Therefore, health and safety is a priority in the healthcare sector due to the nature of the work of nurses. The employer has to ensure employee safety in the workplace.

3.2.3.1 Safety in the workplace

Safety in the workplace is about preventing injury and illness to employees (Trinkoff, Geiger-Brown, Caruso, Johantgen, Nelson, Sattler & Selby, 2008). Therefore, organisations have to identify which potential health and safety hazards are present, and eliminate them as soon as possible in order to limit the possibility of litigation (Kessler, 2011:93). A plethora of research has reported lack of safety and health in the healthcare environment (Albert, Hallowell & Kleiner, 2014:153; Choi, 2014:2; Cipriano, 2016). More so, nurses are in a state of constant fear of being violently attacked by patients or patients' families (Cipriano, 2016). In this regard, Mokoka, Oosthuizen and Ehlers (2010:484) report that security personnel in the health environment are not vigilant enough to avert the occurrences of violent attacks on

nurses. The negative effects of an unsafe workplace environment may increase employee turnover and reduce employee morale (Cipriano, 2016). For that reason, managers and healthcare authorities are to safeguard the work environment of these hazards.

3.2.3.2 Lack of resources

According to Muller, Bezuidenhout and Jooste (2005:478), resources include financial and information resources, materials, buildings, equipment and even intellectual property. In contrast, lack of resources refers to inadequate resources needed to execute the job effectively (Agyeman-Duah, Theurer, Munthali, Alide & Neuhann, 2014:1). In addition, lack of resources increases risk and compromises the safety of employees in the workplace. Moreover, employees will not be able to perform at their full capacity if there is a lack of resources and/or training to perform their daily tasks. Therefore, it is encouraged that management accepts responsibility and ensures a sufficient supply of useful resources to promote health and safety in the organisation (Mokoka *et al.*, 2010:484). The employees' commitment levels to safety measures will be enhanced if management provides the sufficient and necessary resources for productivity.

The shortage of supplies, and sometimes dysfunctional equipment, affects the quality of care and thus increases patients' levels of dissatisfaction. Resources extend beyond equipment and training, to ensuring that there are a sufficient number of staff on duty, availability of medical care and medicines, and include the timeframes relating to the availability of these resources. James and Miza (2015:1128) highlight that a lack of resources is a factor that contributes to conflict in the workplace, thus increasing risk of harm. These authors express that, due to the consistent lack of medicines and resources in public sector outpatient departments, the community becomes impatient and reportedly starts fights with registered nurses in these healthcare workplaces (James & Miza, 2015:1128). Such incidents do not just relate to conflict but to work conditions and safety in the workplace, and they further affect nurses' commitment to safety in the workplace.

3.2.3.3 Working conditions

Tadesse and Admass (2006:3) are of the view that making working conditions safe is in the interests of employers, employees, the government and the public at large. Conversely, the idea has not yet gained meaningful universal recognition in healthcare institutions. This is despite the legal and ethical conditions of work stipulated in as many policies and acts in different countries. Working conditions are referred to as the result of the interaction between a job, the work, the company and the individual (Parent-Thirion *et al.*, 2012:160). The limited number of nurses in the healthcare system weakens the ability of nurses to meet the performance targets of the organisation and to provide quality healthcare outcomes; it also makes it difficult to lure, motivate and retain nurses.

Oosthuizen (2005:209) affirms that a shortage of nurses puts patients and their health at risk. This negatively impacts on the health of the patient and the nurses. Patients are likely to die, get injured while in hospital or are discharged too soon, because of the unavailability of a sufficient number of nurses to care for them. Nurses also experience burnout or fatigue as a result of the strenuous working conditions under which they constantly work, and the long working hours (Oosthuizen, 2005:209). The use of extended work shifts and overtime has escalated as hospitals are trying to cope with a shortage of healthcare employees such as, nurses and medical practitioners (Rogers, Hwang, Scott, Aiken & Dinges, 2004:202). Overtime has largely been utilised as a tool to ensure that the needs of patients are taken care of as much as possible, and as soon as possible. However, errors and near errors are more likely to occur when healthcare employees work overtime, due to fatigue (Olds & Clarke 2010:31). According to Aronsson and Blom (2010:160), working conditions which are inadequate can cause much strain on healthcare nurses and could lead to high staff turnover or excessive sickness and absence. Difficult working conditions coupled with having many patients, some of them critically ill, results in poor quality care. Therefore, inadequate working conditions not only harm the health and safety of healthcare nurses but also diminish their productivity.

3.2.3.4 Change of the system in the healthcare environment

A change of system best addresses medical mistakes caused by sources that are external to the hospital and within the hospital. An example to this is the prevention of medical errors, which is a priority for the health system. The use of information technology (IT) is a key component of system change for error reduction. Bates, Cohen and Leape (2001:299) are of the view that using information technology reduces the frequency of errors in medicine. Furthermore, the following are strategies to prevent medication errors: computerised healthcare order entry, automated dispensing, barcode medication administration, electronic medication reconciliation, and personal health records (Agrawal, 2009:681).

Therefore, organisational, regulatory, cultural and environmental factors influence the performance of nurses in healthcare institutions (Ganguly, 2011:15). Moreover, errors are human but can be costly for employers. Thus, system change assists in the elimination of errors, and consequently motivates nurses to be committed and implement safety measures in public healthcare institutions.

3.2.4 Safety in the public healthcare environment

Safety in the healthcare environment refers to the condition of being safe or protected from chemical exposure, hazards, diseases and other adverse occupational risks that could lead to death (Flin, Burns, Mearns, Yule & Robertson, 2006:109). Moreover, safety reduces the uncertainty of relations between nurses and patients, as well as reduces the cost of healthcare, high turnover and medical errors (Flin *et al.*, 2006:109). Thus, the improved implementation of the safety system in the healthcare environment should incorporate safety principles to process equipment and supplies. Safety culture, which is a possible solution to safety and the commitment to safety by employees in the work environment, refers to programs that prevent workplace violence and improve the work environment, job satisfaction, nurse retention, productivity as well as the quality of care (Sanner-Stiehr & Ward-Smith, 2014:11).

According to Scheneider, Ehrhart and Macey (2013:361), organisational culture and climate are conceptually and empirically closer than had been previously assumed. In

order to prevent occupational injuries and illnesses in the work environment, the development of a culture of health and safety is key. In respect of the protection and promotion of human health, Seke, Petrovic, Jeremic, Vukmirovic, Kilibarda and Martic (2013:77) posit that health and development are intimately interconnected. Therefore, it is necessary to meet basic the health needs of nurses, and protect nurses, for sustainable development.

Marchant, Stevens and Hennessy (2014:26) report that there are pressures from the on-going globalization of the world's economy. The liberation of trade and rapid technological progress are forcing many countries and organisations to change their employment patterns and organisation of work, in order to stay effectively competitive (Ogunsola, 2005:1). Healthcare institutions are not exempt from this, hence they compromise the quality of their working conditions by fostering competitiveness that is based on seeking higher productivity and quality of products at a low cost (Mefford, 2011:5). Thus, the situation results in inadequate safety and health standards, environmental degradation and a lack of basic social protection for nurses. Therefore, it is evident that high productivity and quality employment can only be achieved when the requirements for the prevention of accidents and diseases, as well as the protection of nurses' health and welfare, are integrated, and when the total costs resulting from injury, illness and disability are taken into account.

According to He, Li and Lai (2011:593), organisations must create and maintain a climate for encouraging nurses to effectively deliver excellent service. Equally, the environmental climate of the workplace determines how individuals behave, as it influences how they think and feel about their environment. Furthermore, nurses rely on cues from their surrounding environment to interpret events, develop appropriate attitudes and behaviours, and recognise the consequences thereof. Therefore, the first priority for South African public health institutions is to create an effective safety climate.

3.2.5 Safety measures in the healthcare environment

Procedures and policies play a crucial role in the healthcare environment, as they set a general plan of action towards the desired outcomes and are a fundamental guideline to assist in decision making. Policies and procedures communicate an organisation's values and its expectations of nurses' behaviours and performance. In addition, policies and procedures that are well-written assist in managing nurses more effectively, by clearly defining what constitutes acceptable and unacceptable behaviour in the healthcare environment.

However, there are policies and procedures for safety in the workplace, but there are problems of accessibility and application (Ibrahim, Noor, Ahmad, Nasirum & Ahmad, 2012:730). According to the aforementioned authors, these policies are stored away in management offices and healthcare employees do not have access to them. In most cases, copies of policies and procedures are not kept in folders in a central location or in healthcare areas. The safety measures, for example, are kept somewhere in the cupboard and posted on noticeboards. Sometimes, policies and procedures are not written in a language that all healthcare employees can understand. In some instances in which policies do exist, nurses are not familiar with them; in addition, the policies are available but are not properly promoted. In many instances, nurses were not involved in drawing them up or there was no education taking place. However, management prefer to remain in offices, rather than communicating the relevant policies and procedures with healthcare employees (He *et al.*, 2010:604).

Consequently, the findings from the two studies mentioned above are different from current nursing practice in South Africa. Every hospital or clinic has a copy of standard procedural policies, regulations and guidelines from the SANC and different levels of government available for everyone to use. These are over and above the basic nursing training principles of performance, which every nurse in South Africa has to be competent in and compliant with before being registered or enrolled as a nurse (see Regulations regarding the education and training of nurses in South Africa, Regulation R425). Regulation 425 encompasses the regulations related to the approval of and the minimum requirements for the education and training of a nurse. In addition, it includes annual fees, SANC newsletter, nursing qualification details, policies and

position papers, dates of council meetings as well as strategies for SA 2012-17. Each hospital or clinic has a department for in-service education, quality assurance, safety and risks, as well as wellness and infection control; these departments are created to enforce and ensure the application of these policies and regulations. Under such actions, the safety of the clinical environment is assured, however, health hazards continue to happen.

With regard to these safety measures that are put in place in hospitals and in clinic environments in South Africa, Yoganandan and Sivasamy (2015:6) concur that every organisation has to pay a significant amount of attention to the management of the health and safety of nurses in the workplace. In this regard, Akpan (2011:162) suggests that well-communicated and clearly defined health and safety roles and responsibilities for all levels of the organisation could minimise the non-commitment and neglect of existing safety policies by nurses. This will, in turn, facilitate the creation of a standard level of performance and accountability amongst nurses. Occupational Health (2008:6) maintain that the roles and responsibilities of OHS professionals differ according to region, but may include evaluating working environments, as well as developing, endorsing and encouraging measures that might prevent injury and illness. Furthermore, the roles of OHS professionals include providing OHS information to employers, employees and the public, providing medical examinations, and assessing the success of worker health programs (Occupational Health, 2008:6).

According to Muthuviknesh (2014:63), the goals of OHS programs include fostering a safe and healthy work environment. These programs may also protect co-workers, family members, employers, patients and others who might be affected by the workplace environment, and they have the legal responsibility to make sure that the workplace is safe and healthy. Yoganandan and Sivasammy (2015:6) state that the safety measures provided by the employer will have an impact on the health as well as the physical and mental efficiency of nurses. Employers must consult employees on health and safety issues. In addition, it is vital for both employers and employees to work together for good safety management. However, nurses have to be responsible for their own health and safety and that of others who may be affected by what they do or do not do.

3.2.5.1 Roles and responsibilities of healthcare employers and employees.

Yoganandan and Sivasamy (2015:6) concur that every organisation has to pay attention to the management of the health and safety of nurses in the workplace. In this regard, Akpan (2011:162) suggests that well-communicated and clearly defined health and safety roles and responsibilities for all levels of organisations could minimise the non-commitment and negligence of existing safety policies by nurses, thus facilitating the creation of a standard level of performance and accountability amongst nurses. In addition, the roles and responsibilities of OHS professionals differ according to region, but may include evaluating working environments, as well as developing, endorsing and encouraging measures that might prevent injury and illness, providing OHS information to employers, employees and the public, providing medical examinations, and assessing the success of worker health programs (Occupational Health, 2008:6).

According to Muthuviknesh (2014:63), the goals of OHS programs include fostering a safe and healthy work environment. These programs may also protect co-workers, family members, employers, patients and others who might be affected by the workplace environment, as they have the legal responsibility of making sure that the workplace is safe and healthy. Yoganandan and Sivasammy (2015:6) state that the safety measures provided by the employer will have an impact on the health as well as the physical and mental efficiency of healthcare workers. Again, employers must consult employees on health and safety issues. It is vital for both employers and employees to work together for good safety management. However, employees have to be responsible for their own health and safety and that of others who may be affected by what they do or do not do. Similarly, employees have the rights and responsibilities for their own wellbeing and that of their colleagues. In addition, nurses cooperate with the employer regarding health and safety matters.

The South African National Standard is responsible for health and safety in the healthcare environment (Department of Health, 2013:10). The expense, inconvenience, and other consequences of accidents in the healthcare environment are avoided by ensuring that nurses, know exactly what is expected of them through a written safety policy that provides the foundation for every successful safety

program. The management of the institution identify the relevant procedures for all processes or services, for example, who will do what, how, where and why, so that healthcare employees know their health and safety responsibilities. Moreover, management are expected to assign responsibilities to healthcare employees in terms of their competency, awareness and training. In South Africa, the standards promote public education and public safety, equal justice for all and a more informed citizenry (SANS, 2012). Furthermore, healthcare employees report hazards and defects observed in the workplace, and discuss these with the employer (OSHA, 2012:8).

The needs and focus of OHS vary between countries and regions, all of which take different approaches to ensuring occupational safety and health. Healthcare employees who are not well informed about physical and psychological health may cause accidents in the workplace. In addition, healthcare employees have a responsibility to work safely with hazardous material. Moreover, the lack of safety rules, ignorance of safety regulations, unavailability of essential safety equipment and poor training in safety, need consideration (Yoganandan & Sivasamy, 2015:6). Healthcare organisations need to ensure that healthcare employees are not injured as a result of work. Thus, a healthcare environment that is free of hazards enhances the commitment of employees as well as their performance.

3.2.6 Hazards

Healthcare employees face a number of potential health and safety hazards in most workplaces. Baybutt (2015:84) and Saldaria, Herrero, Rodriguez and Ritzel (2012:3) define a workplace hazard as a condition, situation, product or process that can cause injury or illness to workers. In addition, the term 'hazard' refers to a dangerous phenomenon, substance, human activity or condition that may cause loss of life, injury or other health impact, property damage, loss of livelihoods and services, social and economic disruption, or environmental damage (WHO, 2009:100). Hazards can be divided into two categories: biological and non-biological. Further, there are hazards that can cause disease or illness (Pinto, 2008:65).

Equally important, the factors associated with hazards are: not wearing all necessary protective equipment, working overtime, experiencing work-related pressures, working

in multiple healthcare facilities, and others. Thus, the identification and remedying of these hazards is crucial in order to enhance the healthcare employees' commitment to the implementation of safety measures in their workplace environment, which is, public healthcare institutions.

3.2.6.1 Identification of health and safety hazards

Therefore, healthcare employees, nurses in this case, have to be on the lookout for and have to avoid these hazards. Unfortunately, studies indicate that a large portion of hazards are not adequately identified (Albert *et al.*, 2014:153).

3.2.6.2 Physical hazards

Physical hazards are a common source of injury (Kumar, Goud & Joseph, 2014:13). The physical hazards that are commonly found in the healthcare environment are: electrical hazards, noise, slipping/tripping/falling hazards, heat, poor lighting, inadequate ventilation, and working with medical equipment such as lasers and x-ray equipment. Physical hazards are unavoidable, but safety methods and procedures to manage the risks of physical danger in the workplace have been developed. Harris and Richard (2012:50) explain that machinery-related hazards can cause accidents like crushed hands and arms, severed fingers, and blindness.

3.2.6.3 Psychological hazards

Psychological hazards are associated with psychiatric, psychological and/or physical injury or illness, and are related to the way in which work is designed and controlled in the workplace. According to Morken and Johansen (2013:384), issues related to occupational stress, workplace violence, and psychological risk are internationally recognised as major challenges to occupational health and safety.

3.2.6.4 Promoting health and safety issues

The wellbeing of employees will be improved and client care will benefit if the work environment is safe from work-related illness, or hazards and accidents (DOH,

2003:25). Similarly, Bottani, Monica and Vignali (2009:155) affirm that effective safety management improves the level of safety in an organisation. Furthermore, the level of safety in organisations will decrease the damages and harm caused by incidents. Bottani *et al.* (2009:155) suggest that a partnership between management and nurses is required to promote health and safety in an organisation.

In addition, policy makers, senior management and labour representatives should promote safety in an organisation by setting out a Health and Safety Policy. A policy concerning the improvement of safety management is a systematic approach and necessary framework for improving the level of safety in an organisation. Therefore, policy makers, senior management and labour representatives should set healthcare environmental policies that are aimed at improving industrial hygiene, engineering, environmental management, housekeeping, worker compensation and clinical discipline (Bottani *et al.*, 2009:155). Furthermore, nurses who feel healthy and safe in the working environment develop an emotional attachment, have a sense of obligation and are committed to their organisation (Amponsah-Tawiah & Mensah, 2016:225). Furthermore, a good working environment will motivate nurses to be committed to the implementation of safety measures in public healthcare institutions.

3.2.7 Barriers in the healthcare environment

Generally speaking, healthcare employees, particularly nurses, do want to commit themselves in their duties but they are unable to do so, due to the barriers in the healthcare environment. In addition, nurses are expected to perform their assigned duties, yet their safety is at risk. According to Goins, Williams, Carter, Spencer and Solovieva (2005:206), some of the barriers in the healthcare environment are the lack of healthcare professionals in rural areas; geographical barriers; access to healthcare services and benefits; and communication access.

A challenging healthcare environment places a great deal of stress on nurses. Conversely, the enriched healthcare environment increases the job satisfaction of nurses and the satisfaction of patients, and improves the retention of nurses. Thus, a good healthcare environment enhances employee commitment to the implementation of safety measures in public healthcare institutions.

3.2.8 Implications of ethics in the healthcare environment

Ethics refers to the moral foundation for standards of conduct (Epstein & Turner, 2015:1; MGenius & Lipp, 2013:96). In addition, ethical standards apply to actions that are hoped for and expected by individuals. Similarly, ethics is concerned with what society and its individuals perceive as right and wrong choices. Furthermore, a conflict between personal and professional ethics is referred to as an ethical dilemma (Epstein & Turner, 2015:1; MGenius & Lipp, 2013:96). Niles (2010:247) describes an ethical dilemma in healthcare as a problem, situation, or opportunity that requires an individual, such as a healthcare provider, to choose an action between two obligations. This dilemma occurs when the ethical reasoning of the decision maker may conflict with the ethical reasoning of the patient and institution.

3.2.8.1 Code of ethics in the healthcare workplace

The guide to best practices and the appropriate professional behaviour of nurses is referred to as the code of ethics in the healthcare workplace (Pera & Van Tonder, 2005:1). Furthermore, a code of ethics in the workplace is intended to protect and promote nurses' health, as well as to sustain and improve their working capacity and ability. In addition, it is vital for healthcare institutions to adhere to the highest professional and ethical standards. The foundation of a code of ethics is constituted by the honesty, justice and courtesy of nurses. In addition, integrity is the keystone of all healthcare employees. Therefore, healthcare employees are governed by the codes of ethics (SANC, 2013:6).

3.2.8.2 The code of ethics for the doctor-patient relationship

The relationship between the patient and the nurses is the foundation of healthcare (Reader, Gillespie & Roberts 2014:1). Due to the specialised knowledge and expertise that doctors have, patients who are either in a vulnerable state of illness or who seek to maintain their health, entrust themselves to medical care. Doctors have the responsibility of improving and maintaining the health of their patients (SANC, 2013:6). Furthermore, Doyle, Lennox and Bell (2013:1) indicate that a good relationship

between doctors and patients will help to significantly improve the quality of life and health status of patients.

Codes of conduct have been developed by numerous organisations as a result of public ethical crises that have occurred, particularly in the business world. The healthcare codes of conduct have guided the actions of healthcare providers. According to Riddick (2003:6), the Code of Medical Ethics was amended in 2001 to include the following:

- provide competent medical care;
- uphold professional standards;
- respect the law and rights of patients and colleagues;
- maintain a commitment to medical education;
- support public health activities;
- regard patient care as the primary goal; and
- support medical access for all individuals.

Furthermore, Shamoo and Resnik (2009) postulates that the role of ethics in the healthcare work environment is based on five basic values that all healthcare providers should observe. These values are:

Respect for autonomy: Healthcare employees must respect the decisions of their patients. Autonomy is a self-rule that is applied to informed consent; it requires that a healthcare employee obtains the approval of the patient after the patient has been provided with adequate data to make a decision regarding an intervention. A legal requirement for medical intervention is informed consent.

Beneficence: The healthcare employee should have the best interests of the patient in mind. The healthcare employee is not allowed to take any action to harm the patient. Miller (2006:341) provides an example where Jehovah's Witnesses, a religious sect, despite the ability to possibly save a life, do not believe in blood transfusions and will not give consent for a transfusion to be given during an operation. The healthcare employee has been trained to believe in beneficence and maleficence.

No maleficence: No harm should be caused to the patient by the healthcare employee, when taking action. However, from the view point of the provider, the patient may be potentially harmed if the provider respects the patient's wishes.

Justice: Fair decisions will be made by healthcare employees. Healthcare should be accessible to all patients, and each patient should be treated equally and fairly. Healthcare services should be available to all.

Dignity: Respect and dignity should prevail and should be afforded to all patients. Organisational ethics should govern the ethics in the workplace. Human Resources and Management should establish a code of ethics, develop ethics roundtables, create a decision model for healthcare dilemmas, and provide on-going ethical training in order to create an ethical culture.

All healthcare employees are to consider these ethical principles in their day-to-day activities and to consider them within the framework of the array of professional legislation governing their work. In the context of this study, the focus will be on the ethical implications related to the work of nurses and midwives. According to Jennings Bailey, Bottrell and Lynn, (2006:1), examples of ethical dilemmas in the implementation of the code of ethics are:

- termination of pregnancy;
- trading of products of conception and other human parts;
- participation in and/or conducting clinical research; and
- providing healthcare and specifically nursing care to vulnerable, stigmatised and marginalised persons' cons.

Jarrin (2010:166) reports that healthcare employees who are nurses should have many core elements that guide their profession in place. These core elements that should guide the profession of nurses are: accreditation process for education, a rigorous system for licensure and certification, and a relevant code of ethics so as to practice competently and with integrity. Therefore, nurses are to adhere to a code of ethics which guides them in their decisions and conduct.

3.2.8.3 Healthcare professionals' code of ethics

Generally, each type of healthcare professional has a code of conduct. A code for nurses was established in 1985 by the American Nurses Association; it was later revised, in 1995, and most recently (Epstein & Turner, 2015:1). Subsequently, numerous healthcare facilities have also established their own codes of ethics in order to help providers when they deal with healthcare challenges. Furthermore, there are many challenges that constitute the ethical dilemmas experienced by healthcare employees. Conflicts often arise between the healthcare employee and patients regarding decision-making pertaining to treatments (best choice needed for treatment). The nurse is an advocate for and resource to the patient. Therefore, ethical decision-making is one the best medical tools which healthcare employees, especially nurses, depend on in these demanding situations (Bhanji, 2013:142).

3.3 SUMMARY

This chapter has investigated and discussed the safety-legal implications in the healthcare environment. The background to safety in the healthcare environment was discussed in order to provide an understanding of where nurses perform their daily operations. Furthermore, this chapter provided a discussion of the various levels of healthcare employees and the numerous roles of the law in the healthcare environment. The laws that were presented and discussed herein provide legal guidance to healthcare employees.

The importance of health and safety in the public healthcare sector and safety in the public healthcare environment, as well as safety measures in the healthcare environment, were discussed in this chapter. Health and safety measures in the healthcare environment are crucial for enhancing the commitment levels of healthcare employees. The barriers that are evident in the healthcare environment were discussed in this chapter, as were the ethical implications of the healthcare environment. The following chapter explores the impact of implementing safety measures in the healthcare environment.

CHAPTER FOUR

THE IMPACT OF IMPLEMENTING SAFETY MEASURES IN THE HEALTHCARE ENVIRONMENT

4.1 INTRODUCTION

The previous chapter provided a series of discussions on the safety-legal implications of the healthcare environment. This chapter seeks to explore the impact of implementing safety measures in the healthcare environment. There is a critical need for a healthy and conducive environment for employees. Therefore, the awareness, technical means and resources are required to implement health and safety measures. The health and welfare protection of public healthcare workers is a challenge that should be faced with an integrated approach to health promotion, social protection and employment creation.

This chapter investigates the impact of implementing safety measures in the healthcare environment. Furthermore, the chapter provides a discussion of the safety measures that have to be followed by health employees. The chapter specifically focuses on safety measures for health and safety at the workplace, the availability of staff, training, reporting and follow-up, sharp injuries and work environment. In addition, the chapter provides a discussion of workplace violence and working conditions. This chapter highlights the factors that inhibit the implementation of safety measures.

4.2 BACKGROUND AND ORIENTATION OF IMPLEMENTING SAFETY MEASURES IN THE HEALTH ENVIRONMENT

Predictors of work-related wellbeing can be classified in terms of job demands and resources (Schreurs, De Cuper, Van Emmerick, Notelaers & De Witt, 2011:859). Job demands are all the physical, psychological, social or organisational characteristics of a job that need continuous physical and/or psychological effort (Bakker & Demerouti, 2007:309). Resources are those matters related to workload, time pressures and responsibility (Demerouti & Bakker, 2011:1). South African nurses experience high levels of stress related to working overtime, colleagues not doing their jobs, crisis

situations and insufficient staff (Jennings, 2008:1). In addition, critical decisions, inadequate salaries, frequent interruptions and excessive administration create a high level of stress amongst South African nurses (Rothmann & Malan 2011:1). The aforementioned physical and psychological stressors are likely to have negative consequences for the health environment in terms of increased burnout, absenteeism, and employee turnover (Schreurs *et al.*, 2011:859).

Biggio and Cortes (2013:5) postulate that the wellbeing of nurses in the workplace is influenced by numerous factors that emanate from the working and organisational environment. The wellbeing of employees can also be influenced by individual traits and behaviours (Biggio & Cortes, 2013:10). Therefore, it is important for management to develop training and provide workplace counselling as well as organisational development activities to help nurses stay focused in their job.

Furthermore, Judge, Heller and Klinger (2008:361) indicate that the wellbeing of healthcare employees is associated with their attitudes towards the organisations for which they work. In other words, the enhanced wellbeing of employees results in their job satisfaction, positive emotions and relational interaction with the organisation. The attitudes of employees are explained as follows:

- Job satisfaction occurs when the working environment is conducive to employees and the environment encourages healthcare employees to seek out challenging tasks in their work duties. This implies that the wellbeing of employees in the workplace is related to job satisfaction.
- Positive emotions and affection amongst employees play a vital role in establishing a good working relationship between employees. Positive emotions amongst employees reduce tension and conflict, and they promote a harmonious working environment for employees. Therefore, positive emotions enhance the wellbeing of employees (Hochwarter & Thompson, 2010:1371).
- Relational interactions are crucial to generating employee wellbeing in healthcare institutions (Bambacas & Patrickson, 2008:51).

Therefore, job satisfaction, positive emotions and relational interaction are capable of influencing employee wellbeing in the workplace. The wellbeing of employees further

improves the performance and effectiveness of healthcare employees. The effective management of healthcare employee safety and health protection is a decisive factor in reducing the extent and severity of work-related injuries and illnesses, and their related costs. In fact, an effective safety and health program forms the basis of good worker protection that can save the organisation time and money (Hughes, 2008:1).

Nurses are integral to the provision of high quality healthcare for patients (Mafini & Dlodlo, 2014:2). Therefore, high levels of job satisfaction among nurses earn higher employee retention and patient satisfaction. In order to promote job satisfaction amongst healthcare employees, it is necessary to reduce workload, increase welfare as well as maintain reasonable stress levels and work-family conflict. Job satisfaction is a good measure of the wellbeing of nurses. However, job satisfaction impacts on the retention, performance, efficiency and resources of healthcare employees (Judge *et al.*, 2008:361). Moreover, job satisfaction reduces the psychological risks to which nurses are exposed, and it creates meaning in their jobs. Nurses spend much of their time at work, therefore, the work should be good for both the employer and the healthcare employee. In addition, nurses who experience low job satisfaction may suffer from medical and emotional difficulties. Emotions have both a positive and negative impact on the nurses and the organisation. Favourable outcomes such as achievement, job enrichment and improved social context are obtained from positive emotions and affection (Hochwarter & Thompson, 2010:1371). Conversely, fear, anger, stress, hostility, sadness and guilt are negative emotions that affect employee performance and the relationship between employees and management.

Relational interactions are also crucial to maintaining a safe working atmosphere and environment in healthcare institutions. Relational interactions may have both a positive and negative influence on the wellbeing of nurses (Hughes, 2008:1) while also being an instrument for the development of effective relationships with patients. Furthermore, Hughes (2008:1) suggests that the environment in which nurses provide care to patients can determine the quality and safety of patient care. Kieft, de Brouwer, Francke and Delnoij (2014:249) state that nurses are required to apply their knowledge, skills and experience to care for the changing needs of patients. In order to improve patient experiences of quality of care, healthcare employees must be aware

of the environmental factors that influence their jobs. Kieft *et al.* (2014:249) report that the following are key elements that improve patient experiences:

- clinically competent healthcare employees;
- collaborative working relationships;
- autonomous healthcare practice;
- adequate staffing;
- control over healthcare practice; and
- managerial support and patient-centred approach.

A large part of the demands of patient care is centred on the work of nurses. Nurses who work in hospitals are bequeathed with the responsibilities of catering for and giving quality care to patients. The wellbeing of patients will be achieved if nurses pay attention and adhere to the key elements of quality of care of patients. In other words, the aforementioned key elements would result in more positive patient experiences. In addition, healthcare employees will gain autonomy over their own practice. Healthcare employees, particularly nurses, are bestowed power to ensure that they provide quality and safe patient care. Furthermore, nurses and their work environment have influence over patient experiences of the quality of healthcare. Therefore, nurses have to be knowledgeable about the factors that impact upon their work environment; this means that nurses will be aware of the type of work environment that contributes towards the positive experiences of patients.

Hazard assessment and appropriate employee training should be considered in order to ensure the proper selection, use, and care of Personal Protective Equipment (PPE) through the work area. According to the WHO (2007:1), the key elements needed to ensure the proper selection, use, and care of PPE include:

- Hand hygiene: Hand hygiene should be a major component of standard precautions that will effectively prevent transmission of pathogens associated with healthcare. Hand hygiene involves multiple factors at the individual and system level to provide an institutional safety climate for patients and healthcare employees. In addition, healthcare employees should consider taking respiratory hygiene and cough etiquette seriously.

- Gloves: Healthcare employees should select and wear proper gloves based on the work to be performed. Gloves may have small, unapparent defects or may be torn during use, and hands can be contaminated during removal.
- Facial protection: The facial protection worn by healthcare employees is neither appropriate nor is it well-fitting for the work being performed. Healthcare employees should wear facial protection to minimise exposure to numerous facial hazards such as those from flying particles, liquid chemicals, acids or caustic liquids, chemical gases or vapours, and potentially infected material or potentially harmful light radiation.
- Gowns: Healthcare employees are required to wear gowns in order to eliminate and minimise body exposure in the workplace.
- Sharp instrument: Healthcare employees should take care when utilising sharp instruments such as needle sticks so as to prevent injuries and the spread of diseases.

In this respect, the impact of safety is that of a reliable, safe clinical environment that has patients who are assured of a speedy recovery and nurses who are protected against injury and trauma. A safe environment reflects a level of compassion and vigilance for the welfare of healthcare employees (Stone, Hughes & Dailey, 2008:1). The way to improve safety is to learn about the causes of error and use this knowledge to design systems of care for nurses. Therefore, healthcare professionals should develop innovative models of improving the nursing work environment in order to attract and retain future generations of nurses.

Therefore, it is vital that nurses are taught how to utilise property/equipment so as to eliminate or minimise the risk of injury (Amukugo, Amakali & Sipa, 2015). Morken and Johansen (2013:2) refer to safety measures as an important prerequisite to evaluate and make guidelines for the improvement of preventative practices in the workplace. Clarke and Donaldson (2008:3) suggest that the stages involved in developing and implementing safety measures should be evaluated in order to ensure the effectiveness of health and safety in the working environment. According to De Castro, Cabera and Tagalog (2006:363), employees still suffer from work-related injuries despite the measures put in place to minimise them. Despite the continued risks

experienced by employees in the workplace (public healthcare institutions), healthcare employees' knowledge of preventative measures are limited.

Hovden, Albrechtsen and Herrera (2010:955) posit that healthcare institutions are under stress as a result of the influence of dynamic factors. Health and safety measures have a positive impact not only on performance but also on the productivity of the organisation. Furthermore, identifying and quantifying these effects is not always straightforward, as some of the important consequences of health and safety risks can be externalised. For example, hazards with long-term effects put a strain on society and thus not immediately on the organisation (Salleh, 2008:9). The hazards affect the entire lives of healthcare employees, including their relations with management, colleagues, family and friends. Hazards disrupt and affect the delivery of healthcare services. There will also be costs involved in terms of taking care of injured healthcare employees. Therefore, healthcare employees will leave the institutions due to unfavourable work conditions, thus increasing the challenge of staff shortages and its implications on positive healthcare and safety in the work environment.

Willis-Shattuck, Bidwell, Thomas, Wyness, Blaauw and Ditlopo (2008:247) and Sullivan (2004:56) postulate that a competitive business advantage will be created if an organisation takes health and safety measures in the work environment seriously. This implies that organisations will enjoy enhanced productivity and performance as well as employee motivation if they have a hazard and risk-free environment.

Taiwo (2010:299) supports that the work environment impacts on the productivity of nurses. In other words, the type of work environment in which nurses carry out their duties has an effect on their performance and productivity. Nurses who are satisfied with their work environment display higher levels of job-related performance (Taiwo, 2010:299). Taiwo (2010:300) and Raziq and Maulabakhsh (2015:720) indicate that there are four factors that link employee productivity to the health and safety environment.

These factors are:

- the need for more innovative ways to reduce the high rates of workplace injury and illness;
- the pressure to reduce the social and economic costs of injury and illness, particularly compensation costs;
- the need to improve labour productivity without employees needing to work longer hours; and
- taking on more work as well as the need to offer good working conditions as an enticement to recruit and retain skilled workers in a tight labour market.

Good working conditions promote the efficiency, effectiveness, productivity and commitment of nurses (Raziq & Maulabakhsh, 2015:717). Furthermore, favourable working conditions that include the health and safety of nurses enhance performance and create a positive healthcare system, while also reducing nurses' injuries in the work environment. Furthermore, nurses will have no intention to leave, will be retained in the organisation and will become committed to keeping the work environment safe and healthy. The health and safety of nurses ensures that they are aware of the policies, rules and safety precautions that are undertaken to decrease injuries in the workplace. Rim and Lim (2014:43) noted that numerous countries have legislation to protect employees from risks and hazards.

A major target of management is to significantly improve safety measures. Risks and hazards in the healthcare environment rank high in the rates of severe and fatal occupational injuries, in comparison to other industries (Bhattacharjee & Gosh, 2011:573; Zin & Ismail, 2012:742). Furthermore, healthcare employees are absent from work and are less productive because they nurse illness and injuries acquired in the work environment. According to the Health and Safety Executive (2013:1), the average number of days lost per employee due to injuries and illnesses in the healthcare sector are amongst the highest across the sector. In other words, researchers, policy makers, decision makers and other relevant stakeholders should work together to develop safety measures in order to bring about solutions to meet this challenge. The improvement of safety in the healthcare environment should remain a priority globally (Bhattacharjee & Gosh, 2011:742). Therefore, safety in the

healthcare environment would improve performance and productivity, as well as ensure less absenteeism, and fewer injuries and accidents. Therefore, this will also encourage employee commitment and cause them to stay with the institution.

In addition, efficiency assessment is a vital tool to help policy makers set more effective priorities for safety measures and thus lead to a considerable reduction of hazards and injuries in the workplace (Akpan, 2011:159). Reliable knowledge of the effectiveness of safety measures is a prerequisite task (Akpan, 2011:159). Management should put safety measures in place in the work environment and ensure that healthcare employees adhere to and implement safety measures effectively and efficiently. Reiman and Rollenhagen (2011:1263) report that employee behaviour toward health and safety in their working environment is a major contributor to accidents, danger, risk and injury. Therefore, it is necessary to identify the behavioural safety compliance factors of employers, which encourage employees towards behavioural safety compliance.

Amnesty International (2009) clarifies that private and public healthcare institutions are required to act systematically to ensure health, environment and safety activities by providing:

- sufficient quantity of healthcare facilities, trained healthcare employees and essential medicine;
- healthcare facilities and information on health that is physically and economically accessible;
- healthcare facilities and information on health that is acceptable, in terms of medical ethics; and
- healthcare facilities and information that is scientifically and medically appropriate.

4.3 SAFETY MEASURES

Safety is the responsibility of all healthcare employees (Smalley, 2011:195). Safety measures are activities and precautions taken to improve safety and reduce risk related to human health (Alli, 2008:2; Oakes, 2009:1). Safety, security and protection are the basic needs for the fulfilment of each individual (Datta, 2007:147). These needs are vital to the physiological needs of survival and stimulation. Adherence to safety measures in healthcare institutions ensures and increases the protection of employees from harm, risks and injuries. In addition, complying with safety measures has a positive impact on the safety, health and productivity of nurses, and it allows for good healthcare outcomes. According to Kumar, Goud and Joseph (2014:13), common safety measures include chemical analysis, destructive testing of samples, and drug testing of employees.

4.3.1 Health and safety at the workplace

The healthcare settings in which nurses carry out their jobs and multiple tasks can present a great variety of hazards (European Agency for Safety and Health at Work, 2014:1). Therefore, health and safety at the workplace is crucial to minimising or reducing employees' exposure to occupational hazards. Occupational hazards include chemical hazards, biological hazards, psychosocial hazards, and physical hazards. According to the Health and Safety Executive (HSE) (2013), health and safety at work is aimed at:

- promoting and maintaining the highest degree of physical, mental and social wellbeing of healthcare workers;
- preventing healthcare workers from leaving healthcare institutions due to health problems caused by their working conditions;
- protecting healthcare workers in their employment from risks resulting from factors adverse to health;
- placing and maintenance of the healthcare worker in an occupational environment adapted to his/her physiological and psychological capabilities; and

- adapting the work environment for each healthcare employees to ensure job effectiveness.

Health and safety issues in the workplace require cooperation from healthcare employers and employees. The nurses will be motivated to come to work daily, because they feel they are part of their organisation. Thus, employee commitment towards implementation of safety measures is promoted and enhanced.

4.3.2 Availability of staff

The availability of staff is seen as one of the safety measures that can be implemented in the public healthcare institutions (Koto & Maharaj, 2016:53). Shortage of nurses means overburdening of other employees who are present and who have to work under intense pressure to ensure patient care (Bajpai, 2014:1). The biggest health and safety hazard faced in South Africa is a critical shortage of staff. The unavailability of staff negatively affects the healthcare system (Crisp & Lincoln, 2014:950). There is a steady reduction of services provided at public healthcare institutions because of the shortage of nurses (Benatar, 2013:154). Despite the presence of experienced healthcare professionals and well-established training institutions, South Africans still experience low access to healthcare in the public healthcare institutions (Van Rensburg, 2014:26). The challenge of shortage of nurses is still persistent despite the introduction of the Batho Pele Principles in 1997 as a measure to transform health and healthcare services in the country (James & Miza, 2015:2). Furthermore, O'Brien and Gostin, (2008:6) indicate that migration of nurses undermines the strength and effectiveness and access to public healthcare institutions promoting health inequalities and negative health outcomes.

The shortage of employees forces healthcare employees to work outside their job description, for example the manager assigning an assistant nurse to perform job duties not listed on the job description, example, assistant nurse administering medication to a patient (Dhai, Etheredge, Vorster & Veriava, 2011:88). Shortage of employees forces healthcare employees to perform duties that they are not trained for and they receive no remuneration for it, work load (McDonald & Ruiters, 2005:29). Furthermore, Stimpfel, Sloane and Aiken (2012:2501) indicate that shortage of staff

has a negative impact on the morale of nurses. Employers are therefore required to adopt and implement strategies aimed at attracting and retaining people into nursing.

4.3.3 Training, reporting and follow-up

Effective safety training, reporting and follow-up is vital for educating nurses on how to detect and prevent accidents and potential hazards from occurring in the workplace (Zin & Ismail, 2012:746). According to Ghani, Hamid, Zain, Rahim, Kamar & Rahman (2010:1), training and education programmes play crucial role in enhancing safety and increase safety awareness. Russel (2012:67) suggests that nurses playing key roles are required to be properly trained so they can make effective contribution in ensuring health and safety in the institution. This implies that there must be induction training before nurses commence any hazardous work they have not done before.

Kran, Hershner, Loeding, Maski, Rifkin, Selim and Watson (2015:335) report that nurses are more likely to be exposed to viruses just by touching a patient's body fluids, contaminated medical supplies and equipment, or contaminated environmental surfaces. Healthcare employers must train nurses on how to take additional infection control steps and how to minimise procedures that can increase environmental contamination with infectious material (Kran, *et al.*, 2015:335). Healthcare employers should ensure that nurse training is not a once off process. In-service education needs to be done regularly to keep employees up-to-date with new developments on health and safety. Furthermore, Russel (2012:19) advises healthcare employers to provide training and follow-up relevant on employee's job so as to ensure safety and health. The following training and follow-up that should be provided includes:

- using videos with subtitles in training where possible;
- using safety symbols and signs and ensuring that healthcare employees understands what they mean;
- providing information in audio as well as written formats, which is a good strategy for people with limited literacy as well as people with visual impairment;
- providing audio tapes to share information that has been translated into community languages; and

- checking to see if healthcare employees understands what they have been told in induction training;

Effective training, reporting and follow-up is crucial in enhancing and promoting safety and safety awareness in the workplace. Hence well trained employees become motivated and committed in carrying out their duties and in the implementation of safety measures.

4.3.4 Sharp injuries

Sharp injury is a penetrating stab wound to the skin caused by needles, blades, lancets, scalpels, broken glass or other medical instrument (Castella, Vallino, Argertero & Zotti, 2003:290). Every year numerous healthcare employees are exposed to deadly diseases through needle-stick and sharp injuries (Adefolalu, 2014:159). Schmitz-Felten (2013) reports that the most common causes of sharp injuries include:

- lack of personal protective equipment, safety devices, and sharp disposal containers;
- lack of procedures for sharp injury reporting;
- lack of awareness with occupational hazards;
- insufficiently trained and shortage of staff ;
- limited access to sharps disposal containers;
- recapping needles after use;
- passing sharp instruments from hand-to-hand in the operating suite;
- failure to use sharp disposal containers immediately after use; and
- unpredictable medical incidents and unexpected patient reactions.

Adejumo and Olatunji (2014:229) and Salkin (2004:1) posit that healthcare employees' exposure to sharps is the most frequently occurring risk in public healthcare institutions. Mill, Nderitu and Richter (2014:11) affirm that working with sharp objects such as needles is a potential danger which leads to risks and hazards. However, the risk of injury will depend on how long the employee was on shift/duty, how fast the employee worked and what assistance was provided to the employee. Furthermore,

the risk of injury depends on the protective mechanisms available, lighting situations in health institutions, employee access to retractable needles and the availability and methods of disposal (Mill *et al.*, 2014:11).

Koukoulaki (2010:938) points out that there is a high rate of needlestick injuries amongst temporary healthcare workers. Virtanen, Kivimaki, Joensuu, Virtanen, Elovainio and Vahteral (2005:938) suggest that this association amongst temporary workers may be related to their greater inexperience and lack of safety training at the workplace. According to the Health and Safety Executive (2013:1), all employers are required under existing health and safety law to ensure that risks from sharp injuries are adequately assessed and that appropriate measures are in place to reduce them. Therefore, it is important for healthcare employers and their contractors to co-operate in providing training and information to employees on the safety measures regarding sharp injuries.

The Sharps Regulation supplement's existing requirements should provide health and safety information and training for nurses. The training should focus on safe operating systems and safety guides, and information on sharps should be communicated via posters and internal websites (Riddell, Kennedy & Tong, 2015). Kakizaki, Ikeda, Ali, Enkhtuya, Tsolmon, Shibuya and Kuroiwa (2011:184) postulate that nurses are required to put procedures in place and take specific action in the event of a sharp injury. Employers should provide appropriate first aid to reduce the severity of an injury or illness within the workplace. Furthermore, employers should ensure that suitable first aid services are provided for healthcare workers, depending on the number of workers, the nature of their work, the hazards involved and access to emergency medical services (Kakizaki *et al.*, 2011:184). Russel (2012:27) stipulates that healthcare workers should be responsible for reporting any incidences or hazards at work to their manager or supervisor. Similarly, injured employees are obligated to notify their employers in the event of sharp accidents.

4.3.5 Work environment

Work environment refers to the location in which a task is performed (Mutia & Sikalieh, 2014:82). Muller, Bezuidenhout and Jooste (2005:525) define work environment as the conditions, circumstances, and influences that affect the organisation's ability to achieve its objectives. Furthermore, work environment is the totality of physical, organisational or operational elements that have an impact on the amount of work performed by employees and employees' standards of achievement (Jaskiewicz & Tulenko 2012:38). Eklof, Torner and Pousette (2014:220) indicate that work environment plays a vital role in employees' ability to provide quality healthcare. Furthermore, Eklof *et al.* (2014:220) argue that lack of routines or administrative control systems does not result in poor health, however, stress and poor psychological working environment cause risks and poor safety for employees.

Bradley, Kamwendo, Chipeta, Chimwaza, de Pinto and McAuliffe (2015:65) state that inadequate facilities and equipment shortages contribute to an unsafe and stressful working environment. Taiwo (2010:299) affirms that the work environment can influence the productivity of employees and their attitudes towards work. According to Lamm, Massey and Perry (2006:75), there is increasing and compelling evidence that a healthy and safe working environment has the potential to increase productivity. Equally, a healthy environment benefits employers and nurses as it increases performance.

Lamm *et al.* (2006:75) argue that productivity gains are often made at the expense of the health and safety of nurses. The National Primary Care Facilities Survey of 2003 reports that most healthcare facilities required structural repairs and had inadequate security. As a result, nurses experience stress and anxiety, which are safety hazards. According to Loeppke (2008:97), a positive work environment is essential for retaining healthcare workers, enhancing patient satisfaction and improving organisational outcomes. In addition, there is a link between the work environment and patient satisfaction. Therefore, the working environment may negatively or positively influence the implementation of safety measures in public health institutions.

Furthermore, management plays a key role in creating environments that are conducive to nurses. The work environment desired by all nurses cannot be provided overnight. Management is required to invest time, energy, and resources to ensure that it creates a work environment that is suitable for all nurses. In addition, proper investment in the work environment will result in organisational effectiveness, as a healthy work environment inspires employees to perform at their maximum abilities, thereby increasing the commitment of nurses.

4.4 WORKPLACE VIOLENCE

The key components of an effective healthcare system are the wellbeing of nurses and a workplace free from violence and crises. Violence in the healthcare environment is increasing at an alarming rate, and this has become a major concern for healthcare workers (Kling, Yassi, Smailes, Lovato & Koehoorn, 2009:1655). Chen, Sun, Lan and Chiu (2009:2812) report that workplace violence is seen as a critical psychosocial risk and a challenge that affects the professional and personal life of healthcare workers.

Ray (2007:257) categorises workplace violence into physical, psychological (emotional), sexual and racial violence. The causes of workplace violence include alcohol, long waiting time, recreational drug use, dysfunctional families, anger about illness and dying, disgruntled workers, and patients' unrealistic expectations. Alameddine, Mourad and Dimassi (2015) report that nurses are regularly subjected to minor and major verbal and physical abuse from patients, visitors, and other employees. The most common form of violence experienced by healthcare employees is verbal abuse (Ferns & Meerabeau, 2008:436). The most frequent responses to verbal abuse are stress and anger. In addition, patients and patients' families express their anger through violence (Khademloo, 2013). Simon and Hurvitz (2014:1) and Spangaro, Adogu, Ranmuthugala, Powell Davies, Steinacker and Zwi (2013:1) suggest that the following strategies should be applied in order to reduce the risk of workplace violence:

- establish a zero-tolerance policy for violent behaviour;
- patients with a history of aggressive or violent behaviour towards staff should be identified while maintaining confidentiality;

- transfer violent patients to units with higher staffing ratios or train staff to deal with violent behaviour;
- enforce visiting hours and visitor passes;
- do not let healthcare employees work alone in isolated units with walk-in-patients;
- do not allow employees to be alone with patients during intimate physical examination; and
- never allow healthcare employees to enter seclusion rooms alone.

Furthermore, workplace violence is an issue that cannot be ignored. This is because workplace violence affects the healthcare environment and it is seen as one of the most complex and dangerous occupational hazards experienced by healthcare workers (Sahebi & Gholamzadeh, 2011:27). Rodwell and Cemir (2012:2296) conclude that workplace violence leads to high employee turnover. In addition, workplace violence impacts negatively on nurse commitment, job satisfaction, quality of life, and productivity (Hegney, Tuckett, Parker & Eley, 2010:188; Zeng, An, Xiang, Qi, Ungvari & Newhouse, 2013:510).

Blair (2013:75) and Lai, Magarey and Wiechula (2012:126) report that the negative impact of workplace violence includes increased medical errors and low quality of patient care, while it also minimises communication between, and causes disputes amongst, nurses and patients. Workplace violence can affect the professionalism, performance and satisfaction of healthcare employees (Khoshknab, Oskouie, Najafi, Ghazanfari, Tamizi & Ahmadvand, 2015:1). In this respect, nurses are likely not to be committed to their organisation and will absent themselves from work as a result of the violence experienced while performing their work-related duties. Furthermore, Hunt and Hughey (2010:39) report that workplace violence, such as murder or physical attacks against nurses, frequently occur in public health institutions. In addition, the negative impact of workplace violence is that it places a financial burden on organisations. In other words, organisations will have to spend a significant amount of money on the treatment of employees who have been exposed to violence. Organisations will have to compensate employees, families and other victims of workplace violence.

Furthermore, workplace violence has a negative impact on nurses as it increases absenteeism and decreases motivation, work performance, job satisfaction and productivity (Indermun & Bayat, 2013:1). Hunt and Hughey (2010:39) support this notion by stating that the consequential impact of workplace violence includes low morale as well as reduced productivity and profitability. In addition, public health institutions that have a record of workplace violence will lack the ability to recruit and retain competent nurses. Workplace violence has a negative impact on both nurses and patients. Nurses get exposed to physiological, psychological and social challenges that are related to high levels of stress and anxiety (Eriksen, Tambs & Knardahl, 2006:1). Therefore, nurses who are affected by workplace violence will not be committed to the implementation of safety measures in healthcare institutions. This will lead to staff shortages as these nurses will be on sick leave for long periods of time, especially when depression sets in.

4.5 WORKING CONDITIONS

Working conditions refers to the working environment and all existing circumstances that affect labour in the workplace, including job hours, physical factors, legal rights and responsibility, organisational culture, workload and training (Ali, Ali & Adan, 2013:69). Yassi, Zungu, Spiegel, Kistnasamy, Lochhart, Jones, O'Hara, Nophale, Bryce and Darwin (2016:25) state that working conditions are characterised by understaffing, excessive workloads, stress, exposure to occupational hazards, unsafe environments, occupational ill health and violence.

According to El-Jardali, Jamal, Abdallah & Kassak (2007:1), working conditions has been identified as a pull or push factor that influences the retention of healthcare workers. Van Rensburg (2014:26) reports that in countries which have a shortage of healthcare employees, severe work conditions contribute to the migration of public healthcare workers. Similarly, Oosthuizen (2005:117) affirms that heavy workloads and poor working conditions are the reasons for South African healthcare workers leaving their jobs to seek employment in foreign countries. Improper working conditions can cause much strain on healthcare workers, which can lead to high staff turnover or excessive sick leave (Mosedeghrad, 2013:169).

According to Khamisa, Oldenburg, Pelzer and Ilic (2015:652), working conditions are connected to workload, employment levels and the nature of work tasks. In order to reduce workload, employers are required to design work tasks and establish workloads that are not detrimental to the health of the worker. Furthermore, healthcare workers should be provided with work conditions that allow them to be safe from injury and risks to their health. Furthermore, employers should focus on increasing productivity and reducing costs, by improving the working conditions of nurses (Markos & Sridevi, 2010:94). In addition, nurses should not ignore health and safety instructions, neither should they continue working in unsafe working conditions (Russel, 2012:10).

The working conditions for nurses are vital to retaining nurses in public healthcare institutions. Poor working conditions, such as poor wages, high stress and noise levels, negatively impact on employee productivity and performance; furthermore, they adversely affect the quality and safety of nursing care. In other words, poor working conditions such as a high degree of danger, numerous hazards and long working hours, negatively impact on the health, wellbeing and job performance of nurses (Ali *et al.*, 2013:67). Poor work conditions will likely expose nurses to infections and occupational injuries (Tadesse & Israel, 2016:16). There will be increased sick leave and staff shortage. Poor work conditions will increase the stress and burnout levels of employees. Nurses will experience fatigue and are likely to fail to perform their duties. Furthermore, poor working conditions are negatively associated with high employee turnover, low job satisfaction, low morale, low employee productivity and performance, and low organisational performance (Raziq, 2015:717). Thus, a poor working environment affects nurses' commitment to the implementation of safety measures in healthcare institutions.

Therefore, unfavourable working conditions contribute negatively to employees' wellbeing. Poor working conditions lead to nurses' injuries and ill health. Furthermore, the organisation suffers financial loss as it has to cover the costs incurred, in order to promote and improve the health and wellbeing of nurses.

4.6 FACTORS THAT HINDER THE IMPLEMENTATION OF SAFETY MEASURES

Healthcare employees have to deal with a wide range of environmental risks, occupational diseases or work-related accidents that pose a threat to their health and wellbeing (Werner, Vink, Watt & Jagals, 2015:1127). According to the Guidelines on Occupational Safety and Management (2007:69), the following factors prevent the implementation of safety measures:

- Absence of health and safety management systems: There are existing health and safety policies at healthcare institutions but healthcare workers have no knowledge of the health and safety management systems.
- Lack of adequate training and induction: The training and induction of healthcare workers are not properly carried out by their employers.
- The high costs involved in providing and maintaining risk control measures, as it is expensive to provide and maintain risk control.
- Lack of concern regarding health and safety issues: Healthcare workers are not responsive to enforcing health and safety measures in public healthcare institutions.
- The government has limited capacity to provide the appropriate legal framework and inspectorate personnel to enforce compliance with the Occupational Safety and Health Act, 2007 (ILO).
- The policies on health and safety in public healthcare institutions are not properly implemented. This negatively affects employees' commitment to safety measures.

4.7 SUMMARY

This chapter provided a discussion of the impact of implementing safety measures in the healthcare environment. The background and orientation to implementing safety measures in the healthcare environment was discussed in detail in this chapter. Furthermore, the chapter provided a discussion of the safety measures that should be adhered to by employees in the workplace. The chapter further outlined the safety measures that should be followed in the event of workplace violence and unsafe working conditions. Furthermore, the factors that hinder the implementation of safety measures were explored in this chapter.

The ensuing chapter, Chapter Five, provides a discussion of the occupational health behaviour of healthcare employees. The chapter presents and explores issues on occupational health hazards, the importance of healthcare employees and the challenges faced by healthcare employees in the workplace.

CHAPTER FIVE

OCCUPATIONAL HEALTH BEHAVIOUR

5.1 INTRODUCTION

Chapter Four provided a discussion of the impact of safety measures on the healthcare environment. Furthermore, the chapter provided discussions on the background and orientation to the implementation of safety measures in the health environment. Chapter Four also highlighted the safety measures expected in healthcare institutions. Furthermore, the factors that hinder the implementation of safety measures were discussed in Chapter Four.

The current chapter, Chapter Five, focuses on the occupational health behaviour of healthcare employees. Chapter Five provides a series of discussions on the occupational hazards faced by healthcare employees, the importance of the wellbeing of healthcare employees, the challenges faced by healthcare employees in the workplace, and the role of an organisation in terms of health behaviour.

5.2 BACKGROUND OF OCCUPATIONAL HEALTH BEHAVIOUR

Healthcare employees are the pillars of the healthcare system and their wellbeing is essential to ensuring that the system functions well and that patients are well taken of (Taylor, 2012:101). In addition, the health and wellbeing of all nurses is vital to improving the performance, productivity and success of the healthcare institution, and in achieving its institutional aims and objectives. Therefore, occupational health behaviour refers to the interaction between employees, employers and patients in a health institution, be it a clinic or a hospital. In view of this statement, the study agrees with the view of Hemphill-Pearson (2008:1) who sees occupational health behaviour as the result of dynamic interactions between persons and the environments in which they function.

Furthermore, Schmidt and Gebhart (2013:237) state that occupational behaviour is the client's amount of information on health and safety and the meaningfulness of the activities (autonomy and competency) that are often related to their life satisfaction.

Furthermore, generally, emotional reactions, such as emotional stress, and physical reactions to occupational demands, work organisation, and the psychosocial work environment are regarded and included as necessary attributes of occupational behaviour. In addition, physical stamina, the ability to accept supervision and criticism, as well as interpersonal relationships with colleagues and managers are important components of occupational behaviour for the performance of work-related tasks (Schmidt & Gebhart, 2013:237). Therefore, occupational health behaviour is an important motivator for employee commitment to safety in the work environment and for the removal of health hazards in healthcare institutions.

5.3 OCCUPATIONAL HEALTH HAZARDS

Healthcare employees perform their duties in an environment that is generally considered to be hazardous (Ndejjo, Musinguzi, Yu, Buregyeya, Musoke, Wang, Halage, Whalen, Bazeyo, Williams & Ssempebwa, 2015:159). Healthcare employees are exposed to infections because they get into contact with sick patients. In addition, healthcare employees are exposed to a number of hazards due to their work-related activities (Manyele, Ngonhani & Eliakimu, 2008:159). Some of these hazards are any dangerous biological, chemical, mechanical, environmental or physical agents (Nsubunga & Jaakola, 2005:773).

The terms 'hazard' refers to all aspects of technology and activities that cause danger or risk and that have the potential to harm the health of healthcare employees (Betrand & Shafer, 2016:1). Ataguba and Akazili (2010:74) and Zungu and Malotle (2011:17) postulate that South African healthcare employees experience severe difficulties in performing their work. This is because they have been exposed to hazards that have an adverse effect on their health. Hazards interrupt healthcare employees in the provision of quality healthcare services. Hazards also have negative consequences, such as increased absenteeism, low morale and the loss of healthcare employees. The most extreme cases of hazards or hazardous encounters and their consequences have been found in public healthcare institutions (Ataguba & Akazili, 2010:74; Zungu & Malotle, 2011:17).

The healthcare workforce represents a large portion of the working population, and their health status has an immediate and direct impact on the economy of the country concerned (Goniewicz, Wloszczak-Szubzda, Niemcewicz, Witt, Marciniak-Niemcewicz & Jarosz, 2012:523).

The facilitation of occupational health in the workplace encompasses the development, promotion and maintenance of workplace policies and programs that ensure the physical, mental and emotional wellbeing of employees. In so doing, the organisation manages to limit the occurrence of soft injuries, accidents and hazards, and therefore becomes cost-effective (Arastoo, Hakimovich & Esfandiarpour, 2015:378). In addition, the positive impact of occupational safety and health is related to improved employee retention and a decrease in absenteeism (Tadesse & Admussu, 2006:2). The development of clear policies and programs of occupational health behaviour strives to:

- prevent harmful health effects in the work environment;
- protect employees from health hazards while on the job;
- place employees in work environments that are suitable to their physical and mental make-up;
- address factors that may affect an employee's health and wellbeing, such as ineffective organisation of work, harassment and violence in the workplace, and the need to balance work and family responsibilities; and
- promote healthy lifestyles amongst healthcare employees.

In is regard, Zungu and Malotle (2011:20) explain that occupational health services are supposed to be provided to employees by highly competent healthcare employers. According to Glanz Rimer and Viswanath (2008:167), the three categories of health behaviour include:

Preventive health behaviour: Any activity undertaken by an individual who believes himself or herself to be healthy, for the purpose of preventing or detecting illness in an asymptomatic state.

Illness behaviour: Any activity undertaken by an individual who perceives himself or herself to be ill, to define the state of health, and to discover a suitable remedy.

Sick-role behaviour: Any activity undertaken by an individual who considers himself to be ill, for the purpose of getting well. This includes receiving treatment from medical providers and it generally involves a whole range of dependent behaviours; it also leads to some degree of exemption from one's responsibilities.

Therefore, nurses, who are the focus of this study, require measures to reduce their risk of exposure and acquisition of disease or injury. Health policy makers should enact policies on a professional code of conduct and constitutional mandate to manage exposure to hazards and improve the wellbeing of healthcare employees (Manyele *et al.*, 2008:159). Furthermore, Nsubunga and Jaakkola (2005:773) postulate that employees are exposed to occupational hazards which can be broadly classified as biological and non-biological. Non-biological hazards include the physical, psychological, and ergonomic hazards (Tinubu, Mbada, Oyeyemi & Fabunmi, 2010:12), to which nurses are the most frequently exposed (Rim & Lim, 2014:43).

Nurses by virtue of the nature of their work and day-to-day activities, are most frequently exposed to physical hazards such as slips, trips, falls, burns, fractures, and radiation from X-rays, noise, non-ionizing radiation and psychological hazards, thus making them vulnerable to mortality and severe disabilities. Ndejjo *et al.* (2015:1) state that morbidity and mortality, which are challenges to healthcare employees, inevitably lead to loss of skilled personnel; they therefore have an adverse effect on the number of nurses needed to render healthcare delivery. Ali, Wassie and Greblo (2012:1212) and Mowafi, Nowak and Hein (2007:351) describe the adverse impact of morbidity and mortality on the health sector as a humanitarian resource crisis. These authors argue that this crisis is due to the high burden of hazards and infectious diseases, coupled with difficult working conditions. Therefore, healthcare employees should consider training. Furthermore, education on compliance with important preventive measures is crucial for the promotion of occupational health behaviour and for enhancing employee commitment to safety in the work environment.

5.4 IMPORTANCE OF HEALTHCARE EMPLOYEES' WELLBEING

Employee wellbeing involves a good, healthy lifestyle (Canadian Centre for ManagementDevelopment 2002:1); it also refers to the overall state of health and happiness of employees. Employee wellbeing requires organisations to actively assist employees to maximize their physical and mental health through the creation of a healthier and safer environment for employees (Perez & Martinez, 2009:11).

Wellbeing is, ultimately, the responsibility of an individual, and it requires education and self-awareness (Bevan, 2010:7). Further to this, organisations have recognised that the workplace can be used to promote or reinforce healthier working practices and lifestyle choices. Thus, a healthy, well-trained and motivated workforce will insist on safety measures and protection. Furthermore, the physical and psychological wellbeing of employees can improve employee productivity, commitment and attendance. In addition, employee commitment is reinforced when employees are in good health (Constable, Coats, Bevan & Mahdon, 2009:2).

5.5 CHALLENGES OF HEALTHCARE EMPLOYEES IN THE WORKPLACE

Employers and employees are faced with numerous challenges in their work environment. These challenges relate to workplace violence, job insecurity and working hours. The government and policy makers in the healthcare sector have enacted laws and regulations to deal with these issues and assist in alleviating the burden caused. However, these challenges still persist and thus pose a threat to the wellbeing of employees and, ultimately, have a negative impact on the quality of services received by patients (Epstein, Becker & Green, 2016:1). The discussion below focuses on job insecurity and working hours as a means to illustrate the importance and impact that these factors have on employee commitment to safety in the work environment.

5.5.1 Job insecurity

Job insecurity is defined as a work-related stressor, and it signifies the threat of job loss and discontinuation of employment (Kozak, Kersten, Schillmoller & Nienhaus, 2013:102). In addition, job insecurity reflects the discrepancy between the levels of security that a healthcare employee actually experiences and the preferable level of security. According to Rajgopal (2010:63), employees who were most highly invested or involved in their jobs were most adversely affected by job insecurity. Further, Landsbergis, Grzywacz and LaMontagne (2012:569) indicate that changes in employment conditions have led to the increased job insecurity of employees. Samson and Daft (2005:587) postulate that job insecurity can cause employees to feel more stressed and that it lowers their enthusiasm and commitment to their organisation.

5.5.2 Working hours

Working hours refers to the earliest and latest boundaries within which a working day of eight hours may be for employees (Pencavel, 2014:8). The South African Department of Labour (2004:8) confirms that the Basic Conditions of Employment Amendment Act, No 11 of 2002, provides a description and the regulation of working hours for employees in South Africa. According to the Basic Conditions of Employment Amendment Act, No 11 of 2002, employers in South Africa are not required to allow their employees to work more than forty-five hours in any week, and nine hours in any day if the employee works for five days or fewer in a week, or eight hours in any day if the employee works more than five days in a week.

In the wake of staff shortages, nurse managers trying to respond to instability in the work environment often opt for a change in duty schedules but remain within the forty-five hour week as much as possible, considering the consequences of long working hours for personnel. In this regard, nurses work long hours but have a chance to be at home for an extended period of time. For example, a nurse will work two long days in succession, have a day off, followed by two nights at work. In that week, the nurse has two nights at home followed by a whole day, before starting night duty. In this way, a balance seems to be maintained. With regard to the challenges brought about by the strategies used to avert the negative impact of staff shortages, Townley (2000:3)

postulates that long working hours have a negative impact on employee health as it causes a range of stress-related symptoms (such as fatigue and headaches). In addition, Olds and Clarke (2010:153) argue that the risk of making medical errors increases when work shifts are longer than usual, or when nurses work overtime.

Sullivan (2011:65) states that most organisations have adopted longer working hours, possibly in an effort to maximize productivity. However, Lerman, Flower, Gerson and Hursh (2012:231) insist that fewer employees maintain productivity levels when working an increased amount of overtime.

Nursing is a twenty-four hour profession and, therefore, it is not easy for nurse managers to avoid the use of overtime, as the care provided to patients should be continuous. There are instances when one nurse could not just stop working and hand over to the next nurse when the shift ended; examples of these instances are when nurses are attending to the delivery of a woman, assisting with surgery in theatre, and resuscitating patients in trauma or intensive care units. Under these circumstances, overtime is acceptable and, as a rule, each institution will develop its own policy around this type of overtime and will control overtime. In hospitals and clinics, there is an escalation in the use of extended work shifts and overtime due to a shortage of registered nurses (Stimpfel, Sloane & Aiken, 2012:2501). Therefore, overtime leads to decreased employee commitment and productivity, if it is not controlled.

5.5.3 Implementation and control of safety measures in the workplace

Safety control at work involves adequate program standards, compliance with standards, and hazard control (Occupational Health and Safety, 2004). Employers are required to have safety control measures in place in their institution, and ensure the implementation of and adherence to safety measures by all employees. Therefore, to promote health and safety in the workplace, management is required to constantly perform an evaluation process in order to maintain quality assurance in the organisation.

As indicated by Occupational Health and Safety (2004), safety control measures could be in the form of physical equipment, process control systems, management processes, operating or maintenance procedures, an emergency plan as well as key

personnel and their actions. Nurse managers and management officers should, therefore, take consideration of these measures and assist employees to commit to safety in the workplace and limit hazards.

5.5.4 Role of management towards health behaviour

Managerial style is a vital factor for organisational health and safety (Alli, 2008:1). In addition, the behaviour of management regarding health affects the health behaviour of employees. Management are required to recognise the impact of their behaviour through direct interaction with or observation of healthcare employees (Parand, Dopson, Renz & Vincent, 2014:1). This implies that management should communicate their values, concerning health behaviour, with employees. Management should be sensitive, responsive and observant, in order to ensure that employees comply with the required health behaviour policies of the organisation (Skinner & Chapman, 2013:1).

Furthermore, management should take responsibility as facilitators of and advocates for organisational health. Employees will adopt positive organisational health behaviour if management are responsive to ensuring compliance with health behaviour policies. Healthcare employees' commitment to safety in the work environment, and their productivity, will be enhanced if they adopt positive health behaviour (Skinner & Chapman, 2013:1).

5.5.5 Occupational stress

Stress refers to a set of physical reactions that take place in the body in response to demands that are placed on it (Joseph, 2013:73; Kranner, Minibayeva, Beckett & Seal, 2010:655). In addition, stress is an integral part of everyday life that simply cannot be avoided. Occupational stress is a constantly changing and circular process that involves the transaction between an individual and his or her work environment (Ekundayoi, 2014:157). Furthermore, healthcare employees constantly encounter stressful stimuli in their personal and social domains, and in the workplace. Furthermore, Rothmann (2007:37), Spiesberger, Vagg and Wasala (2003:97) and Stoica and Buicu (2010:7) define occupational stress as mind-body arousal resulting

from physical and/or psychological job demands. Vandenbergher, Benton, Michon, Chebat, Tremblay and Fils (2007:1177), however, report that the feeling of entrapment and disgruntlement that accompanies a lack of alternatives may, over time, translate into stress symptoms in healthcare institutions.

Occupational stress and workplace health have become issues of great concern both nationally and internationally (O'Neill & Davies, 2011:385). Occupational stress appears to be increasing due to the nature of work, the amount of time spent at work and the current changes that are affecting the nature of work (Costa, 2010:112; Randall & Buys, 2013:1). Furthermore, workforces are constantly being downsized and small organisations are merging. These changes in organisational structure create occupational stress for employees (Pryor, Taneja, Humphreys, Anderson & Singleton, 2008:1). Grabovac and Mustajbegovic (2015:2) point out that a poor organisational culture, in terms of health and safety, often leads to or possibly adds to stress and other adverse health effects for employees.

Burton (2015:81) and MVicar (2003:633) state that management has been referred to as one of many possible sources of stress at work. In addition, stress results in low levels of employee personal accomplishment, burnout, decreased performance and increased employee turnover. Therefore, it is suggested that management be mindful of this effect. Mostert, Rothmann, Mostert and Nell (2008:102) purport that the impact of occupational stress in organisations includes:

- high employee turnover and absenteeism from work;
- increased poor health and compensation claims, and decreased productivity;
- indirect costs for employers, for workplace injuries; this includes increased insurance premiums, lost productivity time, additional labour costs for replacing employees and the costs of administration claims; and
- increased unemployment, loss of prospects for further career development and the potential to cause a general decline in quality of life.

Furthermore, Jain, Giga and Cooper (2013:4907) affirm that occupational stress is linked to increased absenteeism, poor work performance, health problems and employee turnover. In addition, occupational stress is deemed to be causally

responsible for a vast and varied range of negative health outcomes that not only affect the healthcare employee, but also affect the employer and society at large. Therefore, occupational stress affects employee commitment in the healthcare environment (Jain *et al.*, 2013:4907).

5.6 OCCUPATIONAL CULTURE IN THE HEALTHCARE ENVIRONMENT

An organisational culture of health and safety in the working environment is fundamental to creating a hazard-free (infection control and fatigue) environment for employees, and error-free care to patients. Organisational safety culture is a foundation for promoting the wellbeing of employees and enhancing safety for patients. In this respect, the burden and cost of poor patient safety, as well as work-related injury and illness amongst health employees will be reduced if health institutions adopt an effective health and safety culture (Department of Labour, 2016:1).

5.6.1 Wellbeing of employees

Sieberhagen, Pienaar and Els (2011:1) define wellness as a person's state of wellbeing, which contributes to an improved quality of life. Takala, Hamalainen, Saarela, Yun, Manickam, Jin, Heng, Tjong, Kheng, Lim and Lin (2012:326) suggest that the wellbeing and quality of life of most employees are affected by the hazards to which they are exposed or the injuries that they sustain at work. Furthermore, the poor employee health has a negative impact on their relationships with colleagues and patients. In other words, nurses that are affected by occupational hazards or disease are more likely to render low quality services to patients, or are forced to stay at home in order to avoid the transference of diseases to colleagues and patients (Chung, Yazdanifard 2014:1; Jain, Giga & Cooper, 2009:256). Furthermore, Zoladz (2013:860) is of the view that healthcare employees experience one or more behavioural difficulties during ill health. This implies that if nurses' injuries or illnesses are left untreated, it will have a negative impact on the employees' ability to secure their jobs as well as maintain relationships with colleagues and family. Furthermore, the happiness and positive emotions of nurses will be negatively affected if employers and management fail to consider their health and wellbeing.

5.6.2 Organisational culture

Ravasi and Schultz (2006:433) define organisational culture as the combined mental assumptions that determine the way of working within organisations. Abu-Jarad, Yusof and Nikbin (2010:26) refer to organisational culture as the totality of an organisation's values, character, attitudes, languages and beliefs. In addition, organisational culture influences employee behaviour and the way in which the members of the organisation become aware of and interpret the behaviour of others (Abu-Jarad *et al.*, 2010:26). Glanz *et al.* (2008:344) state that organisational culture is a system of shared meaning and common understanding and, as such, these meanings distinguish one organisation from another. Therefore, the healthcare setting, in terms of beliefs, values and norms can improve the outcomes of healthcare service delivery. In other words, the productivity and performance of nurses can be enhanced. Furthermore, patients' and nurses' needs pertaining to their health and safety will be met effectively and efficiently.

In addition, culture is like climate in that it can exist at many levels (strong, weak, or transitory) (Glanz *et al.*, 2008:344). Similarly, Naicker (2008:1) perceives culture at the workplace as a very powerful force that is consciously and deliberately activated and passed on to new employees. In addition, organisational culture is either a force for change or a definite barrier to establishing a relationship between employees and the organisation (Agwu, 2014:1; Michalak, 2010:27). Therefore, managers are challenged with changing the culture of an organisation and concomitantly supporting new ways of accomplishing the goals of the organisation. Professional beliefs and values influence the attitudes and direct the behaviour of healthcare employees who observe the organisational values. Management regulates their managerial behaviour in such a way that the goals and objectives of the organisation are proficient. These different and continuous influences, and direction of professional and organisational values, are observed in order to enhance the job satisfaction of healthcare employees. According to Shahzad and Luqman (2012:977), the organisational values and the essence of the culture of an organisation can be captured in seven primary characteristics:

- **Innovation and risk-taking** is the degree to which employees are encouraged to be innovative and take risks.
- **Attention to detail** is the degree to which employees are expected to exhibit precision analysis and attention to detail.
- **Outcome orientation** is the degree to which management focuses on results or outcomes rather than on the techniques and processes used to achieve those outcomes.
- **People orientation** is the degree to which management decisions take the effect of outcomes on people within the organisation into consideration;
- **Team orientation** is the degree to which work activities are organised around teams rather than individuals.
- **Aggressiveness** is the degree to which people are aggressive and competitive rather than easy going.
- **Stability** is the degree to which organisational activities emphasise maintaining the status quo.

Healthcare culture has an impact on the performance and productivity of nurses. The improvement in the manner in which things are done in the healthcare environment also improves levels of employee commitment. In other words, nurses will carry out their assigned duties by following guidelines that are clear and observable, with managerial support, and thus discard any intention to leave their jobs. Furthermore, healthcare employees will experience good relations with management, colleagues and the organisation itself.

Organisational culture comprises the common beliefs, attitudes and values of an organisation; it therefore has a significant impact on how nurses are committed to and engaged in their duties. The values of any health institution assist employees to understand how they should act in the workplace (Joseph & Dai, 2009:243). In the context of this study, organisational culture refers to how hard or easy it will be for healthcare employees (nurses) to continue being innovative and embrace the risks of change. Uddin, Luva and Hossian (2013:63) assert that organisational culture exists on several levels, and it differs from organisation to organisation in terms of visibility and resistance to change. However, it is difficult to determine the most important elements of organisational culture that can bring about change in the organisation.

According to Hester and Setzer (2013:1) and Obasan (2012:121), the levels of organisational culture are:

- Shared assumptions are the least visible or deepest level; it represents beliefs about reliability and human nature that are taken for granted.
- Cultural values represent collective beliefs, assumptions and feelings about what is good, normal, rational and valuable. Cultural values are different in all organisations. Employees may care deeply about money in one organisation, while employees from another organisation may care about technological innovation or employee wellbeing.
- Shared behaviours, which are norms, are more visible and somewhat easier to change than values. The reason for this is that people may be unaware of the values that bind them together.
- Cultural symbols are words, gestures and pictures, or other physical objects, that carry a particular meaning within a culture.

Naicker (2008:1) posits that where there are cultures, there are also sub-cultures and, where there is agreement about cultures, there are significant differences between advocated culture and culture in practice. Therefore, in order for organisations to be healthy, the characteristics and features (leadership, values, staff selection, rewards, norms, roles, decision-making and communication) of culture must be attended to over time (Naicker, 2008:1). Furthermore, the absence of the key elements of culture will have a negative impact on the organisation. This is because a single cultural feature cannot by itself positively impact on organisational success. Organisational culture is fundamental in a workplace environment, however, the improvement of culture is very challenging. However, change is inevitable, it takes time and it requires specific interventions (Naicker, 2008:1).

Chassin and Loeb (2011:559) state that healthcare institutions must undergo three interdependent changes in order to change their culture: leadership must commit to the goal of high reliability; organisational culture must support high reliability and culture must be fully implemented; and the tools of robust process improvement must be adopted. According to Gershon (2004:33) and Sun (2008:137), the norms, values, beliefs and assumptions shared by members of an organisation are referred to as

organisational culture, which evolves over time and is difficult to change. Healthcare institutions should create a culture of safety and health, for healthcare employees and patients, by adopting values and committing resources to these matters in the work environment. The responsibility of employers should be to maintain a safe and healthy environment that will prevent injuries, and minimise illnesses and hazards for nurses and patients (Gershon, 2004:33).

Organisational culture plays a vital role in instilling the values and beliefs of an organisation. Furthermore, organisational culture provides clarity as to perceptions and the ways things are done in a particular organisation. Therefore, nurses are quite informed as to what is expected of them in terms of their duties, due to the guidelines provided in their organisations. In addition, nurses become committed and perform better in an organisation when they know its beliefs and values.

5.6.3 Types of organisational culture

Entrepreneurial culture, bureaucratic culture, clan culture and market culture are the types of organisational culture identified by Acar and Acar (2014:18) and Pinho, Rodrigues and Dibb (2014:374). These types of organisational culture are briefly described, for purpose of clarity, below:

Entrepreneurial culture is characterised by high levels of risk-taking, dynamism, creativity, experimentation and innovation. Entrepreneurial culture relates to the organisational commitment to be a market leader and have a competitive edge; it further encourages employee initiative, flexibility and freedom of growth.

Bureaucratic culture exists in an organisation that values formality, rules, standard operating procedures, and hierarchical co-ordination. There are clear definitions of tasks, responsibilities and authority for all employees in organisations with a bureaucratic culture.

Clan culture includes the attributes of tradition, loyalty, personal commitment, extensive socialisation, teamwork, self-management and social influences. In clan culture, employees recognise an obligation beyond the simple exchange of labour for

salary. Employees believe that the organisation will treat them fairly in terms of salary increases, promotions and other forms of recognition. Employees also hold themselves accountable to the organisation for their actions.

Market culture is characterised by the achievement of measurable and demanding goals, especially those that are financial and market-based. Moreover, the employer is in turn responsible for some level of reward.

The different types of organisational culture have an influence on employee commitment to the implementation of safety measures in public healthcare institutions. Furthermore, management has to attempt to change the perceptions and attitudes of nurses in order to suit the organisations in which they are currently employed. Management provides the requisite resources to reduce the occupational hazards and risks faced by nurses. In addition, nurses should comply with and adhere to the safety rules or safety practices that are in place. Therefore, a favourable and good environment encourages higher levels of employee commitment which, consequently, result in productivity and performance.

5.7 ROLE OF ORGANISATIONS REGARDING HEALTH BEHAVIOUR

A healthy organisation is achieved by managing and preventing stress as well as minimising hazards and risks (Stoica & Buicu, 2010:8). In other words, a healthy organisation is one that has created and maintained a relatively stress-free environment. In addition, a healthy organisation balances the demands and needs of all its stakeholders: government, employers, employees, community, and patients. Raya and Panneerselvam (2013:89) and Swanberg, Walton, Clouser, Hilliard and Loeffler (2011:3) refer to a healthy organisation as one that strategically integrates employee health and wellbeing into its culture and objectives through collaborative and comprehensive initiatives, and through the implementation of policies and practices, to achieve positive organisational and employee outcomes.

Lowe (2011:18) maintains that healthy organisations support individuals and communities to increase control over the determinants of health and, thereby, improve their wellbeing. Furthermore, healthy and productive workplaces are co-created by

employees, at all levels, who are able to influence the culture and other key characteristics of the environment in which they work. Carayon, Hoonakker and Smith (2012:534) refer to a healthy organisation as managerial and business understanding of health in relation to organisational culture. Furthermore, healthy and productive employees are the result of employees' contentment with their organisation.

Healthy organisations are those that have a culture, management, working environment, and business practices that create an atmosphere that improves the health, efficiency, and quality of work of all employees (Enterprise for Health, 2008). In addition, increased employee productivity, motivation and efforts are preserved for a long period of time in organisations that are healthy. In other words, healthy organisations protect the physical and mental health of their employees at work. According to Burton (2015:79), Carayon *et al.* (2012:534) and the Knifton, Watson, Grundemann, Dijkman, den Besten and ten Have (2011), the seven steps that form the fundamental building blocks of healthy organisations are:

- **Communication, consultation and informing:** These are necessary to obtain consent and make sure that all employees at all organisational levels are devoted to implementing safety and health policies, and protecting their health, regardless of their status or position in the hierarchy.
- **Recognition of needs:** Health and safety programmes should educate and be clear about what needs to be addressed. Management are required to promote positive attitudes towards health at work, and ensure that employees understand and prevent stress and health risk factors. In the event of injury, management must provide support to employees with health problems and find ways to incorporate them into the work environment.
- **Determining objectives:** The objectives for the achievement of health and safety in the work environment should be measurable, and the appropriate analytical methods should be employed to achieve these objectives.
- **Developing specific plans and measures:** After determining the objectives and the timeframe, it is necessary to define the means to achieve these objectives. Objectives include: informative campaigns that raise awareness of health and safety issues within the organisation; education and training for employees and employers; actions aimed at reducing injuries and hazards at

the workplace; methods for removing stressors at the workplace; policies aimed at helping people who develop health problems; and discrimination-free employment strategies.

- **Implementation of the programme:** It is crucial to draw up a clear written document concerning the implementation of a health and safety programme and the measures to be taken in this regard, as well as other planned changes within the organisation.
- **Evaluation:** Programme evaluation has to be clear and explicit. It also has to show whether the agreed upon health and safety objectives have been reached or not. Evaluation should take place, as previously scheduled, during programme implementation. Clear communication of health and safety results should be provided to everyone in the organisation, in order to increase employee interest in the health and safety programme, and introduce corrective measures.
- **Ensuring sustainability:** The only way to ensure the sustainability of health and safety plans and programmes at the workplace is to include them in the official work policies of the organisation.

Healthcare employees spend most of their lives at healthcare institutions. Therefore, nurses will value a healthcare environment that nurtures learning; furthermore, they will continuously learn and keep themselves updated with new health and safety developments. In order for employees to be happy and productive, management must foster a work environment in which they can grow and achieve the best. Therefore, employee commitment and productivity will be enhanced, promoted, reinforced and sustained if the organisation adopts positive behaviour towards the health and safety of its employees.

5.8 SUMMARY

This chapter provided an overview of occupational health behaviour in health institutions. The chapter also provided a discussion of the background of occupational health behaviour in health institutions; it further explained that the health behaviour adopted by healthcare employees emanates from the health and safety behaviours that organisations display. Furthermore, this chapter provided a series of discussions on occupational hazards; these occupational hazards were defined and strategies for the prevention of occupational hazards were highlighted herein. The importance of healthcare employees' wellbeing and the challenges experienced by healthcare employees in the workplace were also discussed in this chapter. The chapter explained that healthcare employees experience challenges such as job insecurity and working hours.

Furthermore, the implementation and control of safety measures in the workplace, as well as the role of management in health behaviour and occupational stress, were discussed in this chapter. The chapter presented a discussion of the occupational culture in the healthcare environment and the role of organisations regarding health behaviour. The next chapter, Chapter Six, will provide a broad discussion of the model for employee commitment towards the implementation of safety measures in public healthcare institutions.

CHAPTER SIX

A MODEL FOR EMPLOYEE COMMITMENT TO THE IMPLEMENTATION OF SAFETY MEASURES IN PUBLIC HEALTHCARE INSTITUTIONS

6.1 INTRODUCTION

The previous chapter dealt with the topic of occupational health behaviour. This chapter provides a discussion of employee commitment to safety measures. The findings from previous studies on the influence, nature and outcomes of the implementation of safety measures will be discussed herein. A brief analysis of the influences and outcomes of employee commitment to the implementation of safety measures in the public health sector will also be presented herein.

This chapter sets out to provide insight into the influences of employee commitment to enhance and promote the implementation of safety measures in public health institutions. Moreover, the objective of the study is to describe and analyse the determinants of the phenomenon of employee commitment, which influence the implementation of safety measures. The chapter also aims to understand the context in which employee commitment occurs in the healthcare environment, in order to determine how safety measures can be implemented. Thus, the model presented herein is based on the impact of influences and outcomes that increase employee involvement in and commitment to the promotion of the effective implementation of safety measures in public health institutions.

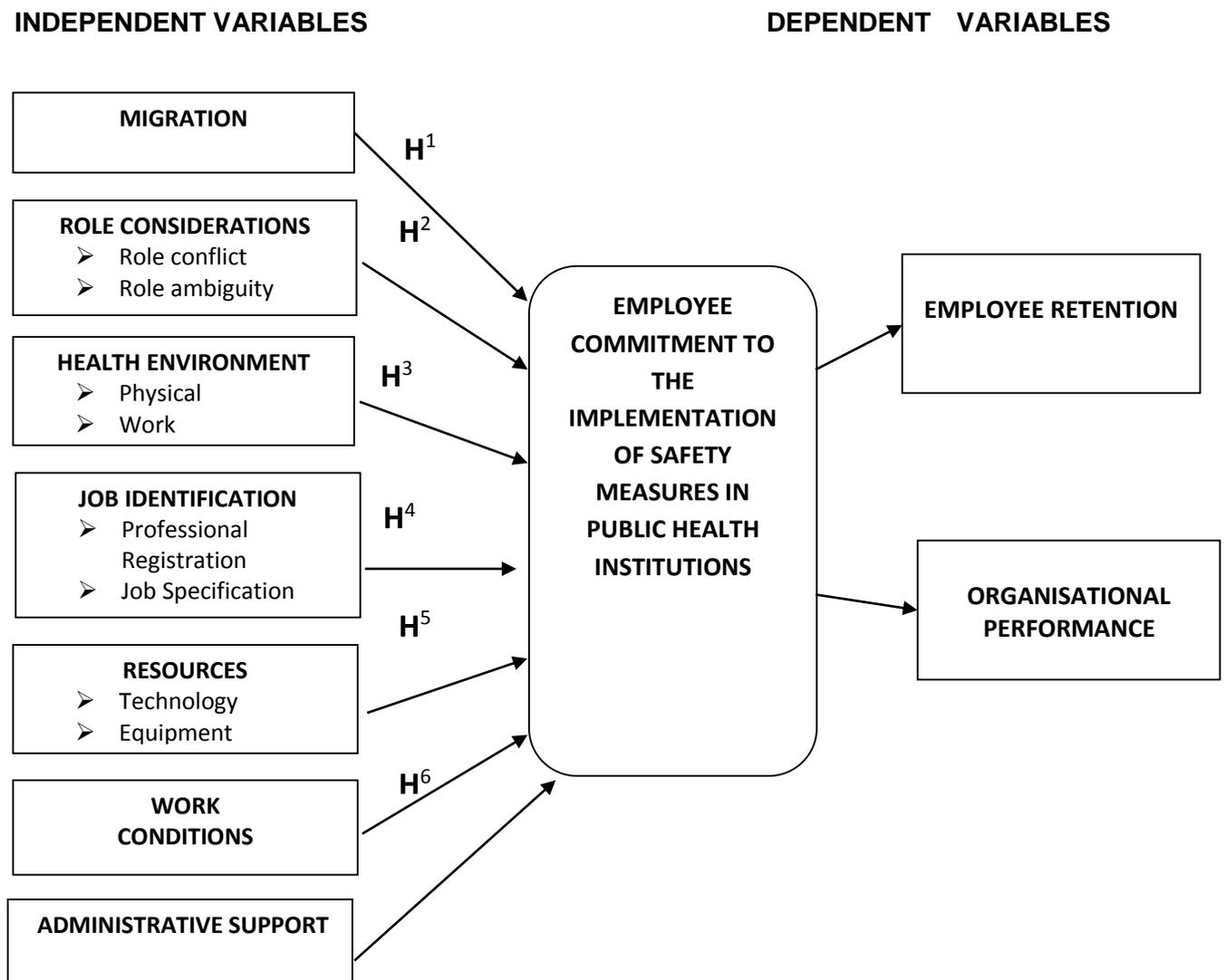
6.2 THE MODELLED INFLUENCES OF EMPLOYEE COMMITMENT TO THE IMPLEMENTATION OF SAFETY MEASURES IN PUBLIC HEALTHCARE INSTITUTIONS

Employee commitment is a vital aspect for any organisational success. He, Li and Lai (2011:596) describe employee commitment as a psychological attachment felt by a person to the organisation for which they work. In addition, He *et al.* (2011:569) further explained that committed individuals believe in and accept organisational goals and values. Whilst, Robinson, Perryman and Hayday (2003:1) viewed employee commitment as a one-dimensional construct that can be enhanced by a particular

human resource policy. In conjunction with this notion, Martin (2006:40) states that the goal of employee commitment entails guaranteeing commitment to the organisation. This notion is based on the assumption that committed employees will be more satisfied, productive and adaptable. According to Meyer and Herscovitch (2001:301), employee commitment is now widely recognised as vital to the experience of work and organisational performance. Employee commitment is a prerequisite for the effective implementation of safety measures in public healthcare sector institutions. Therefore, it is vital for public healthcare employees to be committed in order for this to be realised. Thus, the factors that are discussed as influences on employee commitment, below, need significant consideration.

Figure 6.1 depicts the theoretical framework of employee commitment to the implementation of safety measures in the public health sector; this framework serves as the basis for this study. A variety of influences on and outcomes of employee commitment to safety measures are modelled in Figure 6.1. These influences could be divided into independent variables: migration, role considerations as measured by role conflict and role ambiguity; health environment, job identification as measured by professional registration and job specification; resources as measured by technology and equipment; work conditions and administrative support. The dependent variables of this study include employee retention and organisational performance.

FIGURE 6.1: THE MODELLED INFLUENCES AND OUTCOMES OF EMPLOYEE COMMITMENT TO THE IMPLEMENTATION OF SAFETY MEASURES IN PUBLIC HEALTH INSTITUTIONS



Source: Researcher's own construction.

6.2.1 Migration

Migration is described as any movement of one month or more that involves the crossing of a magisterial boundary, or any change from one type of settlement area (rural, urban) to another, by one or more persons involved in a change of residence (Jackson, 1986:5; Kok, Gelderblom, Oucho & Van Zyl, 2006:125; Norkewicz & Paral, 2003:6). According to Kinfu, Dal Poz, Mercer and Evans (2008:56), the shortage of

healthcare employees in Sub-Saharan Africa derives from many causes, including past investment shortfall in pre-service training, international migration, retirement, morbidity and pre-mature mortality. South Africa has experienced an increased migration rate over the past few years, along with many other African countries. It is also believed that migration is potentially damaging the regional economy and is almost certainly detrimental for the wellbeing of the countries' communities (Kinfu *et al.*, 2008:56). However, adequate human resources are essential for achieving the constitutional rights to life and dignity (Equal treatment, 2005/6). In addition, healthcare employees leave the poorer countries in which they were trained for wealthier countries. Thus, human capital flight is the large-scale emigration of a large group of individuals who have technical skills and/or knowledge. This occurs as a result of two aspects that are related to countries and individuals, respectively.

Grignon, Owusu and Sweetman (2012) argue that inadequate quantity and quality of healthcare employees will bring the South African healthcare system close to a collapse. Put differently, migration undermines the national health of the country. Parkins (2011:6) reports that the migration of healthcare employees can be attributed to various push and pull factors. Healthcare employees migrate after consideration of the advantages and disadvantages of staying versus moving, as well as factors such as distance, travel costs, travel times, mode of transportation, terrain, and cultural barriers.

In South Africa, the migration of healthcare employees has become worrying. Furthermore, there are a number of reasons why people emigrate (Awases, Gbary, Nyoni & Chatora, 2004). Barninghausen and Bloom (2011:485) and Rutten (2009:291) purport that the reasons why healthcare employees migrate could be divided into pull factors and push factors. Examples of pull factors are better economic opportunities and the quest for a better life. These factors are the conditions that motivate workers to migrate and cause medical professionals from one developed country to move to another developed one.

In contrast, push factors are those issues and conditions that cause healthcare personnel to be dissatisfied with their work and careers in their home country; examples of push factors are poor compensation, working and living conditions or

career opportunities. These push factors cause healthcare workers to leave one developed country for another. Fears of political discrimination or poverty are further push factors. Moreover, healthcare employees who are satisfied with their current employment situation, and thus unmoved by push factors, are unlikely to leave their home countries (Barninghausen & Bloom, 2011:485; Rutten, 2009:291). The purpose of this study is to find ways of minimising the migration of healthcare employees in South African public healthcare sector institutions.

Immigration is the action of coming to live permanently in a foreign country (Norkewicz & Paral, 2003:6). In addition, emigration is the movement of healthcare employees out of their country for the purpose of taking up a job offer or for the permanent relocation of their residence. The terms immigration and emigration are used to describe the process of entry into a country or to a different administrative district within the same country (Jackson, 1986:5). This process varies in the extent to which it is formalised. Differences in wage rate are usual in the case of economic migration. If the wages in the new country surpass the value of wages in the health worker's country of origin, he or she may choose to migrate as long as the costs are not too high. This is cost effective. When the opportunity cost is lower, the migration rates tend to be higher.

According to Kok *et al.* (2006:67), the cloud of skill flight hangs over all African countries as its citizens increasingly opt for better career opportunities. In addition, the poor work conditions experienced by health workers act as a push factor that contributes to immigration. In other words, inadequate work conditions drive migration flows. Furthermore, Chen, Evans, Anand, Boufford, Brown and Chowdhurg (2004:1984) report that, as a result of the migration of nurses, the current number of nurses is insufficient to meet the health needs of the population. The empirical findings of Chen *et al.* (2004:1984) reveal that the migration of health employees was not positively associated with lower salaries. Instead, it was found that the consideration to move was determined by other factors such as age, levels of stress experienced and the level of dissatisfaction with work conditions (Clemens, 2007:1).

Furthermore, Labonte, Sanders, Mathole, Crush, Chikanda, Dambisya., Runnels, Packer., MacKenzie, Murphy and Bourgeault (2015:3) postulate that in recent years there has been an overall decrease in the migration of skilled healthcare employees

from South Africa. This is largely attributed to a reduced need for foreign, trained and skilled healthcare employees in destination countries, as well as limitations on recruitment and tighter migration rules. Further to this, the Occupational Specific Dispensation (OSD) Policy of 2007 has been described as critical in retaining South African healthcare employees. Thus, there have been reports of the common occurrence of return migration. Numerous researchers argue that migration hinders employee commitment. Furthermore, if there is an increase in migration, there will be less commitment from employees. Thus, the effective implementation of safety measures in public health institutions will not be possible. It is evident that migration has a negative impact on the implementation of safety measures in public health institutions.

Based on these arguments, it is hypothesised that:

H¹: There is a relationship between migration and employee commitment to the implementation of safety measures.

6.2.2 Role considerations

Role consideration is defined as a situation in which every function, position or duty of healthcare employees is specified (Hill, 2004:48). Therefore, role consideration refers to the behaviour, positions or functions expected from healthcare employees in their performance of assigned tasks. In addition, specifications of duties, or formal definitions of role requirements allow management to hold subordinates accountable for specific types of performance and to provide guidance and direction to the employees (Handler, 2010:32). In this study, role consideration is divided into two categories: role conflict and role ambiguity.

Role conflict and role ambiguity are important intervening variables that mediate the effects of various organisational practices on individuals and on organisational outcomes. In addition, role conflict and role ambiguity are the most commonly experienced job demands. In most cases, nurses experience substantial role ambiguity and role conflict as they take on managerial roles, primarily as a result of inadequate role definition, unethical challenges, and the lack of prior insight into the

managerial role. Therefore, role ambiguity and role conflict might impact on healthcare employees' commitment and job performance. Further, role ambiguity and role conflict impact on employee commitment to the implementation of safety measures in public health institutions. The following section provides the definitions of, and research findings on, role conflict and role ambiguity.

6.2.2.1 Role conflict

Role conflict is defined as mismatches between a job and its description and expectations, as well as an incompatibility between nurses and his/her duties, where congruity will be tested by the impact of job performance (Khan, Yusoff & Khan, 2014:21). Onyemah (2008:299) defines role conflict as a feeling of being torn in multiple directions, unable to find a way to satisfy every role partner. According to Robbins and Coulter (2003:401), role conflict occurs when an individual is confronted by different role expectations. Role conflict is described as when the roles of two or more statuses are irreconcilable (Du Toit & Van Staden, 2005:77). Therefore, role conflict is referred to as incompatible demands from various role senders, or multiple roles that are held simultaneously.

6.2.2.2 Role ambiguity

Role ambiguity is defined as a state of uncertainty and vagueness. This implies that role ambiguity occurs when employees cannot understand the tasks assigned to them (Khan *et al.*, 2014:21). In addition, Du Toit and Van Staden (2005:85) explain role ambiguity as the lack of clarity in the expectations associated with a specific role. Similarly, Slattery, Selvarajan and Anderson (2008:2268) define role ambiguity as a situation when role expectations are not clearly specified. While Onyemah (2008:299) notes that role ambiguity is an employee's uncertainty about the expectations of different members in his/her role set. According to Slattery *et al.* (2008:2268), role ambiguity means that the norms for a specific position are vague, unclear and are not correctly defined.

The research findings by Mahfuz (2011:171) reveal that role conflict and role ambiguity are negatively related to job performance and other vital work-related outcomes such

as commitment and satisfaction. Evidently, Tang and Chang (2010:869) affirm that there is a positive link between role conflict and creativity; in addition, both self-efficacy and job satisfaction serve as partial mediators between role conflict and creativity. Moreover, findings have demonstrated that higher levels of job demands trigger innovative responses (Jones, 1993). Therefore, role conflict can force individuals to become receptive to different viewpoints; it can also force employees to be more flexible and expand their source of information. Du Toit and Van Staden (2005:85), Khan *et al.* (2014:21), Onyemah (2008:299) and Slattery *et al.*(2008:2268) note that high degrees of role ambiguity are associated with increased employee tension, anxiety, fear and hostility, decreased job satisfaction, and loss of self-confidence and low productivity. Furthermore, role ambiguity leads to feelings of guilt felt by employees for not meeting tasks and expectations.

Therefore, it is argued that role conflict and role ambiguity have a negative impact on the performance and productivity of healthcare employees, that is nurses, because it leads to the development of burnout and stress symptoms, depression, emotional exhaustion, irritation and disengagement. Furthermore, role conflict and role ambiguity may have a negative impact on employee commitment to the implementation of safety measures in public health institutions.

It is hypothesised that:

H²: There is a relationship between role considerations, as measured by role conflict and role ambiguity, and employee commitment to the implementation of safety measures.

6.2.3 Health environment

Health environment is defined as those aspects of human health that comprise of disease and injury that are determined or influenced by factors in the environment (Du Plessis & Rousseau, 1999:316; Jackson & Kochtitzky, 2010:1; Muller, Bezuidenhout & Jooste, 2005:525). According to OHS Policy for the Health Sector (2010), an inadequate health environment negatively influences employee commitment to the implementation of safety measures in public health institutions. The health

environment is classified into physical and health environment, which will be discussed below, for reasons of clarity.

6.2.3.1 Physical environment

Physical environment refers to the tangible components of service delivery (Du Plessis & Rousseau, 1999:316). The physical environment comprises of all the physical and social conditions that surround a person and that can influence that person's health. Physical environment is likely to increase job satisfaction and, consequently, have a positive effect on employee commitment and quality of healthcare services in the evolving South African health system. The actual physical layout of an organisation can create a conducive working environment that is in line with the aspirations of public professionals. The maintenance of the physical environment is also important in order to increase employee retention. Zinhumwe (2012:192) argues that evidence-based design (EBD) of the physical environment improves the safety of nurses and patients by reducing the risk of hospital-acquired infections.

6.2.3.2 Work environment

Work environment is the result of the interaction between a job, the work, the company and an individual. Muller, Bezuidenhout and Jooste (2005:525) postulate that work environment refers to the conditions, circumstances and influences that affect the organisation's ability to achieve its objectives. Furthermore, work environment encompasses any physical, organisational or operational element that has an impact on the work an employee does, the amount of work they do and the standard that they attain. Mutia and Sikalieh (2014:82) and Ushie, Agba, Ogaboh and Okorie (2015:9) posit that work environment involves physical and geographical location as well as the immediate surroundings of the workplace, such as a construction site or office building. In addition, work environment involves other factors relating to the place of employment; these factors include quality of air and noise levels, as well as the additional perks and benefits of employment, such as free childcare, unlimited coffee, or adequate parking (Guvana, 2008:27).

Work environment refers to a set of concrete or abstract features of an organisation, related to both the structures and processes in that organisation that healthcare employees perceive as either facilitating or constraining their professional practice (McGlynn, Griffin, Donahue & Fitzpatrick, 2012:260). Furthermore, a work setting where policies, procedures and systems are designed in such a manner that they meet the organisational objectives and succeed in personal satisfaction at work is described as a work environment (Klopper, Coetzee, Pretorius & Bester, 2012:685). Teams with the highest levels of healthcare employees and patient satisfaction are distinguished by rich interdependence, in which all team members actively support each other on a daily basis (Janisse & Tallman, 2001).

The findings of Begat, Ellfsen and Severinsson (2005:221) reveal that healthcare employees perceived their working environment as stressful, which had a negative effect on their jobs. Aiken, Clarke, Sloane, Lake and Cheney (2008:223) provide findings that indicate that high percentages of nurses in public healthcare institutions work in poor environments. The poor environment in which nurses worked increased their burnout levels and dissatisfaction with their jobs.

The findings of Nsubanga and Jaakola (2005:773) reveal that sharp-related injuries and stress were major health hazards experienced by healthcare employees in their work environment. In addition, the use of all necessary personal protective equipment is associated with reduced exposure to both biological and non-biological hazards. Caruso, Bushnell and Eggerth (2006:930) reveal that long working hours in a health environment that is not conducive results to prolonged exposure to hazards and limited recovery time. Equally, Hoffart and Woods (1996:354), in Persefori, Anastasios, Nicos and Evridiki (2016), indicate that numerous healthcare employees reported dissatisfaction and high burnout levels in jobs where work environments were poor. Moreover, the shortage of nurses is a result of a poor work environment.

Furthermore, Kotwal, Anargh, Singh, Kulkarni and Mahen (2013:54) reveal that the washing of hands, which is a simple measure, is not adhered to by healthcare employees. The empirical findings by Ushie *et al.* (2015:8) reveal that factors such as consistent communication flow, manageable workload, availability of electricity, and a workplace that is free from known dangers are positively associated with employees'

commitment and performance. Mrara (2010:27) supports that a poor work environment may cause discomfort to some employees, who may end up being attracted to other organisations that have better working conditions.

In summary, it has been noted that a healthy work environment benefits healthcare employees and increases performance, employee satisfaction and, ultimately, patient care (Peltier & Dahl, 2009; Raziq & Maulabakhsh, 2015:717). In addition, negative outcome, such as absenteeism, decrease when organisations improve their working environments in ways that promote health. In this respect, Kraus (1994:51) suggests that productivity may be better in work environments where workers feel safe from accidents and injuries. Overall, a crucial factor in the recruitment and retention of nurses is work environment, which can also influence the quality of care and safety.

It is accordingly hypothesised that:

H³: There is a relationship between the health environment and employee commitment to the implementation of safety measures.

6.2.4 Job identification

Franco, Benett and Kanfer (2002), as cited in Musyoka, Adoyo and Ongombe (2016:88), define job description as a broad, general and written statement of a specific job that includes the duties, purpose, responsibilities, scope and working conditions of a job, along with the job title, and the name and designation of the person to whom the employee reports. Job identification is crucial in both public and private healthcare environments. In addition, job identification includes items such as post level, personnel number, departmental location of the job, the person to whom the incumbent reports and the date on which the job description was last revised (Muller *et al.*, 2005:255).

Professional registration and job specification are part of job identification. Healthcare professionals, including managers, matrons, sisters and trained nurses, have to register with specific health boards in South Africa. In other words, job identification is measured by professional identification and job specification. The registered nursing

professional, for example, is subject to the ethical codes of the Professional Association of Nurses, the Democratic Nursing Organisation of South Africa, Hospersa, and the South African Nursing Council, all of which control the standards of nursing practice (Du Toit & Van Staden 2005:162).

The empirical findings of Jayasuriya, Whittaker, Halim and Matineau (2012:156) indicate that attention to human relations is required for the provision of a conducive environment. Similarly, increased attention that is given to interpersonal relationships, work climate and supportive supervision can enhance satisfaction and productivity. In addition, the findings of Mustafa (2013:37) reveal that employees will be unable to perform to the expected standard due to a lack of training and performance management.

The findings of Nzinga, Mbindyo, Mbaabu, Warira and English (2009:1) reveal that management experiences low employee productivity because employees do not understand what is expected of them, what they are allowed to do and which skills they require to do their jobs. In other words, employees were unproductive, despite their availability at the workplace. Furthermore, Feysia, Herbst, Lemma and Soucat (2012) report low levels of healthcare employee competency at performing basic life-saving skills and the common occurrence of healthcare employees' inability to refer patients with complications. According to Lipinge, Hofnie, van der Westhuizen and Pendukeni (2006) and WHO (2006), the following factors are associated with job description:

- socio-demographic characteristics;
- healthcare employees' performance, productivity, availability, responsiveness;
- job descriptions on performance of healthcare employees;
- clear job description;
- established lines of authority in job descriptions;
- work plans in job descriptions;
- task descriptions in job descriptions; and
- challenges to health service managers on human resource practices.

To summarise, healthcare employees are expected to carry out duties according to the correct level and job description. The uniforms, name tags and bars according to the different ranks of nurses should be clearly defined. This will enable patients, visitors and colleagues to properly identify nurses according to their different roles.

It is hypothesised that:

H⁴: There is a relationship between job identification, as measured by professional registration and job specification, and employee commitment to the implementation of safety measures.

6.2.5 Resources

Resources include financial and information resources, materials, buildings, equipment and even intellectual property (Muller *et al.*, 2005:478). Similarly, Schultz, Bagraim, *et al.* (2003:240) refer to resources as a source of supply, support or aid, especially one that can be readily drawn upon when needed. In addition, resources can be described as anything required to satisfy human needs. Mphande (2013:2) postulates that public health institutions have limited resources. Public health institutions also struggle with how best to utilise these limited resources in order to achieve the greatest reduction in injuries at optimal cost. Inadequate and poor quality of resources hinders the delivery of a good healthcare system.

Furthermore, Mphande (2013:2) reports that legal representatives are concerned with how public health providers waste the resources provided to them by government. Public healthcare employees need adequate and sufficient resources to enable them to effectively perform their duties. Therefore, the unavailability of resources will impact negatively on the productivity and performance of public healthcare employees. In this study, resources consist of technology and equipment, which will be discussed for the purpose of clarity, below.

6.2.5.1 Technology

Technology refers to non-human mechanical instrumentalities that are utilised by humans to convert raw materials into finished goods or services (Gilbert, 2004:9). Du Plessis and Rousseau (1999:316) and Schultz, *et al.* (2003:240) suggest that technology is an attempt to ascertain the quality of a firm by using modern technology during service delivery. Furthermore, medical technology is defined as mechanical devices, interlinked instruments, apparatuses, machines, appliances and auxiliary devices utilised by healthcare professionals to diagnose, observe, prevent and treat patients' illnesses (Kramme, Hoffmann & Pozos, 2011:4).

Numerous studies affirm that there is a growing demand, throughout the world, for more technological equipment in the delivery of health services (Erixon, 2011; Kachieng'a, 1999:102; Mosadeghrad 2014). Furthermore, Kumar (2011:4) reports that there is an urgent need to address technology and healthcare costs through the development and use of appropriate technology in accordance with the needs and priorities of society. Numerous researchers argue that fewer facilities may also include the unavailability of, or lack of access to, modern technology. In addition, rapid changes in technology continue to cause increasing rates of skill obsolescence. Katamba (2011:35) states that healthcare providers are required to provide training to employees on how to utilise and operate the latest technologies available in order to remain competitive.

Du Toit and Van Staden (2005:173) note that admission to a public healthcare institution means that, during the course of the treatment, a patient is exposed to highly sophisticated medical technology. This includes the use and adaptation of highly sophisticated health technology resources. This implies that healthcare providers in South Africa are utilising medical technology as a strategy to improve access, quality and cost efficiency in healthcare delivery systems. Despite the improvement in medical technology, numerous healthcare employees find themselves inexperienced in the use of medical technologies and are incapable of managing them (Du Toit & Van Staden, 2005:173).

Cookson (2005:118), Fox (2005:114) and Kachieng'a (1999:102) contend that health service planners, hospital administrators, physicians and other healthcare professionals need to understand the forces that control healthcare delivery systems. Moreover, it is imperative to understand the role of technology management in order to effectively communicate it to health policy makers. Thus, there is also a need for suitable infrastructural arrangements in order to make the role of technology more competitive and clinically efficacious. As a consequence, the effective management of technology directly contributes to improved patient health outcomes.

6.2.5.2 Equipment

Equipment is fairly broad and covers a spectrum that ranges from small pieces of equipment such as scalpels and surgical scissors to more complex medical equipment. Researchers affirm that the selection of the best and most effective equipment often saves time and money, as a result of a low frequency of breakdowns. Simultaneously, expenditure on spare parts, service and maintenance, selecting and procuring healthcare equipment, which is appropriate, efficient and safe, remains a major challenge to the South African government (Govender, Mueller & Basu, 2011:1).

The findings of Nguyen, Wilson and McDonald (2015) reveal that healthcare employees are demotivated by healthcare environments with limited resources (technology and equipment). In addition, the findings suggest that inappropriate medical equipment hampers the deliverance of high quality healthcare. Furthermore, the results suggest that, in order for healthcare employees to deliver high quality care, efforts should be focused on providing them with appropriate medical technology and equipment, drug supplies and infrastructure. Conversely, Choi, Pang, Cheung and Wong (2011:1290) found that resource adequacy was positively associated with job satisfaction. The research findings of Rochefort and Clarke (2010:2213) indicate that higher ratings of nurse staffing and resource adequacy were related to lower emotional exhaustion scores.

Therefore, health service planners, hospital administrators, physicians and other healthcare professionals need to understand the forces that control healthcare delivery systems (Cookson, 2005:118; Fox, 2005:114). In addition, it is imperative to

understand the role of medical technology management in order to effectively communicate it to health policy makers (Mosedeghrad, 2014:5; Suter, Oelke, Adair, & Armitage 2009:8). There is also a need for suitable infrastructural arrangements in order to make the role of technology more competitive and clinically efficacious. As a consequence, the effective management of technology directly contributes to improved patient health outcomes. To sum up these arguments, resources (technology and equipment) play a critical part in the commitment of healthcare employees to the effective implementation of safety measures in public health institutions.

It is accordingly hypothesised that:

H⁵: There is a relationship between resources and employee commitment to the implementation of safety measures.

6.2.6 Work conditions

The American Nurses Association (ANA) (2016) refers to work conditions as the conditions in which healthcare employees work; this includes facilities, services, comforts, conveniences, physical environment, stress, noise levels, and degree of safety or danger. Concurrently, work conditions are the result of the interaction between a job, the work, the company, and an individual (Parent-Thirion et al., 2012). Furthermore, work conditions involve the working environment and the following aspects of an employee's terms and conditions of employment: training, skills and employability, health, safety and wellbeing, remuneration, as well as working time and work-life balance (Parent-Thirion et al., 2012). Moreover, the nature of working conditions plays a role in persuading healthcare employees to leave or stay in their working environments. The government, for example, revitalized health and safety programmes as a strategy to find new ways of improving the work conditions in public healthcare institutions.

Numerous studies identified work conditions as the result of the interaction between a job, the work, the company, and an individual. Work conditions are the conditions in which individuals or staff work (ILO, 1996-2016). Certainly, unpleasant work conditions

put stress on healthcare employees and adversely affect the quality and quantity of their productivity and performance (Michie & Williams, 2003:3). Therefore, healthcare institutions need to think about how to secure long-term commitment to healthcare employees. Failure to create the right environment will encourage disgruntled healthcare employees to search for new jobs with better work conditions.

Furthermore, Pera and Van Tonder (2005:87) note that good work conditions are associated with job satisfaction and good employee relations. This indicates that if employees are exposed to appropriate work conditions, it will assist in fostering happiness and, in the process, enhance their motivation to work. Furthermore, the research findings by Equal Treatment (2005:6-14) show that public healthcare employees encounter the following poor work conditions:

- Poor facilities: Healthcare employees work in old and deteriorating facilities and utilise inefficient medical equipment for treating patients;
- Insufficient incentive and salaries: Healthcare employees are not provided with enough incentives and salaries for work performed;
- Insufficient on-the-job training: Management do not provide on-going training for employees on developments in medicine and medical technology;
- Inaccessible healthcare service: Healthcare employees find it difficult to access adequate services and treatment when they are exposed to hazards or adverse related injuries;
- Staff shortage: Management do not make an attempt to employ more staff members, and positions have been vacant – this leads to the shortage of staff; and
- Poor management: Healthcare employees holding management positions do not carry out their duties effectively because they lack training.

Healthcare employees prefer physical surroundings that are not dangerous and uncomfortable. Indeed, it is crucial that work conditions be considered a priority in the public health sector. In fact, it will be difficult for management to attract and retain healthcare employees in a poor work environment. Healthcare employees will not be committed to safety and health measures in an environment that has unfavourable work conditions.

Therefore, it is hypothesised that:

H⁶: There is a relationship between work conditions and employee commitment to the implementation of safety measures.

6.2.7 Administrative support

Administrative support refers to all support gained from Human Resources, clerical duties, procurement, information technology and payments sections, which support the core functions of clinical healthcare in the workplace (Arends, 1989; Du Toit & Van Staden, 2005:161; Perrine, 2010). Administrative support plays a significant role in the public healthcare system. In addition, HRM provides the necessary administrative support (resources) to ensure the successful functioning of employees in public healthcare institutions (Du Toit & Van Staden, 2005:161). These resources provided by HRM include personnel (recruitment of employees) and medical supplies.

Letvak (2014) reports that employees are subjected to the physical and emotional demands of the profession when there are insufficient resources with which to work. In other words, employees will experience physical and emotional fatigue when management does not provide sufficient medical supplies to work with and when they do not recruit enough employees to perform the requisite duties. The findings of Kieft, de Brouwer, Francke and Delnoij (2014:249) reveal that resources such as competent nurses, collaborative working relationships, autonomous nursing practice, managerial support and a patient-centred culture would improve patient experiences of the quality of nursing care. The public healthcare sector serves the majority of the population, but is chronologically underfunded and understaffed. Hence, the shortage of staff has a negative impact on employee motivation. Furthermore, healthcare employees face an extremely high workload and high emotional demands due to the amount of responsibility they have (Kieft *et al.*, 2014:249).

Given these facts, the role and efficiency of administrative support of healthcare employees in the public health sector is crucial to enhancing employee commitment to the implementation of safety measures.

It is accordingly hypothesised that:

H7: There is a relationship between administrative support and employee commitment to the implementation of safety measures.

6.3 EMPLOYEE COMMITMENT TO THE IMPLEMENTATION OF SAFETY MEASURES

Employee commitment is defined as a psychological attachment that a person feels to the organisation (He *et al.* 2011:596). In addition, committed individuals believe in and accept the organisational goals and values. Commitment encompasses employees' acceptance of organisational goals and their strong belief in these goals; their willingness to perform duties and take up responsibilities on behalf of the organisation; and a definite desire to maintain organisational membership. Furthermore, employee commitment also entails the use of an individual skill and expertise for the advancement of the organisation (Uygur & Kilic, 2009:113).

According to Meyer and Herscovitch (2001:299), commitment is a stabilising force that acts to maintain behavioural direction when expectancy or equity conditions are not met and do not function. Fiorito, Bozeman, Young and Meurs (2007:186) refer to employee commitment as one of the key determinants of organisational effectiveness and productivity. Laschinger and Finegan (2005:6) and Lok, Westwood and Crawford (2005:6) note that employees are considered to be committed to their organisations if they show willingness to continue to be associated with their organisation and make great efforts in achieving organisational objectives.

The commitment of employees serves as a psychological bond that encourages individuals to act in ways that are consistent with the interests of the organisation. For the purpose of this study, employee commitment will mean that healthcare employees will fully engage in and adhere to the implementation of safety measures. Healthcare managers should communicate with their subordinates more often and provide them with help when they face problems. Cooperation and communication should also be encouraged amongst healthcare employees (Vance, 2006:1; Mayberry, 2006).

Communication is one of the most dominant and important activities in organisations (Harris & Nelson, 2008:1).

In addition, committed employees can be described as employees who work hard to improve themselves and be productive, thus increasing their value to the employer, and making personal sacrifices to ensure the organisation's success. Committed employees are proud of their organisation and they recommend their organisation to other applicants as a good place to work. In addition, committed employees have intend to stay long in their organisation, and they are not attracted to other organisations that offer better incentives (Laschinger & Finegan, 2005:6; Lok, Westwood & Crawford, 2005:6). Therefore, committed employees are needed by organisations in order to achieve their goals and objectives in an efficient and effective way.

Lockwood (2007:1) maintains that employees with the highest level of commitment perform better and are less likely to leave the organisation, which indicates that engagement is linked to organisational performance. Khan, Rehman and Akram (2012:71) suggest that employee commitment means that healthcare employees will fully engage in and adhere to the implementation of safety measures, on a long term basis, in the public health sector. Consequently, the results show that employees go above and beyond expectations. Ogba (2008:867) affirms this by suggesting that committed employees perform their duties to their maximum without being supervised, and they deliver high quality service to the healthcare system. Furthermore, employees display positive attitudes towards their assigned duties. Committed healthcare employees are motivated, satisfied and display enthusiasm in carrying out their duties; they are always present at work, they perform to their maximum abilities and have no intention of leaving their current workplaces. Therefore, employee commitment is vital for the survival of the healthcare system, and public healthcare institutions in particular (Ogba, 2008:867).

Du Toit and Van Staden (2005:85), Khan *et al.* (2014:21), Onyemah (2008:299) and Slattery *et al.* (2008:2268) investigated factors affecting the commitment of employees in organisations. The results of these studies revealed that unfavourable work conditions impact negatively on employee commitment. Furthermore, factors such as

age, gender, workload, communication and payments were investigated, and the research findings reveal that workplace stressors such as role ambiguity and role conflict impact negatively on employee commitment (Du Toit & Van Staden, 2005:85; Khan *et al.*, 2014:21; Onyemah, 2008:299; Slattery *et al.*, 2008:2268).

Furthermore, Bragg (2002:18) stipulates that the drivers of employee commitment increase the commitment levels of employees in the organisation. The drivers of employee commitment include fairness and trust. This indicates that employee commitment will increase if management is fair in making decisions that concern employees. In addition, the trust between management and employees will improve employees' commitment levels. Hellriegel and Slocum (2004:54) argue that commitment is correlated with high productivity. Furthermore, healthcare employees who are committed in the workplace deliver high quality service to the healthcare system. Vance (2006:1) posits that employee commitment is vital for the survival of the healthcare system. The empirical findings of Simpson (2010:2) support this notion by revealing that employee commitment is vital in order to remain competitive in the business environment. In addition, Olivier (2010:17) postulates that employers enjoy distinctive competitive advantages when employees are committed.

In addition, organisations with committed employees do better financially than organisations with uncommitted employees (Bragg, 2002:1). Furthermore, the research findings by Hsu and Wang (2008:359) reveal that employees who are committed recommend their organisation to others as a good place to work; employees stay longer; they resist competitive job offers; and do not actively look for other employment. Similarly, the research findings of Gibson, Ivancevich, Donnelly and Konopaske (2006:184) show that committed employees are less likely to quit their jobs. Bennett and Minty (2005:16) assert that various studies indicate that promoting employee commitment increases employee retention and organisational performance. Furthermore, Seleka's (2011) research findings indicate that healthcare employees were committed because:

- management provided and maintained systems of work and medical equipment. Employee commitment improved because employees were able to

work with medical equipment that posed no risk to their health and wellbeing;
and

- management put systems in place to ensure that employees are not exposed to hazards and risks that might affect their health and safety.

6.4 THE MODELLED OUTCOMES OF EMPLOYEE COMMITMENT TO THE IMPLEMENTATION OF SAFETY MEASURES

Employee retention and organisational performance are the modeled outcomes of employee commitment to the implementation of safety measures, in the context of this study. This section provides a series of comprehensive discussions on employee retention and organisational performance for the purpose of clarification.

6.4.1 Employee retention

Employee retention refers as a business's efforts to maintain a working environment that encourages current staff to remain with the company (Connell & Phillips, 2004:7). In addition, Das and Baruah (2013:1, 8-9) and Zineldin (2000), as cited in Sinha and Sinha (2012:146), refer to retention as the ability of management to encourage employees to be obliged to remain in the organisation for a long period of time. Employees are the pillars of an organisation and contribute effectively to its successful operation. Moreover, an organisation will not survive very long if skilled and talented employees always resign or retire from the organisation. Therefore, employee retention considers the various measures taken to encourage healthcare employees to remain in the healthcare system for the maximum period of time. The techniques for employee retention motivate healthcare employees to enjoy their work and avoid changing jobs frequently.

Employee retention is defined as the ability of organisations to keep their valuable employees through various strategies, such as offering competitive remuneration or benefits, appropriate recruitment and selection, good management or leadership, as well as the availability of training and development opportunities (Mrara, 2010:27). Moreover, employee retention is a systematic effort by employers to create and foster an environment that encourages current employees to remain employed (Purcell,

2005:30). In addition, management retains skilled employees by having policies and practices in place to address their diverse needs (Purcell, 2005:30). In other words, employee retention refers to the various policies and practices created by management to encourage employees to remain in the organisation for a longer period of time.

Goodin (2003:335) concurs that, in many countries, employee turnover in public healthcare institutions poses a major challenge to patients and stakeholders in the community. Furthermore, the turnover of nurses is costly and expensive to healthcare institutions, and it contributes to staff shortages at the unit level (Aiken, Buchan, Ball & Rafferty 2008:3335). This indicates that one nurse has to do the job of numerous nurses due to staff shortages. Similarly, Ellis (2013:6) concurs that healthcare employees experience a heavy workload as a result of employee turnover and the shortage of staff.

Furthermore, public healthcare institutions are experiencing job freeze as a result of employee turnover. In other words, numerous health professionals in public healthcare institutions are resigning and they are not being replaced due to the high costs of recruitment and training (Equal treatment, 2005:18; Gregory, 2015). Furthermore, public healthcare faces the challenge of attracting and retaining young people to replace those who are approaching retirement. Moreover, when healthcare employees are satisfied, the turnover rate is lower and there are increased prospects of healthcare institutions retaining their healthcare employees (Vance, 2006:1). The public healthcare sector is facing a critical shortage of healthcare employees because numerous skilled health professionals resign or retire. Numerous South African health employees resign in order to take up offers of better jobs abroad, in spite of the high quality of training they have received from their country. Nel (2007) asserts that a large amount of funding was invested in educating and training healthcare employees. Similarly, the Department of Health invests time in the training of public healthcare employees. Despite this investment in training and education, the public healthcare system is losing its healthcare employees to private healthcare institutions (Nel, 2007). Liang (2013:1) and Liu (2014:3) found that most healthcare employees leave an organisation due to the following factors: low income; poor working conditions; risk of contracting infection; risk of injury at work; long hours of work; heavy workload and

work-related stress; few paid leave days; and insufficient resources. Furthermore, healthcare employees leave an organisation due to a lack of personal growth and development opportunities, poor ongoing training opportunities, the lack of advancement and promotion opportunities, as well as poor relations amongst co-workers and poor relations with supervisors (Liang, 2013:1; Liu, 2014:3). The American Psychological Association (2008) refers to the aforementioned factors as push factors that cause healthcare employees to leave the country. These factors push health professionals to other employment opportunities, whilst other factors and the general conditions of service are strong determinants of the movement of healthcare employees (American Psychological Association, 2008).

The research findings presented by Olivier (2010:44) reveal that employees must feel a sense of belonging to the organisation; their job must provide a sense of excitement and they must have confidence in management if they are to remain committed to the organisation. In order to address employee turnover, Adzei (2012:467) suggests that financial incentives influence an employee's intention to remain in the organisation. Furthermore, Jack, Canavan, Ofor-Atta, Taylor and Bradley (2013:1) research findings suggest that strengthening interpersonal and team dynamics is a critical and low cost method of increasing employee retention.

In addition, the research findings of Henderson and Tullock (2008:30) indicate that healthcare employees leave in order to obtain better salaries, training opportunities and more desirable working conditions. In addition, healthcare employees leave so that they can have access to better education, to find political stability, and because of family bonds abroad (Henderson & Tullock, 2008:30). Liang (2013:28) and Liu (2014:3) further propose the following as some of the factors that have an impact on employee retention:

- **Confidence for growth and leadership:** Healthcare employees need to feel that they work for a well-led organisation that is heading in a positive direction. Management is required to clearly and consistently communicate organisational strategies.

- **Room for growth:** Healthcare employees want to reach their potential at work; they want to know that there are opportunities to learn, grow and progress. Therefore, management is required to provide an opportunity for growth and leadership for employees.
- **A fair exchange:** Healthcare employees need to feel valued if they are to deliver more, with less, in difficult times. There should be a balance between the contribution employees make and the rewards they receive.
- **An environment for success:** Organisations need to encourage employees to perform at their maximum best in order to sustain employee commitment. Management should ensure that capable healthcare employees are given roles and placed in positions in which they can operate at their best. Management should also create efficient work processes, a supportive working environment and encourage collaboration.
- **Authority and influence:** Healthcare employees want to make a positive contribution to their organisations. Therefore, healthcare institutions need to empower healthcare employees and grant them the authority to perform their duties by making decisions concerning their work.

Healthcare employees are critical to the provision of quality healthcare services because they work closely and continuously with the patient. Therefore, it is critically important for the Department of Health to ensure that skilled healthcare professionals such as doctors, pharmacists and nurses are retained and that employee turnover is appropriately managed. Skilled and valuable employees that are retained are more likely to feel a sense of belonging to the organisation, as their job is likely to provide them with a sense of excitement and they are likely to be committed to the implementation of safety measures in their organisation.

Therefore, it is hypothesised that:

H⁸: There is a relationship between employee commitment to the implementation of safety measures and employee retention.

6.4.2 Organisational performance

Organisational performance encompasses the actual output of an organisation as measured against its goals and objectives for survival and prosperity (Carton & Hofer, 2006:43; Thomas, Deshmukh & Kumar, 2008:24, 27; Zumitza & Michie, 2015:19). Furthermore, organisational performance relates to how successfully an organised group of people, with a particular purpose, are able to perform a function. Organisational performance refers to the overall analysis of an organisation's performance compared to its stated goals and objectives (Meier & O'Toole 2010).

Organisations require highly committed employees in order to achieve their goals and objectives in an efficient and effective way. According to Schultz *et al.* (2003:75), organisational performance can be achieved with numerous factors in place. Schultz *et al.* (2003:75) suggest that factors that may improve organisational performance include leadership, structure of working units, systems and procedures, enabling support, empowerment, job design, employee commitment, incentives and benefits. Leather (2005:21) affirms that employee commitment can improve organisational performance.

Vermeeren (2014) concludes that Human Resource practices are directly or indirectly linked to organisational performance. Markos and Sridevi (2010:89) reveal that employee engagement is the key to performance improvement. In addition, employee productivity and organisational performance is directly related to employee commitment (Edmans, 2010:1) Furthermore, Adhia, Nagendra and Mahadevan (2010) postulate that the quality and disposition of managerial employees is key to organisational performance. Previous studies reveal that organisational performance impacts both negatively and positively on employee morale, productivity and engagement (Chandrasekar, 2011).

Furthermore, in public healthcare institutions, organisational performance can be negatively influenced by a number of factors, such as a lack of ventilation, unsuitable furniture, inappropriate lighting, excessive noise and inappropriate safety and health measures. These factors have a negative impact on the health and wellbeing of healthcare employees and thus impact on their productivity and organisational

performance. In addition, employees who operate in poor work environments are likely to suffer from occupational disease, which negatively impacts on employees' motivation, productivity and performance. Therefore, organisations will achieve high performance levels if the workplace environment of healthcare facilities is safe and conducive to the needs of their employees (Chandrasekar, 2011).

Numerous studies indicate that work environment plays a significant role in motivating employees to perform their assigned duties. In addition, there is a link between organisational performance and employee health and wellness, lost work time, productivity and employee performance (Yu & Bang, 2013). In addition, the research findings of Khan, Khan and Khan (2011) reveal that the training and development of employees have a significant impact on organisational performance. Furthermore, higher the organisational performance and success are the result of employees who are more motivated in performing their tasks.

Moreover, management must acknowledge that employee commitment is vital for organisational performance in public health institutions. Therefore, employee commitment and organisational performance will be enhanced through the proper implementation of a healthy and safe environment for healthcare employees.

Against this background, it is hypothesised that:

H⁰: There is a relationship between employee commitment to the implementation of safety measures and organisational performance.

6.5 SUMMARY

This chapter discussed the influences and outcomes of employee commitment to implementing safety measures in public health institutions. The following independent variables, as depicted in Figure 6.1, were broadly discussed in this chapter: migration, role considerations, health environment, job identification, resources, work conditions and administration support.

This chapter provided the definitions of all the independent variables and presented the empirical findings from previous studies that support the formulated hypotheses related to each of these variables. Furthermore, this chapter provided definitions, discussions and existent empirical findings on the dependent variables of employee retention and organisational performance, also depicted in Figure 6.1. The next chapter will provide a comprehensive discussion of the research design and methodology utilised to conduct the study.

CHAPTER SEVEN

RESEARCH DESIGN AND METHODOLOGY

7.1 INTRODUCTION

The previous chapter interpreted and discussed a model for employee commitment to the implementation of safety measures, using the hypothesised model to demonstrate the relationship between the mediating variables of the study. This chapter takes the reader through the research methodology that was applied to carry out the research, in order to attain the goals of the study. The goal of this study is to investigate the factors that might contribute to employee commitment to the implementation of safety measures in public healthcare institutions. Healthcare employees, which included assistant nurses, senior assistant nurses, enrolled nurses, senior enrolled nurses and professional nurses, from five categories of hospitals in two regions, namely, the Eastern Cape and KwaZulu-Natal, were selected to accelerate the discussion that was critical for the investigation.

Furthermore, this chapter describes the steps, techniques or strategies used in the collection and analysis of data. The design, population and sample, research instruments, data collection and analysis, reliability and validity of the research are also discussed herein. The chapter also outlines the ethical considerations and limitations of the study. Furthermore, the results of the study will assist to lay a coherent foundation on which to build the suggested approach to enhancing the commitment of employees in public healthcare institutions.

7.2 PURPOSE OF THE STUDY

The overall aim of this study was to investigate the commitment of employees to the implementation of safety measures in public healthcare institutions. This purpose of this chapter is to review the literature pertaining to employee commitment and safety measures in public healthcare institutions; to explore and describe health and safety as a concern in the work environment; and to provide guidelines and recommendations for the improvement, implementation and monitoring of safety measures in public healthcare institutions. Furthermore, this study developed and

presented a coherent framework for promoting employee commitment and for the development of suitable and effective safety measures in public healthcare institutions.

7.3 RESEARCH DESIGN AND METHODS

A research design refers to the plans and procedures for research that span the decisions from broad assumptions to detailed methods of data collection and analysis (Creswell, 2009:3). Similarly, research design refers to the management and conditions for collecting and analysing data in a manner that reveals the relevance of the study. In simple terms, research design is an action plan for the research conducted. Hernon and Swartz (2009:1-2) note that a research design covers the population or sample being studied, design type, whether it is exploratory or correlational or experimental or descriptive, data collection duration as well as the reliability and validity of data. Burns and Grove (2001:223) assert that designing a study assists the researcher to obtain the intended results, thus increasing the chances of obtaining information that could be associated with the research problem. In addition, a research design was utilized to provide a guideline about how simply and economically the data will be collected and analysed in relation to the purpose of the research. Thus, a research design offers the researcher the simplest and most affordable way of conducting the research (Terre Blanche, Durrhein & Painter, 2006:34).

Furthermore, a research design depends on the research questions that govern the study and the required data, in order to make way for questions and data connections, and show the tools and procedures relevant to answering the research questions. Punch (2006:48) asserts that the primary procedural plan includes five major characteristics: the strategy used, conceptual framework, study population and subject, as well as the tools and procedures adopted for the data collection and analysis. It can be concluded that a research design is the specification of the most adequate operations conducted with the aim of testing a particular hypothesis in the study or answering the research questions. In this study, the research design was deductive and explanatory.

7.4 RESEARCH PARADIGM

Kumar (2005:6) describes research as one of the ways in which to find answers to one's questions; it includes various strategies, designs and methods. Myers (2009:1625) defines a research method as a plan of inquiry, which progresses from the primary supposition to the research design and the collection of data. Research methodology has been defined as the broad-spectrum approach that the researcher takes in carrying out the research project (Leedy & Ormond, 2001:14). Concurrently, Burns (2002:20) defines research methodology as a way of obtaining, organizing and analysing data; it includes the data collection and analysis techniques used in the study. Furthermore, research methodology is a methodical progression of dynamic inquiry and discovery through collecting, analysing, and inferring from data, which results in understanding a given phenomenon in which the study is interested. Burns (2000:613), Creswell (2003:209, 2009:95) and Denzin and Lincoln (2000:7) confirm that, in research, there are three methods to be followed: qualitative, quantitative and mixed methods.

7.4.1 Qualitative research method

Academics and researchers in anthropology, marketing, nursing, psychology, sociology and education utilise the qualitative research method to address and answer questions relating to the way humans organise, relate to and interact with the world. In other words, academics and scholars employ the qualitative research to provide answers to the 'why' and 'how' of human behaviour, opinion and experience. These answers and information, which are provided by observation and interaction, are difficult to obtain through the quantitative method of research (Guest, Namey & Mitchell, 2012:1). According to Atieno (2009:14), the qualitative research method is a type of research inquiry that focuses on the utilisation of words, pictures and non-numerical data to provide answers to a research investigation. In addition, the qualitative research method allow researchers to interpret and provide answers to research questions by observing things in their natural settings (Denzin & Lincoln, 2011:3). Johnson and Christensen (2010:31) conclude that the qualitative research method is exploratory and discovery-oriented. In addition, Denzin and Lincoln (2011:3)

affirm that the qualitative research method is interpretative, naturalistic, and materialistic.

Furthermore, Brennen (2012:1) states that researchers have, over time, formed a belief that the qualitative research method is an easier way of conducting a research investigation. Contrarily, Brennen (2012:1) describes qualitative research methods as controversial, contradictory, ambiguous, challenging, time consuming, difficult to conduct and to get right. Additionally, the qualitative research method does not provide researchers with answers that are easy, truths that are simple and measurements that are precise. Houser (2014:78) states that the weakness of the qualitative research method is eminent in its inability to utilise large sample sizes; its inability to generalise results to a large population; and its inability to ethically maintain the privacy of its study group.

7.4.2 Quantitative research method

Quantitative research is aimed at accurate and objective measurement, and the generalization of findings to a population beyond the study context (Fossey, Harvey, McDermott & Davidson, 2002:717). In addition, quantitative research is empirical research which is deductive and explanatory, and can be used in response to relational questions of variables within the research. Similarly, Creswell (2003:153) posits that quantitative research entails the collection of data so that the information can be enumerated and subjected to statistical handling in order to support or contest varying knowledge claims. Furthermore, the quantitative approach is sometimes called the traditional, experimental or positivist approach because it was dominant in the 1960s and 1970s (Leedy & Ormrod, 2001:101). According to Leedy and Ormrod (2001:101), the quantitative approach usually ends with confirmation of the hypotheses that were tested. Data is collected in the form of numbers, and statistical types of data analysis are used by quantitative researchers. Human behaviour is quantified and reflected by quantitative research with numbers and observations. The quantitative approach seeks to explain relationships among variables mathematically, and to apply some form of numerical analysis to the social relations being examined (Leedy & Ormrod, 2001:101). This study utilised the quantitative research method in conducting its investigation. In other word, the quantitative research method was used

to gather and analyse data in this study. The quantitative research method allowed for the formulation, testing and validation of the research hypothesis. The reliability and precision of the measuring instrument (questionnaire) was achieved as a result of the utilisation of the quantitative research method.

7.4.3 Mixed methods research

Mixed methods research is gaining increasing influence across disciplines (Hesse-Biber, 2010:1-2). In addition, the growth of the utilisation of mixed methods research is attributed to its ability to merge factors in a research enquiry. In addition, the popularity of mixed methods research is attributed to its ability to address complex problems and questions with different approaches or methods. Hesse-Biber (2010:1-2) states that mixed methods research employs a research technique that combines both qualitative and quantitative research methods in order to answer questions, and to gather and analyse data. In other words, mixed methods research allows researchers to gather data that comprises of words, pictures, narrations and numbers. According to Andrew and Halcomb (2009:7), mixed methods research is a research enquiry that resolves the paradigm war that exists between the qualitative and quantitative research paradigms. Mixed methods research is the third research paradigm that is gaining acceptance by both qualitative and quantitative researchers.

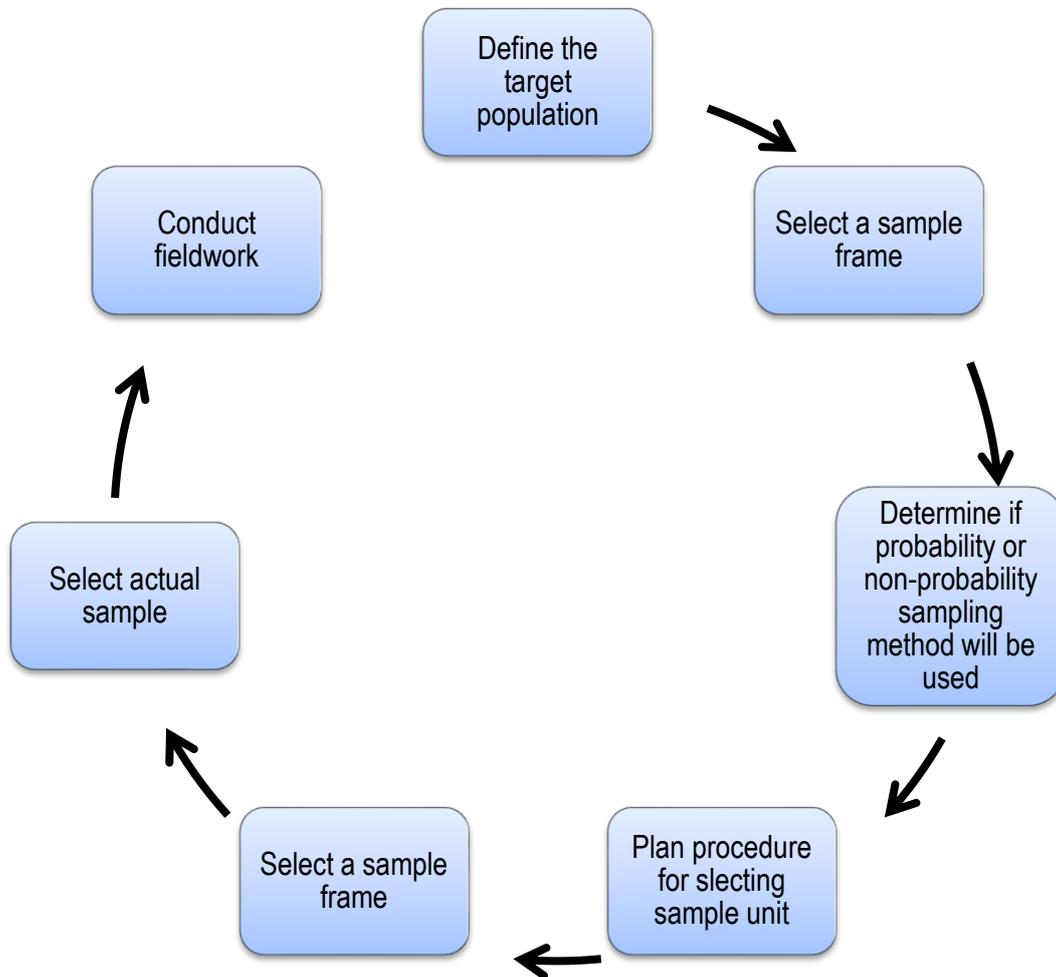
7.5 SAMPLING

Sampling is the process of selecting a sample unit from a larger group or population, of interest. The purpose of sampling is to gather data from the population of interest in order to address the research problem of the study (Tashakkori & Teddie, 2010). Zikmund (2003:70) notes that a sample is a subset, or some part of a larger population. In addition, Cooper and Schindler (2006:402) refer to sampling as the decisive factor of coming up with representative participants in the target population, especially for statistical inferences. Therefore, a sample must be representative of the population of interest; for the purpose of this study, the target population is healthcare employees. In addition, sampling refers to any procedure for the selection of the elements in a population, from which a conclusion can be drawn about the entire population (Cooper & Schindler, 2006:402; Diamantopoulos & Schlegelmilch, 2005:10).

Terre Blanche *et al.* (2006:49) argue that sampling is the selection of research participants from an entire population, and involves decisions regarding which people, setting, events, behaviours, and/or social processes to observe. In addition, it is a process of choosing from a much larger population, a group about which general statements would be made, so that the selected part will represent the whole group.

Similarly, Frazer and Lawley (2000:10) noted that sample size is based on data analysis requirements as well as budget. The larger the sample size, the lower the likelihood of error in generalising to the population. Sampling is done when it is impractical for the researcher to survey the whole population and when the budget and time constraints prevent a survey of the entire population. Sampling can be classified into two major categories: probability and non-probability sampling (Tashakkori & Teddie, 2010:356). The probability sampling method was utilised in this study to select its sample from the study population. The choice of sample size is governed by the level of certainty that the characteristics of the collected data will represent the characteristics of the population. Figure 7.1 illustrates the stages of the sampling process.

Figure 7.1: Schematic diagram showing stages in selecting a sample



Source: Adapted from Zikmund, Babin, Carr & Griffin (2012:391).

7.5.1 Population and sampling

One of the major steps in survey design is defining the population. The research population refers to the group of people from which a sample is selected for the purpose of the study, and the pool of people to which the study results are applied (Neuman, 2011:241). In addition, Gray (2009:148) defines a population as the total number of possible units or elements that are included in the study. Babbie, Haley and Zaino (2003:112), Black (1999:111) and Ngulube (2005:129) postulate that a study might focus on organisations or institutions, but the researcher must gather data from a given population in specific organisations. In addition, Diamantopoulos and

Schlegelmich (2000:10) note that a population is the totality of entities on which the study focuses and which the researcher has an interest in. It encompasses all the elements that make up our unit of analysis.

According to Diamantopoulos and Schlegelmich (2000), a population is not only limited to describing or defining people but includes objects or substances that meet certain criteria set by the researcher. For example, researchers may select its population using age, gender, location, years of experience, financial status, types of organisation, levels of employees, and patients with a particular disease or people with peculiar habits. This study selected its sample using the following criteria: the level of nurses, based on training and registration, as well as the location of employment, based on categories of hospitals.

The researcher depends on the research question and existing literature to identify a population that is in a position to provide relevant, rich and comprehensive information, in selecting a research setting and sample (Lewis & Ritchie, 2003:49). The healthcare sector is comprised of various categories of employees including medical practitioners, clinical associates, nurses, pharmacists, dental practitioners, specialists, physiotherapists, occupational and environmental therapists. In this study, nurses in South African healthcare sector institutions were the target population. All levels of nurses, that is, assistant nurses, senior assistant nurses, enrolled nurses, senior enrolled nurses and professional nurses in public healthcare institutions from two regions, namely, the Eastern Cape and KwaZulu-Natal were the target population. The target population consisted of 97 305 nurses (from the two regions) registered with the South African Nursing Council (SANC) (South African Health Review (SAHR) (2016: 302-303). Therefore, a portion or subset of the population was selected (Babbie & Mouton, 2003:100).

7.5.2 Determining the sampling method

The accuracy of the research is influenced by the way in which the sample has been selected (Shahrokh & Dougherty, 2014:242). Gray (2009:580) posits that sampling techniques ensure that a sample is representative of the population and that the findings can be generalised to the population. Kumar (2005:151) suggests that

researchers select the appropriate sampling design for their study, and that they need to understand the strengths and weaknesses of each. Probability sampling, non-probability sampling and mixed sampling are examples of sampling techniques. The non-probability sampling method could be defined as a method in which the sample is not selected using a random selection method. Maxfield and Babbie (2010:244) postulate that there are four types of non-probability sampling methods. These methods are: purposive or judgemental, quota, convenience and snowball sampling.

A sample that is selected using random selection, so that each unit in the population has a known chance of being selected, is referred to as a probability sample (Adams, Khan & Raeside, 2014:73). Additionally, a representative sample is likely to be obtained from the population when using the probability sampling method. Sampling error is usually kept to a minimum when using this probability sampling method. According to Khalid, Hilman and Kumar (2012:21), probability sampling methods are comprised of simple random sampling, systematic random sampling, stratified random sampling and cluster sampling.

Simple random sampling involves the researcher randomly selecting a sample from the sampling frame. If selections are made purely by chance, this is known as simple random sampling (Khalid *et al.*, 2012:21; Fox *et al.*, 2009:7). According to Fox *et al.* (2009:7), the usual method of obtaining random sample is to use computer packages and tables of random numbers may also be found in the appendices of most statistical textbooks.

Systematic sampling is a more commonly employed method. For example, after numbers are allocated to everybody in the population frame, the first individual is picked using a random number table and then subsequent subjects are selected using a fixed sampling interval (Fox *et al.*, 2009:7).

According to Fox *et al.* (2009: 8), stratified sampling is a way of ensuring that particular strata or categories of individuals are represented in the sampling process. Khalid *et al.* (2012: 21) refer to stratified random sampling as a process of stratification (different strata are identified on the bases of different factors) and a random sample is then drawn from each stratum. Fox *et al.* (2009:9) refer to cluster sampling as a method

frequently employed in national surveys where it is uneconomical to carry out interviews with individuals scattered across the country. Moreover, cluster sampling allows individuals to be selected in geographical batches. According to Sekaran and Bougie (2010), as cited in Khalid *et al.* (2012:9), in cluster sampling, the population is divided into clusters and then some clusters are randomly drawn from the group. Furthermore, in a selected cluster, all elements may be selected for study or a random sample can further be drawn from the cluster.

This study used the probability sampling technique to select its sampling unit. In this study, the stratified random sampling technique, which is a probability sampling technique, was used to select a sample (Khalid, Hilman & Kumar 2012:21) from the target population that comprised of five (5) levels of nurses in each of the five (5) sub strata (categories of hospitals). The total target population of 97 305 nurses was divided into five strata, which consisted of 20 743 assistant nurses and senior assistant nurses; 30 695 enrolled nurses and senior enrolled nurses; and 45 869 professional nurses. In addition, a proportional sample was elected using the simple random sampling technique, a type of probability sampling that gives each member of the population an equal and independent chance of being selected to participate in the study (Adams *et al.*, 2014:73). This implies that 400 respondents for each of the five strata were carefully selected, which amounts to a total of 2000 respondents.

Furthermore, the convenience sampling technique was utilised within each stratum of the study to select the sample unit within the strata. Teddie and Yu (2007:78) posits that convenience sampling involves selecting a sample unit on the basis of ease, accessibility and willingness to participate in a study. Similarly, Etikan, Musa and Alkassim (2015:1) define convenience sampling as a type of nonprobability or non-random sampling by which members of the target population meet certain criteria, such as ease of accessibility; geographical proximity; availability at a given time, or a willingness to participate are included in the study.

7.5.3 Sampling frame and sample size

A sample frame is a set of points or grid elements from which a sample is selected (Menza, Caldow, Jeffrey & Monaco, 2008:6). In addition, the sample frame provides the required information about the selection of the samples. The sample frame provides a detailed foundation by which the research sample can be drawn (Johnson & Christensen, 2004:73). Cooper and Schindler (2006:411) define a sample frame as a list from which a sample can be drawn. In this study, a representative sample was drawn from all levels of nurses, namely, assistant nurses, senior assistant nurses, enrolled nurses, senior enrolled nurses and professional nurses registered with the SANC, employed in the five categories of hospitals in public healthcare institutions, in two regions of South Africa, namely, the Eastern Cape and KwaZulu-Natal.

Table 7.1: Sample structure of the study

Targeted Groups	Sample Size
Tertiary Hospital	300
Regional Hospital	320
District Hospital	200
Healthcare Centre	280
Central Hospital	300
TOTAL	1400

Source: Researcher's own construction.

The quantitative study allows for the utilisation of a large sample size so as to ensure that the study findings can be generalised to the population. According to Hair, Black, Babin and Anderson (2014:574), a minimum sample size of 500 respondents will be required in the case of more than seven constructs being examined. In this study, there are nine constructs that were measured, as indicated in hypothesised model (Figure 1.1). The selected sample size is large enough to draw adequate data for the validation of results and reach a meaningful conclusion regarding employee commitment to the implementation of safety measures in the public healthcare sector.

Fox, Hunn and Mathers (2009:18) suggest that the expected response rate needs to be taken into consideration, thus, allowance needs to be made for non-responses to a survey, so that this can be added to the required sample size. In this study, for example, calculations indicate that there is a need of a minimum sample size of 1400 with an expected response rate of 70%. This indicates that, in this study, an initial

sample size of $2000=1400/0.7$ is selected in order to allow for possible non-response. Therefore, 2000 nurses, who have precise and well-defined knowledge about public healthcare, were mindfully selected.

7.5.3.1 Response rate and sample size

A total number of 1400 questionnaires were distributed to respondents in the Eastern Cape and KwaZulu-Natal. The questionnaires received from respondents amounted to 1,028. Therefore, this study achieved an acceptable response rate of 73.4%. Table 7.2 provides an illustration of the sample size and response rate.

Table 7.2: Sample size and response rate

Questionnaires	Respondents
Initial sample size	2000
Minimum sample size	1400
Usable questionnaires received	1028
Response rate	73.4%

Source: Researcher's own construction.

7.5.3.2 Missing data

A thorough assessment and verification process for missing data was done in order to facilitate data processing. The verification process allowed the researcher to detect questionnaires that were bad (missing pages), torn and poorly completed by respondents. A total number of two hundred and seventy two (272) out of one thousand and four hundred (1400) questionnaires collected from respondents had issues and were omitted from data capturing. In order to ensure the trueness of the results, the 272 questionnaires with missing data were not utilised in this study.

7.6 DATA COLLECTION METHODS

Data collection methods are the procedures, techniques and tools that are used by researchers when collecting data from the sampled respondents. Fox and Bayat (2007:88) and Somekh and Lewin (2007:221) define data collection techniques as follows: cost effective, speedy, less intrusive, reduces bias, lacks interviewer bias, and offers the possibility of anonymity and privacy to encourage more candid responses

on sensitive issues. Furthermore, data collection is defined as the process of gathering data that is required for a research investigation (Egan, 2007:130). Data collection methods can be classified into two categories: primary and secondary data collection methods.

7.6.1 Primary data

Primary data can either verify or nullify secondary data as it is a timely source of current information (Babbie, 2005:1). Primary data is, therefore, important in any study to answer research questions. According to Collis and Hussey (2009:112), primary data is original data collected by the researcher from the source, by means of conducting experiments, surveys, interviews or focus groups. In this study, self-constructed and self-administered questionnaires were the tools used to collect primary data. A self-administered questionnaire is commonly utilised to gather primary data in quantitative research methods (Collis & Hussey, 2003:66).

The primary data in this study was gathered from all nurses in public healthcare institutions in the Eastern Cape and KwaZulu-Natal. In order to collect primary data concerning employee commitment to the implementation of safety measures in public healthcare institutions, 1400 questionnaires were distributed to respondents.

7.6.2 Secondary data

Secondary data is data that has already been collected and published by other researchers (Collis & Hussey, 2009:112). Similarly, secondary data is the collection of existing literature on the topic of discourse. The collection of secondary data forms the basis of the conceptual framework of a study (Oliver, 2004:1). Thyer (2010:68) describes secondary data as data that are collected from an existing source; therefore, they are historic data. Furthermore, Beri (2010:12) states that secondary data are existing and second-hand data that is collected and used by researchers in order to answer new research questions and problems. The secondary data collected in this study provided existing information on the topic of discourse.

Furthermore, secondary data was mainly collected from publications, books, databases, reports and internal records. A comprehensive body of literature was consulted through the NMMU Library and its online databases. The NMMU online databases include EBSCO Host, Sabinet, Science Direct, and Business Source premier. Furthermore, published books and journals were the largest source of secondary information.

7.7 QUESTIONNAIRE DESIGN

The researcher developed the questionnaire while guided by the research questions, objectives, theoretical framework and the literature review, as well as inputs from her promoters and statistician. According to Mavodza (2010:110), a questionnaire is a measuring instrument that asks questions about the variables of a study. A questionnaire is also referred to as a set of questions used to gather information in a survey. In addition, Eiselen, Uys and Potgieter (2005:21) define a questionnaire as a descriptive and opinion related survey in the form of a self-administered questionnaire.

This study utilised a questionnaire as its data collection tool because it has the advantage of gathering vast quantities of primary data from a variety of respondents. Mavodza (2010:115) asserts that questionnaires are inexpensive to administer, and are easy and quick to analyse and develop. The use of a questionnaire guaranteed anonymity, privacy and confidentiality, so that respondents answered the questions without fear of victimisation. The questions were brief and concise. However, Mavodza (2010:115) argues that respondents are mostly lazy to thoroughly read questions that are too long; this ensures that they eventually give inaccurate responses or information, as they usually do not read all of the questions. For this reason, the questionnaires were self-distributed and, where possible, queries were responded to before leaving some of the participants to complete the questionnaires on their own.

The questionnaire was designed so as to generate knowledge on how committed employees were to the implementation of safety measures in public healthcare sector institutions. The questionnaire has been designed to generate a snapshot of the knowledge about the commitment of employees to the implementation of safety measures in public healthcare institutions. In addition, the questionnaire was used as

a measuring instrument in the study, to investigate the influences on employee commitment to the implementation of safety measures in healthcare sector institutions and the effect that employee commitment has on organisational performance, employee retention and cost effectiveness. The data assisted in framing further studies and data gathering. Bless and Smith (2000:108) provide the following reasons as to why researchers prefer to use the questionnaire:

- Respondents were offered enough time to plan and think about good answers.
- Questionnaires kept valid and consistent information, which the researcher could refer back to when analysing data.
- Questionnaires could be utilised without direct personal contact with respondents.
- Questionnaires might be completed by respondents themselves without the assistance of an interviewer.

Bless and Smith (2000:108) stipulate that utilising questionnaires as a data collection instrument has disadvantages:

- It takes a long time for a researcher to compile questions and distribute questionnaires as well as collecting them.
- Questionnaires are useless to those who were illiterate.
- Questionnaires are costly in terms of materials to be used, such as computer or typewriter, printer, pages for printing and files to carry those questionnaires to the participants.

This study utilised a structured and closed-ended questionnaire to solicit answers from the respondents. The questionnaire used in this study was divided into four sections: Section A, B, C and D. Furthermore, Sections A, B and C consisted of 94 items on a 7-point Likert scale (1=strongly disagree, 2=disagree, 3=disagree somewhat, 4=undecided, 5=agree somewhat, 6=agree, 7=strongly agree). The items in Section A investigated the respondents' perceptions of factors that influence safety and health implementation measures. Section B contained items pertaining to perceptions regarding commitment to safety and health measures. Section C solicited answers regarding organisational performance and employee retention. Sections A, B and C

used the interval level of measurement to categorise the data. The interval level of measurement refers to a classification in which attributes are ranked or ordered and the distance between attributes are equal and have a meaning (Rubin & Babbie, 2009:70).

Section D contained questions regarding the biographical information of employees. This section comprises of the demographic information of the respondents and the sector in which they operate. The biographical data of respondents was measured using a nominal scale. Gender, age, educational level, nursing training level, tenure and level of monthly income were requested in the biographical information. Section D utilised the nominal level of measurement to categorise its data. The nominal level of measurement describes and classifies data into categories and labels (Rubin & Babbie, 2009:70). In addition, the labels attached to each item have no meaning.

The key dimensions in Sections A, B and C of the questionnaire were: migration, role consideration, health environment, job identification, resources, work conditions, administrative support, commitment to safety and health measures, organizational performance and employee retention. Table 7.3 illustrates the variables, attributes and number of items contained in the measuring instrument.

Table 7.3: Measuring instruments: Number of items per variable

Variables	Attributes	No. of items
Migration	<ul style="list-style-type: none"> • Emigration • Immigration 	7
Role considerations	<ul style="list-style-type: none"> • Role conflict • Role ambiguity 	10
Health environment	<ul style="list-style-type: none"> • Physical • Work 	10
Job identification	<ul style="list-style-type: none"> • Professional registration • Job specification 	7
Resources	<ul style="list-style-type: none"> • Technology • Equipment 	7
Work conditions	-	10
Administrative support	-	5
Commitment to safety and health measures	-	20
Organisational performance	-	8
Employee retention	-	5
Biographical information	-	6

Source: Researcher's own construction.

7.7.1 Demographic profile of the respondents

Section D of the measuring instrument solicited responses regarding the biographical information of the respondents. Table 7.4 provides a summary of the demographic profile of 1028 respondents.

Table 7.4: Demographic profile of the respondents

Demographic category	Range	N	%
Gender	Female	836	81
	Male	192	19
	TOTAL	1028	100
Age	<20	12	1
	21-30	102	10
	31-40	199	19
	41-50	282	27
	51-60	272	27
	60+	171	16
	TOTAL	1028	100
Highest qualification	Grade 12 and lower	93	9
	National Certificate	122	12
	Diploma	272	27
	Bachelor's degree	253	24
	Postgraduate degree	188	18
	Other	100	10
	TOTAL	1028	100
Level of nursing training	Nursing Assistants	85	8
	Senior Nursing Assistants	165	16
	Enrolled Nurses	274	27
	Senior Enrolled Nurses	312	30
	Professional Nurses	192	19
	TOTAL	1028	100
Tenure	1-5 years	109	11
	6-10 years	187	18
	11-15 years	250	24
	16-20 years	263	25
	21 years +	219	21
	TOTAL	1028	100
Level of monthly income	<R5000	26	2
	R5001-R10 000	144	14
	R10 000-R15 000	319	31
	R15 000-R20 000	293	29
	R20 000-R25 000 +	246	24
	TOTAL	1028	100

Source: Researcher's own construction.

Table 7.4 indicates that eighty-one per cent (81%) of the respondents are female, and males comprise nineteen per cent (19%) of the respondents. Therefore, in this study, the majority of nurses were female, and males were in the minority in the public healthcare sector.

Table 7.4 also reveals that the age groups of 41-50 years and 51-60 are the largest groups, with twenty-seven per cent (27%) each; they are followed by nineteen per cent (19%), which is occupied by 31-40 age group, who are followed by sixteen per cent (16%), while the smaller portion of ten per cent (10%) and one per cent (1%), are occupied by 31-40 years, 60 + years and <20 respectively.

The findings revealed that twenty-seven per cent (27%) of nurses obtained a diploma, twenty-four per cent (24%) attained a bachelor's degree, while eighteen per cent (18%) held a postgraduate degree. However, twelve per cent (12%) obtained a national certificate and ten per cent (10%) constituted the other highest qualification. Finally, a small portion of nine per cent (9%) had completed to grade twelve (12) or a lower grade.

This study shows that Senior Enrolled Nurses constituted the majority the nurses, at thirty per cent (30%), and twenty-seven per cent (27%) of the sample were Enrolled Nurses. Nineteen per cent (19%) were Professional Nurses and sixteen per cent (16%) were Senior Nursing Assistants. However, eight per cent (8%) were Nursing Assistants. Table 7.4 indicated that twenty-six per cent (26%) and twenty four per cent (24%) of the respondents have been employed by public healthcare sector between sixteen to twenty years (16-20 years) and eleven to fifteen (11-15 years), respectively. However, eleven per cent (11%) have been in the public healthcare sector for a period of five years.

This study indicated that the majority of nurses, thirty-one per cent (31%), earned between ten thousand rand and fifteen thousand rand (R10 000-R15 000) per month. Twenty-nine per cent (29%) of the respondents indicated that they earn between fifteen thousand rand and twenty thousand rand (R15 000-R20 000) per month. Twenty-four per cent (24%) earn between twenty to twenty-five thousand rand and

above (R20 000-R25 000), while two per cent (2%) of the respondents earn less than five thousand rand (R5000) per month.

7.7.2 Variables of the research instrument design

Literature on employee commitment factors and their impact on the implementation of safety measures in public healthcare institutions was discussed in order to effectively utilise the variables in the hypothesised model. Existing measuring instruments have been used to provide evidence of reliability.

7.7.2.1 Migration

Perlic, Miklowitz, Link, Struening, Kaczynski, Gonzalez, and Rosenheck (2007:2) defines migration as the move from one place to another. In the current study, migration is classified into two parts: emigration and immigration. The present study developed a seven item scale to measure migration in relation to employee commitment towards the implementation of safety measures in public healthcare institutions. Emigration refers to the act of leaving one's country of origin with the intent of permanently settling in another. To measure emigration, items were derived from Clemens, Ozden and Rapoport (2014), Dustmann, Fadlon and Weiss (2011:66) and Elliot (2000:603). Immigration, in this study, is the action of coming to live permanently in a foreign country. To measure immigration, items were derived from Dumont and Lemaitre (2005:49), Dustmann, Fadlon and Weiss (2011:66), Norkewicz and Paral (2003:6) and Paral (2000:6).

7.7.2.2 Role conflict

In this study, role conflict is a feeling of being torn in multiple directions, and unable to find a way to make every role partner satisfied. A seven item scale was utilised to measure role conflict in relation to employee commitment towards the implementation of safety measures in public healthcare sector institutions. In order to measure role conflict, the items were derived from Ivancevich (2008:227), Jones (2007:132), Katz and Kahn (1966), as cited in Zakari (2011:179), Onyemah (2008:299), Rizzo

(1970:459), as cited in Judeh (2011:459), Robbins and Coulter (2003:401), Rosen, Chang, Djurdjevic and Eatough (2010:458) as well as Tang and Chang (2010:873).

7.7.2.3 Role ambiguity

In this study, role ambiguity refers to the lack of clarity regarding the expectations associated with a specific role. It leads to job stress and thus occurs when the expectations, objectives and responsibilities of role have not been clearly defined for the employee. A seven item scale was used to measure role ambiguity in relation to employee commitment to the implementation of safety measures in public healthcare sector institutions. To measure role ambiguity, items were randomly picked from Gold and Roth (2013), as cited in Khan, Yasir and Khan (2014:104), Onyemah (2008:299), Rizzo (1970:459), as cited in Judeh (2011:173), Rosen *et al.* (2010:459), Slattera, Selvarajanb and Anderson (2008:2268) and Yongtang, Weixi, Yalin, Yipeng and Liu (2014:8).

7.7.2.4 Health environment

In this study, health environment is comprised of the physical and work environments. In order to measure health environment in relation to employee commitment to the implementation of safety measures, a seven item scale was used. In the current study, the physical health environment refers to the tangible components of service delivery. The items were formulated from Du Plessis and Rousseau (1999:316) and the National Environmental Health Association. In this study, the work environment is comprised of the conditions, circumstances and influences that affect an organization's ability to achieve its objectives. A seven point Likert scale was used to measure work environment in relation to employee commitment to the implementation of safety measures in the public health institutions. In order to measure health environment, items were adapted from (Parent-Thirion et al., 2012) and Muller, Bezuidenhout and Jooste (2005:525).

7.7.2.5 Job identification

Job identification includes items such as post level, personnel number, departmental location of the job, the person to whom the incumbent reports and the date on the job

description was last revised. In addition, professional registration is an important milestone for any employee; it establishes the employee's knowledge, understanding and competence. In order to measure the relationship between job identification and employee commitment to the implementation of safety measures, a seven point Likert scale was employed. The items were retrieved from the Institute of Science and Technology (2015) and Muller *et al.* (2005:255).

7.7.2.6 Resources

In this study, resources refer to the combination of human resources, raw materials and equipment that healthcare employees use to convert raw materials into finished goods and services. A seven point Likert scale was used to ascertain the relationship between resources and employee commitment to the implementation of safety measures in the public healthcare sector institutions. In order to measure resources, items were adapted from Schults, *et al.* (2003:240).

7.7.2.7 Work conditions

In this study, work conditions are the conditions in which healthcare employees work. Work conditions include facilities, services, comforts, conveniences, physical environment, stress and noise levels, degree of safety or danger, and many others. In order to measure the relationship between work conditions and employee commitment to the implementation of safety measures, a seven point Likert scale was used and the items were taken from (Parent-Thirion *et al.*, 2012), Guvana (2008:29) and Widerszal-Bazyl and Cieslak (2000:58).

7.7.2.8 Administrative support

In this study, the administrative personnel are responsible for securing the resources necessary for the work-related functions of healthcare employees. A seven point Likert scale was utilised to establish the relationship between administrative support and employee commitment to the implementation of safety measures in the public healthcare sector institutions; the items were derived from Du Toit and Van Staden (2005:16) and the Organization for Economic Co-operation and Development (2008:1).

7.7.2.9 Employee commitment

In this study, employee commitment is the psychological attachment felt by a person for the organization. Similarly, employee commitment is the degree to which the employee feels devoted to his/her organization. Moreover, committed healthcare employees believe in and accept organizational goals and values. A seven point Likert scale was used to measure employee commitment to the implementation of safety measures in the public health institutions. The items of employee commitment were retrieved from Akintayo (2010), He, Li and Li (2011:596), Ireferin and Mechanic (2014:34), Newstorm and Davies (2002:211), as cited in Naicker (2008:31), Phillips and Edwards (2009).

7.7.2.10 Safety measures

In this study, safety measures are those measures that are taken to increase or ensure the safety or protection of nurses from danger. In order to measure the relationship between safety measures and employee commitment to the implementation of safety measures in the public healthcare sector, a seven point Likert scale was used; the items were taken from Alli (2008:46) and Oakes (2009:787).

7.7.2.11 Employee retention

In this study, employee retention is an effort by a business to maintain a working environment that encourages current nurses to remain with the institution. It refers to the ability of an organization to keep its valuable employee through various methods or strategies, such as offering competitive remuneration or benefits, appropriate recruitment and selection, good management or leadership, as well as the availability of training and development opportunities. A seven point Likert scale was used to measure relations pertaining to employee retention and employee commitment to the implementation of safety measures in the public healthcare sector institutions. The items were retrieved from Connell and Phillips (2004:7), Mrara (2010:27) and Purcell (2005:30).

7.7.2.12 Organisational performance

In this study, organisational performance is the decisive dependent variable for researchers concerned with just about any area of management. In order to ascertain the relationship between organisational performance and employee commitment to the implementation of safety measures in the public healthcare sector, a seven point Likert scale was used. In order to measure organisational performance, items were adapted from Schuler and Cording (2006:540), Tharanou, Saks and Moore (2007:25) and Tucker and Thorne (2010:27)).

Figure 7.5 provides a summary of the variables that assessed employee commitment to the implementation of safety measures in public healthcare institutions, and scale development.

Table 7.5: Summary of employee commitment to the implementation of safety measures in the public healthcare institutions and measuring scale development

Migration - 7 Items
Migration refers to any movement from one place to another, for example, the act of leaving one’s country of origin with the intent of settling in or permanently living in a foreign country. Along the same lines, it refers to any movement of one month or more that involves the crossing of a magisterial boundary, or any change from one type of settlement area (rural, urban) to another, by one or more persons involved in a change of residence. Immigration is the action of coming to live permanently in a foreign country. This term is used to describe the process of entry into a country or within it to a different administration district (Dumont & Lemaitre, 2005:49; Dustmann, Fadlon & Weiss, 2011:66; Jackson, 1986:5; Elliot, 2000:3; Kok, Gelderblom, Oucho & Van Zyl, 2006:125; Norkewicz & Paral, 2003:6; Paral, 2000:6).
Role conflict - 10 Items
Role conflict is defined as a feeling of being torn in multiple directions, unable to find a way to make every role player satisfied. Similarly, role ambiguity is described as the lack of clarity regarding the expectations associated with a specific role. It is another factor that leads to job stress and thus it occurs when expectations,

objectives and responsibilities have not been clearly defined for employees (Gold & Roth, 2013, as cited in Khan, Yusoff, Khan, Yasir, & Khan 2014:104; Ivancevich, 2008:227; Jones, 2007:132; Katz & Kahn, 1966, as cited in Zakari, 2011:179; Onyemah, 2008:299; Pearce, 1981:665, as cited in Zakari, 2011:180; Rizzo, House & Lirtzman, 1970:459, as cited in Judeh, 2011:173; Robbins & Coulter, 2003:401; Rosen, Chang, Djurdjevic & Eatough, 2010:458-459; Slattery, Selvarajanb & Anderson, 2008:2268; Tang & Chang, 2010:873; Yongtang, Weixi, Yalin, Yipeng & Liu, 2014:8).

Health environment - 10 Items

Health environment: Involves the aspects of human health, including quality of life, that are determined by physical, chemical, biological, social and psycho-social factors in the environment. Furthermore, Physical Health Environment refers to the tangible components of service delivery. Environmental health is the art and science of protecting against environmental factors that adversely impact upon human health or the ecological balances to long term human health and environmental quality, be it in the natural or human-made environment. Work Health Environment comprises of the conditions, circumstances and influences that affect the organization's ability to achieve its objectives (Du Plessis & Roussea, 1999:316; Muller, Bezuidenhout & Jooste, 2005:525).

Job identification - 7 Items

Job Identification refers to a written document that summarizes the major duties and responsibilities of the position, job specifications and requirements to perform the job, and the working conditions. It also includes: post level, personnel number, departmental location of the job, the person to whom the incumbent reports and the date on which the job description was last revised (Du Toit & Van Staden, 2005:162; Heathfield, 2016:1; Jivani, 2014; Muller *et al.*, 2005:255).

Resources - 7 Items

Resources refers to a source of supply, support or aid, especially one that can be readily called upon when needed. It also refers to anything required to satisfy human needs (Schulz, Bargrain Potgieter, Viedge & Werner, 2003:240).

Work conditions - 10 Items

Work Conditions refers to the conditions in which an individual or staff member works; it is the result of the interaction between a job, the work, the company and

an individual. Furthermore, it includes facilities, services, comforts, conveniences, physical environment, stress and noise levels, degree of safety or danger, and many other factors (Parent-Thirion et al., 2012; Guvana, 2008:29; Widerszal-Bazyl & Cieslak, 2000:59).

Administrative support - 5 Items

Administrative Support refers to all forms of support from human resources, clerical duties, procurement, information technology and payments sections that support the core functions of clinical healthcare in the workplace. Moreover, the responsibility of administrative personnel is to secure the necessary resources for the functioning of professional personnel (Arends, 1989; Du Toit & Van Staden, 2005:16; Perrine, 2010).

Employee commitment – 20 Items

Employee commitment is characterized by a strong belief in and acceptance of the goals and values of the organization. In addition, employee commitment is the willingness of employees to exert considerable effort on behalf of the organization, and having a strong desire to maintain membership of it. Furthermore, it can be defined as the degree to which the employee feels devoted to their organization. Employee commitment is also defined as the psychological attachment felt by a person for the organization, and refers to a committed employee's belief in and acceptance of organizational goals and values (Akintayo, 2010; He, Li & Lai, 2011:596; Newstrom & Davies, 2002:211, as cited in Naiker 2008:31; Irefin & Mechanic, 2014:34; Phillips & Edwards, 2009; Ongori, 2007).

Safety measures - 20 Items

Safety Measures are those activities and precautions taken to improve the safety, health and welfare of people engaged in work or employment by reducing the risks related to human health in the workplace (Alli, 2008:46; Oakes, 2009:787).

Employee retention - 5 Items

Employee retention refers management's ability to encourage employees to be obliged to remain in the organization for a long period of time. It is referred to as an effort by a business to maintain a working environment which encourages current staff to remain with the company. Equally, it is the ability of an organization to keep its valuable employees through various methods or strategies such as offering competitive remuneration or benefits, appropriate recruitment and selection, good

management or leadership, as well as availability of training and developmental opportunities (Connell & Phillip, 2004:7; Das & Baruah, 2013:1,8-9; Mrara, 2010:27; Pursell, 2005:30; Yee, 2012; Zineldin, 2000, as cited by Sinha & Sinha (2012:146).

Organisational performance - 8 Items

Organisational performance encompasses the actual output of an organization as measured against its goals and objectives for survival and prosperity. In addition, it identifies, predicts or models the effects of management control variables presumed to be casually antecedent. Moreover, organizational performance is defined as a practice-based framework that builds on the synergy between planning, assessment and results in the discernment of impact and value (Carton & Hofer, 2006:43; Thomas, Deshmukh & Kumar, 2008:24-27; Tucker & Thorne, 2010:2; Zमितza & Michie, 2015:19).

Source: Researcher's own construction.

7.8 THE CRITERIA FOR EVALUATING THE MEASURING INSTRUMENTS

Reliability and validity are fundamental criteria needed for evaluating the measuring instrument. In other words, reliability and validity ensure the precision and accuracy of the measuring instrument. Reliability and validity ensure that the measuring instrument is adequate for the collection of primary data (Kirch, 2008:891). Coldwell and Herbst (2004:17) postulate that scientific statements about the world or a subject of discourse must be true and accurate. Researchers must understand that it is a general rule to ensure the reliability and validity of scientific statements. Therefore, to ensure the precision and accuracy of scientific statements, the measuring instrument must be reliable and valid. The reliability and validity of the measuring instrument will be discussed, below, for the purpose of clarification.

7.8.1 Reliability

Reliability is defined as the measure to which test scores are dependable and stable across conditions (Reynolds, Livingstone & Wilson, 2009:431). Similarly, Joppe (2000:597), as cited in Golafshani (2003:598), defines reliability as the extent to which results are consistent over time. In addition, reliability reflects an accurate

representation of the total population under study. Joppe (2000:597) states that if the results of a study can be reproduced under a similar methodology, then the research instrument is considered to be reliable. Embodied in this citation is the idea of the replicability or repeatability of the results or observations. In addition, Pallant (2003:176) postulates that reliability is concerned with the degree of consistency or the stability of measurements, that is, whether the same results would be achieved if the test or measure was applied repeatedly. Therefore, a measurement is reliable when the results drawn from the instrument remain the same, when used repeatedly. In other words, reliability is the stability of a measurement over time, and the similarity of measurements within a given period. The reliability of the measuring instrument in this study ensured the consistency and stability of its measures.

According to Kirk and Miller (1986:41-42), as cited in Golafshani (2003:598), researchers can test the reliability of a measuring instrument by employing three types of measures: test-retest, inter-rater or inter-observer, and internal consistency reliability. Internal consistency reliability was utilised to assess the reliability of the measuring instrument in this study. Bajpai (2011:50) describes internal consistency reliability as the degree to which items on a measuring instrument contain scores that are inter-correlated. Furthermore, the Cronbach's value is utilised by researchers to describe and assess the internal consistency of a measuring instrument. According to Zeanah (2009:243), a Cronbach's alpha of above 0.60 and 0.70 is considered an adequate and acceptable indication of reliability of the measuring instrument. Therefore, the Cronbach's alpha of 0.60 is acceptable and was used as the cut-off point in assessing internal consistency reliability in this study.

7.8.2 Validity

Validity is an indication that the instrument measures what it is intended to measure (Babbie & Mouton, 2003:122). Somekh and Lewin (2007:221) indicate that validity ensures that the measurement collects the data required to answer the research question. In addition, validity refers to the extent to which a research instrument adequately measures and reflects the real meaning of the concept being studied. Furthermore, Bashir, Afzal and Azeem (2008:35) and Golafshani (2003:598) suggest that validity determines whether the instrument truly measures that which it was

intended to measure, and it determines how truthful the research results are. In this regard, the extent to which a scale that is encoded into a set of questions actually measures the variable it is supposed to measure is referred to as validity. The validity of the measuring instrument in this study ensured the accuracy and effectiveness of the measuring instrument. In other words, ensured that the measuring instrument measured what it was intended to measure in this study.

The validity of a measuring instrument serves three functions: to represent the universe of content, to establish relationships with a particular variable and to measure affective behaviour or cognitive variables. Content, face and construct validity were measured in order to establish the validity of the instrument (Somekh & Lewin, 2007:221). In order to assess the measuring instrument of this study, content validity (face validity and sampling validity), construct validity (convergent and discriminant) and criterion-related validity were used.

Content validity is the degree to which items of a measuring instrument are representative of a given construct (Yaghmale, 2009:25). According to Nunnally (1978:86), the content validity of an instrument depends on the adequacy of a specified domain of content that is sampled. Similarly, content validity refers to the degree to which the instrument covers the content that it is supposed to measure. Furthermore, Polit and Beck (2006:489) refer to content validity as the adequacy of the sampling of the content that should be measured. Content validity is a form of validity that ensures that the fundamentals of the subject to be covered in a study are a fair demonstration of the wider topic under examination and that the essentials preferred for the study sample are attended to in intensity and breadth (Cohen, Manion & Morrison, 2008:135). Therefore, the aim of content validity is to ensure that the measuring instrument provides items that are relevant to the subject covered in this study.

Babbie (2007:298) refers to content validity as the degree to which a measure covers the array of meanings included in the notion. In addition, content validity is an essential source of evidence and should be analysed in any process of the test construction (Rico, Dios & Ruch, 2012: 451). Therefore, content validity, in this study, ensured the comprehensiveness and representativeness of the content of the scale measured. The

measuring instrument used in this study was also reviewed by specialists prior to compiling a final version, in order to assess face validity.

Construct validity refers to how well researchers translate or transform a concept, idea, or behaviour, that is, a construct into functioning and operating reality. In addition, construct validity deals with how well items capture the operationalisation of a construct (Trochim, 2006, as cited in Drost, 2012:116). Furthermore, Ayodele (2014) affirms that construct validity shows the extent to which presumptions are justifiably prepared from the operationalisation in one's study to the hypothetical constructs on which the operationalisation are based. Thus, it was related to how well the experiment was operationalized, and constructs represented reality. Discriminant and convergent validity are sub-categories of construct validity. Discriminant and convergent validity were utilised in assessing the construct validity of the measuring instrument in this study (Trochim, 2006, as cited in Drost, 2012:116).

Discriminant validity occurs when constructs that are expected not to relate do not relate. Tavakoli (2012:176) postulates that discriminant validity occurs when constructs in an inquiry are poles apart from other substantially comparable constructs. Furthermore, discriminant validity will occur when constructs did not measure what they should not measure. Convergent validity is the degree to which the operational definition is correlated with variables that one would expect it to be correlated with (Altermatt, 2007:479). In addition, convergent validity is the degree to which the operational definition is correlated with variables that one would expect it to be correlated with.

Criterion-related validity is the degree of correspondence between a test measure and one or more external criterion, usually measured by their correlation (Bollen, 1989:179, as cited in Drost, 2012).

7.9 PRETESTING THE MEASURING INSTRUMENT

A pilot study is a criterion for evaluating the effectiveness of a measuring instrument. Blessing and Chakrabarti (2009:114) report that the purpose of a pilot study is to detect potential mistakes and errors in the measuring instrument that may pose a threat to the quality and validity of the results. In addition, Blessing and Chakrabarti (2009:114) indicate that the need to pilot test the measuring instrument is fundamental to avoiding errors and mistakes during data collection. According to Ary, Jacobs, Sorensen and Razavieh (2009:95), a pilot study is a preliminary test or trial run of the measuring instrument. Furthermore, the trial run of the measuring instrument is aimed at reducing flaws in and ensuring the appropriateness of the questionnaire. McBurney and White (2009: 236) postulate that a pilot study is a small-scale study that is performed to pre-test and modify the design and procedures of the study. McBurney and White (2009:236) state that a pilot study ensures the credibility of the results of the main study, and it will give researchers a clearer picture of the empirical results that can be expected in the main study.

Ary *et al.* (2009:95) report that it is important for researchers to test their questionnaire on a smaller number of respondents drawn from the study sample. Yin (2015:39) postulates that a pilot study helps to test and refine the measuring instrument. In addition, a pilot study will allow researchers to detect unclear and biased questions, and language errors. Furthermore, researchers will learn the behaviour of the respondents towards the study. A preliminary or pilot study of this research was conducted in order to pre-test the measuring instrument. A total of 50 questionnaires were distributed to nurses (respondents) in various hospitals in the Eastern Cape. The pilot study created awareness of the study and enabled the researcher to understand nurses' perceptions of the study. The pilot study was helpful in minimising errors and increasing the efficiency of the measuring instrument. In addition, the pilot study was relevant because, as a result of it, relevant and error-free data was gathered.

7.10 DATA ANALYSIS

Data analysis in the quantitative research method is a statistical procedure that involves how researchers analyse primary data in order to test hypotheses and answer research questions and problems (Mertens, Pugliese & Recker, 2016:1). Researchers can only draw conclusions, and make sense and meaning of primary data after the data has been analysed. In other words, the credibility of findings is determined through the analysis of the primary data (Mertens *et al.*, 2016:1). Furthermore, Siddiqui (2011:655) describes data analysis as a systematic approach that involves the reduction and transformation of numerical data gathered into meaningful information. According to Creswell and Clark (2011:204), the steps involved in data analysis include preparing the data for analysis, exploring the data, analysing the data, representing the analysis, interpreting the analysis and validating the data and the researcher's interpretations thereof.

Furthermore, Murthy and Bhojanna (2009:183) postulate that quantitative researchers analyse data by preparing the raw data, then editing, coding, tabulation, summarising the data, and finally analysing the data through the use of statistical software. The primary data gathered in this study was edited and coded using the Microsoft Excel software package; it was then analysed using the Statistica software (version 12) software package. The analysis of the primary data was done in five stages: exploratory factor analysis, reliability of the measuring instrument, descriptive statistics, multiple regression analysis, and correlation analysis (Pearson correlation).

7.10.1 Exploratory factor analysis

The aim of factor analysis is to reveal any latent variables that cause the manifest variables to vary in correlation with another related variant (Costello & Osborne, 2005:1). In addition, factor analysis should yield the same solution while also avoiding the inflation of estimates of variance that are accounted for. Confirmatory and exploratory factor analyses are the two types of factor analysis that can be used by researchers to investigate the relationship between and describe the variability among observed variables (Nesselroade & Cattell, 2013:235). This study utilised exploratory factor analysis (EFA) to uncover the underlying structure of and relationships amongst

measured variables in this study (Fabrigar & Wegener, 2012:20). Munro (2005:324) defines EFA as a statistical procedure that summarises data by grouping together measured variables that are intercorrelated.

Joreskog and Sorbom (1993:22) state that researchers utilise EFA to analyse data when they need to explore and discover relationships as well as assess latent sources of variation and covariation among observed variables. In addition, EFA is a statistical procedure or technique that generates structures, models and hypotheses. Furthermore, Nesselroade and Cattell (2013:235) suggest that exploratory factor analysis is a better form of factor analysis because it provides a more conservative test of a study's hypothesis. In addition, EFA does not base its solution upon the pre-stated hypothesis of the study, but it investigates a number of unexplored domains and forms data out of it for the generation of a hypothesis.

7.10.2 Descriptive statistics

Descriptive statistics refers to the collection, organizing, presentation and analysis of data (Fox & Bayat, 2007:111). Furthermore, descriptive statistics is also referred to as a statistical technique or method aimed at reducing large data into meaningful information. Descriptive statistics assists researchers to summarize and organize data in an effective and meaningful manner (Fox & Bayat, 2007:111). In this study, simple descriptive analysis and interpretation, in the form of percentages, were used. In other words, this study presented the biographical information of the respondents in numbers and percentages. Furthermore, descriptive statistics was used to reduce the large set of data contained in Sections A, B and C of the measuring instrument. The data was coded and analysed, and the descriptive results were summarised and presented in mean and standard deviations.

7.10.3 Regression analysis

Regression analysis can be a long, drawn-out process of taking account of more than one self-determining variable, and can be referred to as multiple regression (Guerard, 2013:19). Furthermore, Guerard (2013:20) refers to simple regression analysis as a type of analysis that seeks to measure the statistical association between two

variables. A statistical association or correlation amongst variables, rather than a causal relationship amongst variables is shown by regression analysis. Torres-Reyna (2007:2) recommends that researchers should have clarity in terms of what they are trying to estimate, for example, they should identify which are the response and predictor variables before running a regression analysis.

Multiple regression analysis was utilised to investigate and measure the relationships between several independent variables (predictor) and one dependent variable (response) in this study. Baran and Jones (2016:159) define multiple regression analysis as a rigorous statistical technique that predicts the unknown value of the dependent variable from the known value of multiple independent variables. Furthermore, Blaikie (2003:146) affirms that multiple regression analysis explains the variability of a dependent variable when two or more independent variables change.

7.10.4 Correlation analysis

Hair, Babin, Money and Samouel (2003:99) define correlation analysis as a statistical procedure that is used to analyse and evaluate the association between two variables. In addition, Weinberg and Abramowitz (2008:135) report that correlation analysis (Pearson correlation) is an advanced statistical method that evaluates the direction and strength of the association between two variables. Hair *et al.* (2003:283) postulate that the correlation coefficient is symbolized by r and it explains the degree of relationship between variables. According to Hair *et al.* (2003:283), the correlation coefficient ranges between -1.0 and +1.0. In this study, correlation analysis (Pearson correlation) was utilised to measure the degree of association between the observed variables, and to test the research hypotheses (Markovic & Jankovic, 2013:154).

7.11 ETHICAL CONSIDERATIONS

Ethical guidelines refer to whether the researcher showed competency, maintained honesty in managing resources, acknowledged sources and support during the study, and gave an accurate report of the findings. The researcher would undermine the entire scientific process if he/she fails in his/her responsibility to uphold ethics when

carrying out research. In order to uphold ethical standards, the following was considered:

- Approval was obtained from the Research and Ethics Committee of the Business Management and Economics Department of the NMMU.
- Permission to conduct the study was obtained from the Department of Health.
- The aims and objectives of the research were communicated to both the respondents and the institution, in this case, public healthcare institutions.
- Relevant information regarding details of the study and the expectations of the research was supplied, together with the questionnaires, to all respondents.
- The researcher furnished the respondents with her contact details, so that she could be reached if necessary.
- A written and informed consent to distribute the questionnaire to nurses was obtained from the head of each healthcare institution.
- Confidentiality was ensured by protecting all data collected during the study from unauthorised persons.
- Respondents remained anonymous to ensure that the responses are not linked to particular individuals. Respondents were not required to provide their personal details, including their names. Their privacy was also respected.
- The respondents were not influenced by the researcher when completing the questionnaires.
- Respondents provided responses according to their personal opinion.
- The respondents were allowed by the researcher to withdraw from participating in the study at any time.
- Respondents were made aware that the research was being conducted for study purposes.
- Data collected were stored in the researcher's laptop. The researcher also stored the hard copies of the questionnaires safely.
- The researcher was guided by a promoter and co-promoter who are experienced in the fields of business management and healthcare research. This enhanced adherence to research principles.
- In this study, ethics clearance was sought from the Faculty of Business and Economic Sciences and Research Technology and Innovation (RTI), at NMMU.

7.12 SUMMARY

This chapter provided a detailed outline of the research design and methodology used to conduct the study. The purpose of the study, and its research paradigm, was also presented in this chapter. Furthermore, this chapter provided comprehensive discussions of the three research paradigms – qualitative, quantitative and mixed methods – that are used in conducting research investigations in the social sciences. This chapter indicates that the quantitative research method was used in conducting the current research investigation. In addition, information on the population and sampling, sampling design, stages in selecting a sample, sample frame and sample size of this study were provided in this chapter. The chapter further contained an overview of the data collection methods (primary and secondary) employed in this study; this was followed by a series of discussions on the questionnaire design, demographic profile of the respondents, variables of the research instrument and criteria for evaluating the measuring instrument of the study. This chapter outlined the stages in which the primary data was analysed, and provided a detailed description of exploratory factor analysis, reliability of the measuring instrument, descriptive statistics, multiple regression analysis, and correlation analysis (Pearson correlation).

The next chapter, Chapter Eight, presents the empirical results of the study and analyse the data collected. In addition, the results of the various types of analysis will be presented and discussed in the chapter.

CHAPTER EIGHT

EMPIRICAL EVALUATION OF EMPLOYEE COMMITMENT TO THE IMPLEMENTATION OF SAFETY MEASURES IN HEALTHCARE INSTITUTIONS

8.1 INTRODUCTION

The previous chapter provided an overview of the research methodology that was employed in order to attain the goals of the study. The goal of the study is to explore the factors that contribute to employee commitment to the implementation of safety measures in health institutions. The current chapter introduces the results of the reliability and validity assessments of the measuring instrument. The results of the empirical evaluation and analysis of employee commitment to the implementation of safety measures in the public health institutions are presented in this chapter.

In addition, in this chapter, the relationships between the variables of the study will be empirically tested. The variables subjected to empirical assessment in this study are: migration, role considerations, health environment, job identification, resources, work conditions, and administrative support as well as the impact of employee commitment to the implementation of safety measures on employee retention and organisational performance.

8.2 SUMMARY OF THE OBJECTIVES AND HYPOTHESES OF THE STUDY

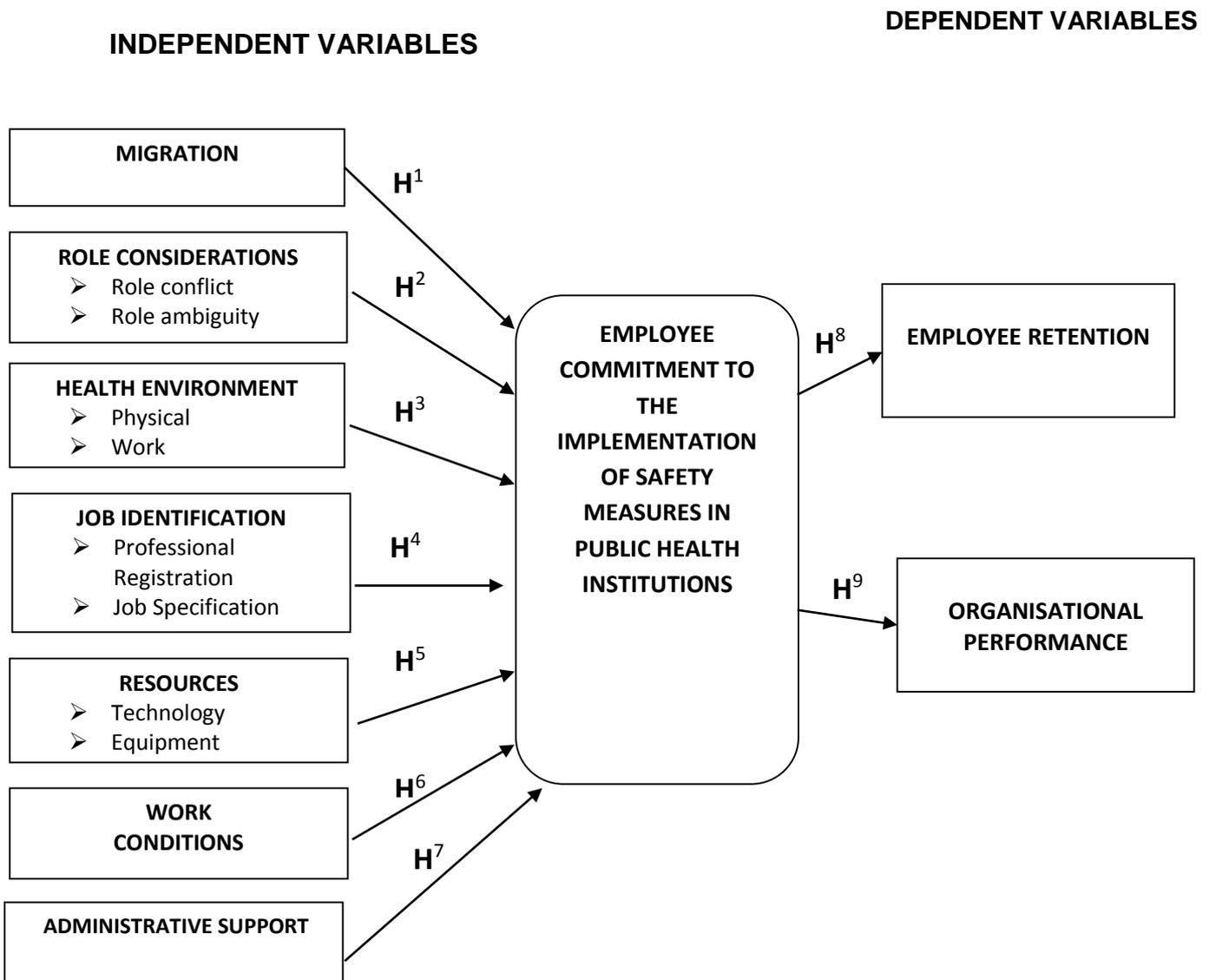
The primary objective of the study is to investigate and analyse the factors that may contribute to employee commitment to the implementation of safety measures in the public healthcare institutions. The following hypotheses are formulated on the basis of the hypothetical model of the study concerning employee commitment to the implementation of safety and health measures in health institutions:

H¹ There is a relationship between migration and employee commitment to implement safety measures.

- H² There is a relationship between role considerations (as measured by role conflict and role ambiguity) and employee commitment to implement safety measures.*
- H³ There is a relationship between health environment and employee commitment to implement safety measures.*
- H⁴ There is a relationship between job identification (as measured by professional registration and job specification) and employee commitment to implement safety measures.*
- H⁵ There is a relationship between resources and employee commitment to implement safety measures.*
- H⁶ There is a relationship between work conditions and employee commitment to implement safety measures.*
- H⁷ There is a relationship between administrative support and employee commitment to implement safety measures.*
- H⁸ There is a relationship between employee commitment to implement safety measures and employee retention.*
- H⁹ There is a relationship between employee commitment to implement safety measures and organisational performance.*

The empirically tested hypotheses are depicted on Figure 8.1.

FIGURE 8.1: Theoretical model of employee commitment to the implementation of safety measures in the health institutions



Source: Researcher's own construction.

8.3 DATA ANALYSIS RESULTS

The primary data gathered in this study was coded using the Microsoft Excel software package. Furthermore, this study performed a full analysis of the primary data using the Statistica Software (version 12) package. The data analysis consisted of five distinct phases and the empirical results will be presented as follow:

- The objective of the first phase of data analysis was to assess the internal consistency reliability of the measuring instrument. This was done by calculating its Cronbach's alpha values. The Cronbach's alpha values considered as a cut-off point in this study are 0.7 and above.
- The second phase of the statistical analysis evaluated the descriptive analysis of variables. The descriptive analysis enabled the researcher to summarise a large sum of data in a meaningful way by simply describing the basic features of the data in a study. The results from the descriptive analysis are presented using tables, figures and standard deviation values that provide simple summaries about the sample and the measures.
- The third phase of the statistical analysis evaluated the discriminant validity of the measuring instrument. The discriminant validity enabled to researcher to measure the constructs under consideration.
- The objective of the fourth phase was to test the hypothesised relationships using multiple regression analysis. Multiple regression analysis procedures were used to test the relevant hypotheses and to analyse the relationship between a single dependent variable and several independent variables.
- The fifth phase of the statistical analysis is the correlation analysis. This phase utilised the Pearson correlation coefficients to assess the association between variables in this study. Moreover, Pearson's correlation coefficient (r) was used to measure the strength of the association between two variables.

Table 8.1 provides a summary of the abbreviated variables that will be utilised in the study.

Table 8.1: Abbreviations of variables

VARIABLE	ABBREVIATION
Migration	MI
Role considerations	RC
Health environment	HE
Job identification	JI
Resources	RES
Work conditions	WC
Administrative support	ADM
Commitment to safety and health measures	CSH
Employee retention	ER
Organisational performance	OP

8.3.1 Internal reliability of the Instruments

The consistency of collecting, analysing and interpreting data is referred to as internal reliability (Zohrabi, 2013:261). Internal reliability might be obtained when another researcher, upon reanalysing the data, comes to the same conclusions as the original researcher. The Cronbach's Alpha coefficient is the most widely employed objective measure of reliability, and the STATISTICA (Version 10) computer program was utilised to evaluate the internal validity and consistency of the measuring instrument used in this study.

Cronbach's alpha values between 0.79 and 0.91 are the results displayed in Table 8.2. Cronbach's alpha was calculated to assess the internal consistency of each of the factors. In this study, 0.70 was considered to represent an adequate standard of reliability. Therefore, according to Fidel (2009:647), and Halsey, Curran-Everett, Vowler and Drummond (2015:179) values between 0.7 and 0.8 are good, and values between 0.8 and 0.9 are great, while values above 0.9 are excellent.

Table 8.2: Cronbach's alpha values of measuring instruments: Theoretical model

Measuring instrument	Initial value	Final value
Migration (MI)	0.79	0.79
Role considerations (RC)	0.95	0.95
Health environment (HE)	0.86	0.86
Job identification (JI)	0.89	0.89
Resources (RES)	0.85	0.85
Work conditions (WC)	0.84	0.84
Administrative support (ADM)	0.80	0.80
Commitment to safety and health measures (CSH)	0.93	0.93
Employee retention (ER)	0.88	0.88
Organisational performance (OP)	0.91	0.91

Source: Author's calculations

8.3.2 Validity of the measuring Instrument

Validity is the extent to which an instrument measures what it is supposed to measure and performs as it is designed to perform (Drost, 2011:106). Validity is defined as the degree to which an instrument succeeds in measuring and performing as it is designed to (Alumran, Hou, Sun, Yousef & Hurst, 2014:2). Drost (2011:106) specifies that there are four kinds of validity to consider: statistical conclusion validity, internal validity, construct validity and external validity. This study utilised construct validity to assess the correctness of the measuring instrument.

Construct validity refers to how well a test tool measures the construct that it was designed to measure (Andale, 2014:231). Convergent and discriminant validity are considered subtypes of construct validity. Convergent validity is the degree to which the operational definition is correlated with variables that one would expect it to be correlated with. Discriminant validity occurs when constructs that are expected not to relate do not (Altermatt, 2007:479; Tavakoli, 2012:176).

Furthermore, this study utilised Exploratory Factor Analysis (EFA) to examine the factorial validity of the items of the constructs. The 89 items were submitted to an

exploratory factor analysis with principle axis factoring extraction and varimax rotation. According to Hair, Anderson, Tathan and Black (1998) and Abdullah, Spickett, Ruchev and Dhaliwal (2009), the minimum level of factor loadings must be more than $\pm .30$, loadings of $\pm .40$ are significant and loadings of $\pm .50$ or greater are most significant. However, sample size plays a major role in determining significant factor loadings. According to Hair *et al.* (1998), factor loadings of $.30$ are considered significant for sample sizes of 350 or greater. In this study, loadings were greater than 0.4 (Hee & Abidin, 2016:74; Clark, Thomas, Khattab & Carr, 2013:145; Hair, Black, Babin & Anderson, 2010:56). The factor loadings of 0.4 and above were considered significant in this study. In addition, 3 items loading per factor is considered a cut-off point, and is thus significant for further analysis of the empirical results in this study.

8.3.2.1 The employees' perceptions of the influences of employee commitment to the implementation of safety measures (CSH)

Table 8.3 shows that all seven items expected to measure 'job identification' (JI1, JI2, JI3, JI4, JI5, JI6 and JI7) and the three items (ADM2, ADM3 and ADM4) expected to measure 'administrative support', as well as the one item (RES3) that was expected to measure 'resources' loaded onto factor one (1) and are termed 'organisational support'. Two items (RES1 and RES2) meant to measure 'resources' and one item (ADM1) that was expected to measure 'administrative support' cross loaded and this led to the deletion of these items, and they were not used in subsequent analyses.

Table 8.3 indicates that all items expected to measure 'role considerations' (RC1 – RC10) and one of the seven items that were expected to measure 'migration' (MI7) as well as one item (RES4) that was expected to measure 'resources' loaded on factor two (2). These thirteen items were regarded as a measurement of 'role considerations.' Table 8.3 further indicates that seven of the ten items (HE3, HE4, H5, HE6, HE7, HE8 and HE9) expected to measure 'health environment' loaded on factor three (3) and are termed 'health environment'. One item (HE10) could not load to a significant extent ($p < 0.4$) and this led to the deletion of this item, and it was not used in subsequent analyses. According to Table 8.3, two items (HE1 and HE2) loaded onto factor seven (7). Consequently, all items that loaded onto factor 7 were deleted on the basis of lack of sufficient validity.

Table 8.3 shows that four of the seven items expected to measure ‘migration’ (MI1, MI2, MI4 and MI5) loaded onto factor four (4) and are termed ‘migration’. One item (MI6) meant to measure ‘migration’ did not load to a significant extent ($p < 0.04$) and was deleted on the basis of lack of sufficient validity. Table 8.3 shows that two of the seven items (RES5 and RES6) expected to measure ‘resources’ and three of the ten items (WC1, WC3, and WC4) expected to measure ‘work conditions’ loaded onto factor five (5) and are termed ‘work environment’. Furthermore, Table 8.3 indicates that six of the ten items (WC5, WC6, WC7, WC8, WC9 and WC10) expected to measure ‘work conditions’ loaded onto factor six (6) and are termed ‘work conditions’. One item (WC2) could not load, hence, this item was not considered for further analysis and was deleted.

Table 8.3: Factor loadings: Employees’ views of migration, role considerations, health environment, job identification, resources, working conditions and administrative support

Items	Factor(1)	Factor(2)	Factor(3)	Factor(4)	Factor(5)	Factor(6)	Factor(7)
	Job identification	Role considerations	Health environment	Migration	Work conditions – related to enabling environment	Work conditions-related to work benefits	N/A
J13	0.699627	0.181001	0.321410	0.134168	-0.029021	0.253669	-0.040363
J12	0.676045	0.149270	0.305738	0.150590	0.032037	0.190647	0.031759
J16	0.669105	0.109623	0.120193	-0.073828	0.342694	0.005847	0.099432
J11	0.659977	0.160129	0.286331	0.159142	-0.006592	0.174490	0.073691
J17	0.657916	0.035139	0.051472	0.025517	0.340071	0.045520	0.130938
J15	0.655545	0.088925	0.264344	-0.005780	0.152758	0.123364	0.184396
J14	0.653587	0.148241	0.318150	-0.020752	0.124582	0.180502	0.067562
ADM2	0.539434	0.049270	0.019406	0.096210	0.156524	0.275230	0.020461
ADM3	0.532280	0.071903	0.001468	0.074006	0.206127	0.228593	-0.010611
ADM1	0.486667	0.028138	0.037572	0.169811	0.165172	0.419878	0.163338
RES3	0.474702	0.318308	0.133306	0.025748	0.208005	0.261498	0.021449
RES1	0.456171	0.339761	0.179033	-0.045008	0.203896	0.407280	-0.006113
ADM4	0.439206	0.321388	0.070472	-0.180611	0.315850	0.249671	-0.200613
RES2	0.433286	0.347214	0.204831	-0.147779	0.267144	0.409653	-0.150883
RC8	0.145515	0.835301	0.150919	0.046846	0.036333	0.232428	-0.072616
RC9	0.151085	0.801523	0.185536	0.035744	0.024029	0.210903	-0.067916
RC6	0.124650	0.799552	0.099378	0.118047	0.063922	0.224286	0.006656
RC3	0.023076	0.796711	-0.004076	0.121214	0.037908	-0.068736	0.197830
RC4	0.061494	0.788346	-0.043904	0.060914	0.101895	-0.028862	0.182329
RC2	0.050515	0.786023	0.047933	0.150355	0.085131	-0.025279	0.109148
RC10	0.139522	0.776231	0.175472	-0.025626	0.054875	0.198917	-0.100535
RC5	0.123356	0.773430	0.062584	0.122007	-0.043689	0.089998	0.148849
RC1	0.008211	0.739329	0.115530	0.265744	-0.016090	0.088596	0.101362
MI7	0.122745	0.544848	0.128495	0.302383	0.136440	0.072505	-0.166607

Items	Factor(1)	Factor(2)	Factor(3)	Factor(4)	Factor(5)	Factor(6)	Factor(7)
	Job identification	Role considerations	Health environment	Migration	Work conditions – related to enabling environment	Work conditions-related to work benefits	N/A
RES4	0.322013	0.448498	0.206807	-0.183998	0.244114	0.364402	-0.123593
MI3	0.044833	0.415813	0.103466	0.602262	0.080712	-0.052736	-0.064598
HE7	0.181171	0.053347	0.759887	0.079166	0.153091	0.107336	0.077938
HE8	0.228143	0.050073	0.724224	0.075958	0.099721	0.067221	0.167011
HE4	0.250928	0.192847	0.671515	0.063902	-0.010359	0.273691	-0.017110
HE9	0.111394	0.087529	0.635610	0.141902	0.147743	0.109956	0.256973
HE5	0.246529	0.294148	0.618082	-0.032194	0.115461	0.188537	-0.113481
HE3	0.204540	0.384776	0.574685	-0.021774	-0.039408	0.354643	0.088959
HE6	0.276847	0.197548	0.566066	-0.052238	0.348650	-0.074805	-0.016495
MI2	0.002538	0.245267	-0.009323	0.736380	-0.019348	0.000841	0.119032
MI1	0.060499	0.319840	0.026199	0.674475	-0.119034	0.093912	0.065526
MI4	0.197613	0.130028	0.201314	0.525206	0.266218	0.022767	-0.176239
MI5	0.150438	0.299033	0.162094	0.436930	-0.009039	0.283216	-0.247973
RES5	0.309852	0.129365	0.129868	-0.053255	0.675538	0.130263	-0.073342
RES6	0.333087	0.088635	0.173765	-0.041799	0.634386	0.234368	-0.143729
WC3	0.175921	0.075184	0.163695	0.173937	0.585869	0.194493	0.219243
WC1	0.121078	0.026767	0.138775	0.093771	0.509473	0.392547	0.181883
WC4	0.003813	0.027624	0.049114	0.088310	0.437938	0.030313	0.302093
WC2	0.193821	0.220402	0.183140	-0.032217	0.416051	0.489698	-0.038666
WC8	0.276916	0.370308	0.192958	0.019486	0.021208	0.665705	0.014997
WC7	0.176194	0.273170	0.137133	0.044959	0.150901	0.656122	-0.099979
WC9	0.250993	0.308424	0.115825	-0.014535	0.129841	0.649292	0.119821
WC10	0.249262	0.186843	0.176457	0.033007	0.245424	0.579234	0.061301
WC6	0.186729	0.123471	0.188828	0.232341	0.104532	0.535681	0.113530
WC5	0.074105	-0.025585	0.178810	0.344128	0.320485	0.435488	0.201260
HE1	0.222256	0.333902	0.193382	0.074747	0.015144	0.010988	0.657105
HE2	0.171701	0.359554	0.346206	-0.052666	0.005051	0.132809	0.604871
RES7	0.220310	0.128583	0.125210	0.032084	0.321148	0.338026	-0.011860
ADM5	0.371002	0.288025	0.159374	-0.087454	0.262474	0.251218	-0.031074
HE10	0.294818	0.212696	0.332918	-0.055422	0.136549	0.068366	-0.159507
MI6	0.336009	0.299159	0.220818	0.256804	0.020297	0.347979	-0.223003
Expl.Var	6.403261	9.064401	4.470635	2.627438	3.255868	4.618083	1.737940
Prp.Totl	0.114344	0.161864	0.079833	0.046919	0.058141	0.082466	0.031035

Loadings greater than 0.4 were considered significant

Table 8.3, indicates that, as a result of the comprehensive exploratory factor analysis, all items expected to measure the variables of ‘resources’ and ‘working conditions’ are not valid enough for the respondents to interpret as expected, hence, these items were interpreted and perceived by respondents as measures of a single construct termed ‘work environment’. Table 8.3 further reveals that the independent variable

'administrative support' has been deleted as the factor loadings of the items of this variable were insignificant.

8.3.2.2 Views of employees regarding commitment to the implementation of safety measures (CSH) in health institutions

The empirical results presented in Table 8.4, show that respondents perceived 'employee commitment to implement safety measures' as a two-dimensional variable. This means that the respondents viewed this construct as comprising of a measurement related to '*safety compliance*' on the one hand and '*safety management*' on the other. Nine (CSH1, CSH2, CSH4, CSH5, SC6, SC7, SC8, SC9, and SC10) of the twenty items that were expected to measure 'employee commitment to the implementation of safety measures' loaded onto factor one (1); this is termed '*employee commitment related to safety compliance*'. Six items (CSH15, CSH16, CSH17, CSH18, CSH19 and CSH20) loaded onto factor two (2), and this is termed '*employee commitment related to safety management*'. Furthermore, Table 8.4 shows that one item (CSH3) did not load and four items (CSH11, CSH12, CSH13 and CSH14) cross loaded; they were expected to measure 'employee commitment to implement safety measures'. All five items are deleted and are, therefore, not considered for further analysis.

Table 8.4: Factor loadings: Employees' views of commitment to the implementation of safety measures (CSH) in health institutions

Items	Factor (1)	Factor (2)
	Safety compliance	Safety management
CSH1	0.527718	0.308929
CSH2	0.592407	0.304396
CSH3	0.396724	0.104025
CSH4	0.408932	0.172376
CSH5	0.565283	0.236283
CSH6	0.713000	0.159534
CSH7	0.731165	0.242740
CSH8	0.633662	0.304928
CSH9	0.710026	0.257728
CSH10	0.718068	0.353214
CSH11	0.654531	0.408560
CSH12	0.599969	0.486826
CSH13	0.589531	0.512645
CSH14	0.448187	0.593491
CSH15	0.238949	0.775548
CSH16	0.226205	0.784779
CSH17	0.207590	0.785364
CSH18	0.254230	0.764941
CSH19	0.192343	0.769194
CSH20	0.267301	0.689141
Expl. Var	5.399077	5.157812
Prp. Total	0.269954	0.257891

Loadings greater than 0.4 were considered significant

8.3.2.3 Views of employees towards outcomes of the commitment to implement safety measures (CSH)

Table 8.5 indicates that five of the eight items (OP1, OP2, OP3, OP4 and OP5) that were expected to measure 'organisational performance' loaded onto factor one (1). All five items that were expected to measure 'employee retention' (ER1, ER2, ER3, ER4 and ER5) loaded onto factor two (2). These five items are termed 'employee retention'. Table 8.5 further indicates that three items (OP6, OP7 and OP8) cross loaded and were thus considered unacceptable for further analysis.

Table 8.5: Factor loadings: Outcomes of commitment to the implementation of safety measures (CSH) in health institutions

Items	Factor 1	Factor 2
	Organisational performance	Employee retention
OP1	0.712987	0.266953
OP2	0.782886	0.277893
OP3	0.772796	0.253510
OP4	0.741217	0.339585
OP5	0.714742	0.293454
OP6	0.669078	0.401003
OP7	0.649802	0.408908
OP8	0.612997	0.526589
ER1	0.331661	0.764829
ER2	0.336495	0.814007
ER3	0.303196	0.825859
ER4	0.273072	0.798180
ER5	0.153012	0.664647
Expl. Var	4.437543	4.028005
Prp. Total	0.341349	0.309847

Loadings greater than 0.4 were considered significant

As a result of the discriminant validity assessment with the exploratory factor analysis, some items were deleted and new variables were formed. This means that the reliability of the new and adapted variables had to be re-evaluated.

8.3.3 Cronbach's alpha values of latent variables based on the results of factor analysis: Theoretical model

Table 8.6 indicates that all Cronbach reliability coefficients are above 0.70, which is regarded as acceptable for the purpose of this study. This indicates that all instruments have a fair reliability of 0.70 and above (Kimberlin & Winterstein, 2008:2277; Tavakol & Dennick, 2011:54). In addition, the value of Cronbach alphas is affected by the number of test items, item inter-relatedness and dimensionality. Thus, 0.70 to 0.95 are acceptable values of Cronbach alpha. The study retains MI, RC, HE, JI, WE, CSH, ER and OP, since their Cronbach alphas were above the cut-off point. These results are summarised in Table 8.6 by means of an empirical factor structure used for regression analysis.

Table 8.6: Factor loadings: Cronbach's alpha coefficients of the latent variables based on the comprehensive exploratory factor analysis

VARIABLES	INDIVIDUAL ITEMS	A
Migration(MI)	MI1, MI2, MI4, M15	0.70
Role considerations (RC)	RC1, RC2, RC3, RC4, RC5, RC6, RC7, RC8, RC9, RC10, M13, M17, RES4	0.94
Health environment (HE)	HE3, HE4, HE5, HE6, HE7, HE8, HE9	0.87
Organisational support (OS)	JI1, JI2, JI3, JI4, JI5, JI6, JI7, ADM2, ADM3, ADM4, RES3	0.90
Work conditions related to an enabling environment (WC-EE)(1)	RES5, RES6, WC1, WC3, WC4	0.73
Work conditions related to benefits (WC-WB)(2)	WC5, WC6, WC7, WC8, WC9, WC10	0.83
Commitment to implementation of safety measures related to safety compliance (CSH-SC)	CSH1, CSH2, CSH4, CSH5, CSH6, CSH7, CSH8, CSH9, CSH10	0.86
Commitment to implementation of safety measures related to safety management (CSH-SM)	CSH15, CSH16, CSH17, CSH18, CSH19, CSH20	0.89
Employee retention (ER)	ER1, ER2, ER3, ER4, ER5	0.88
Organisational performance (OP)	OP1, OP2, OP3, OP4, OP5	0.88

8.3.4 Descriptive statistical analysis

In summary, MI, RC, HE, JI, WC, CSH, OP and ER were retained in this study, as a result of their Cronbach's alphas, which were above the cut-off point. However, ADM and RES have been deleted, as the factor loadings of the items of these variables were below the cut-off point, and thus insignificant for further analysis. The descriptive statistics of each variable that was measured on a seven point Likert scale is depicted in Table 8.7. Options 6 or 7 on the scale represented the degree to which respondents agreed with the statements on variables. Options 5 or 3 represented the degree to which respondents somewhat agreed or somewhat disagreed, respectively. The degree to which respondents disagreed with the statements was represented by Options 1 or 2. Option 4 indicated that the respondents were neutral.

Table 8.7: Descriptive statistics for each variable: general sample response per category

VARIABLE	MEAN	STANDARD DEVIATION
MI	5.36	1.262
RC	4.60	1.638
HE	5.22	1.237
OS	5.28	1.126
WC1-EE	5.53	0.951
WC2-B	5.23	1.265
CSH-C	5.79	0.896
CSH-M	5.72	1.050
ER	5.30	1.276
OP	5.47	1.118

Employee commitment to the implementation of safety measures in public healthcare sector institutions was measured by ten factors, as shown in Table 8.7. The survey results indicated that employee commitment to the implementation of safety measures related to safety compliance and safety management in public healthcare sector institutions were between the ranges of 4.44 to 5.79. Thus, the range indicates that the respondents agree, except for role considerations for which some respondents held some neutral perceptions regarding their commitment to the implementation of safety measure.

The descriptive statistics illustrated in Table 8.7 indicate that the respondents, to some extent, perceived role considerations (with specific reference to role conflict and role ambiguity) as clear, with a mean score of 4.60 and standard deviation of 1.638. This score implies that the respondents are more committed when they are provided with clarity regarding what their clinical responsibilities entail and when clear clinical orders, planned goals and objectives relevant to their daily job-related activities exist.

Table 8.7 indicates that respondents agreed that migration (mean score: 5.36), health environment (mean score: 5.22), organisational support (mean score: 5.28), work conditions related to an enabling environment (mean score: 5.53) and work conditions related to employee benefits (mean score: 5.23) improve employee commitment to the implementation of safety measures in public health institutions.

Table 8.7 further indicates that respondents perceived employee commitment to the implementation of safety measures related to safety compliance (mean score: 5.79) and safety management (mean score: 5.72) in health institutions as their responsibility. This implies that the respondents comply with all safety and health standards and accept responsibility for their own safety and health in the healthcare institutions. Furthermore, the respondents accept the responsibility of safety management by ensuring that every task/job they perform is done safely and with no adverse health consequences. Table 8.7 shows that respondents perceived employee retention (mean score: 5.30) and organizational performance (mean score: 5.47) as highly influenced by employee commitment to safety compliance and safety management regarding the implementation of safety measures in health institutions.

Table 8.8 summarises the empirical factor structure of items that are regarded as measures of individual independent and dependent variables in the theoretical model, following the exploratory factor analyses. Thus, the original theoretical model had to be adapted.

Table 8.8: Empirical factor structure: Influences and outcomes of employee commitment to the implementation of safety measures

VARIABLES	INDIVIDUAL ITEMS
Migration(MI)	MI1, MI2, MI4, M15
Role considerations (RC)	RC1, RC2, RC3, RC4, RC5, RC6, RC7, RC8, RC9, RC10, M13, M17, RES4
Health environment (HE)	HE3, HE4, HE5, HE6, HE7, HE8, HE9
Organisational support (OS)	J11, J12, J13, J14, J15, J16, J17, ADM2, ADM3, ADM4, RES3
Work conditions related to an enabling environment (WC1-EE)	RES5, RES6, WC1, WC3, WC4
Work conditions related to benefits (WC2-WB)	WC5, WC6, WC7, WC8, WC9, WC10
Commitment to implementation of safety measures related to safety compliance (CSH1-SC)	CSH1, CSH2, CSH4, CSH5, CSH6, CSH7, CSH8, CSH9, CSH10
Commitment to implementation of safety measures related to safety management (CSH2-SM)	CSH15, CSH16, CSH17, CSH18, CSH19, CSH20
Employee retention (ER)	ER1, ER2, ER3, ER4, ER5
Organisational performance (OP)	OP1, OP2, OP3, OP4, OP5

As a result of these changes in the variables, the original hypotheses had to be reformulated and the theoretical model had to be adapted. Figure 8.2(a) and Figure 8.2(b) show the adapted model of employee views regarding commitment to the implementation of safety measures (CSH) in public health institutions.

Figure 8.2(a): The adapted model of the relationships among variables based on employees' views regarding CSH related to safety compliance

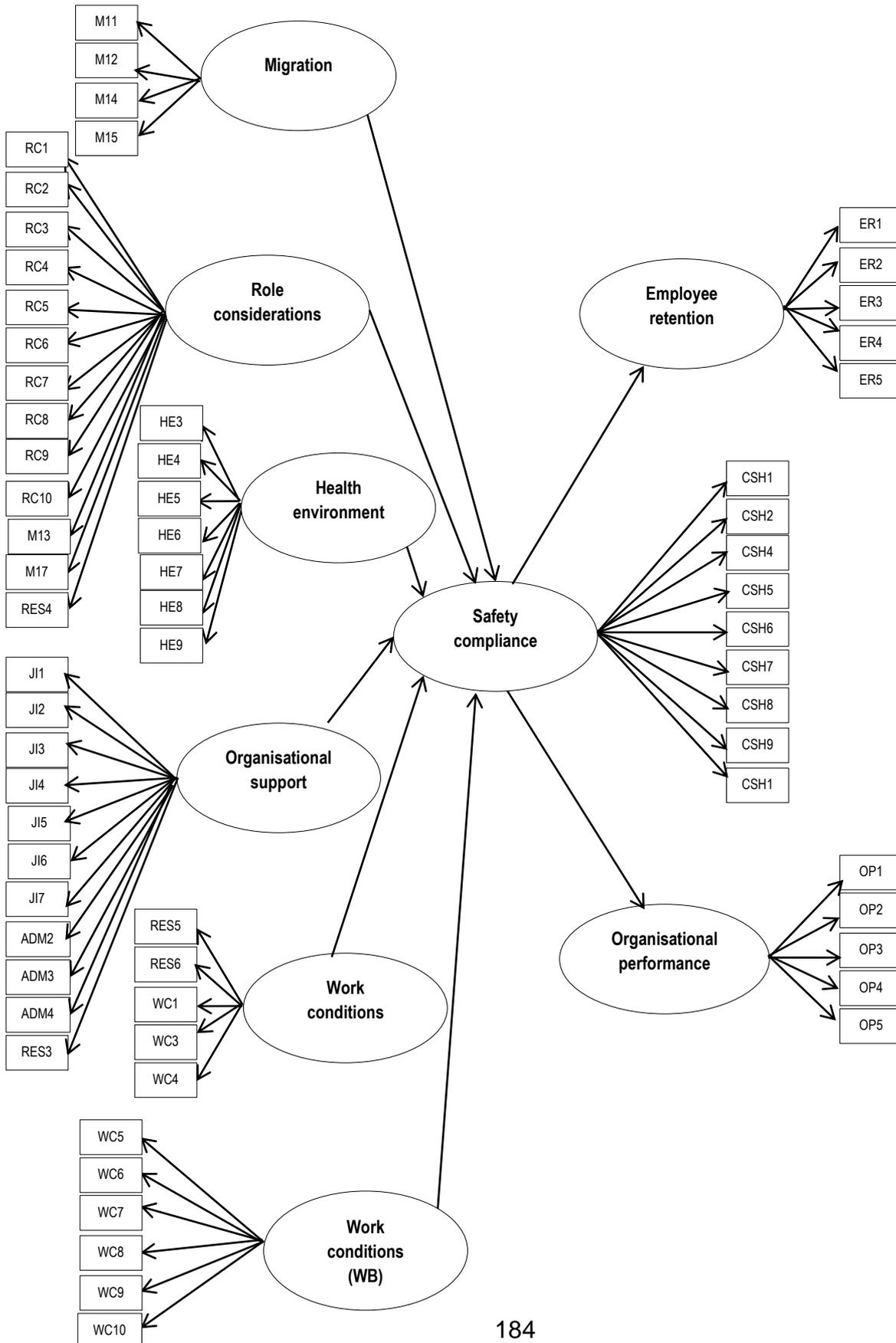
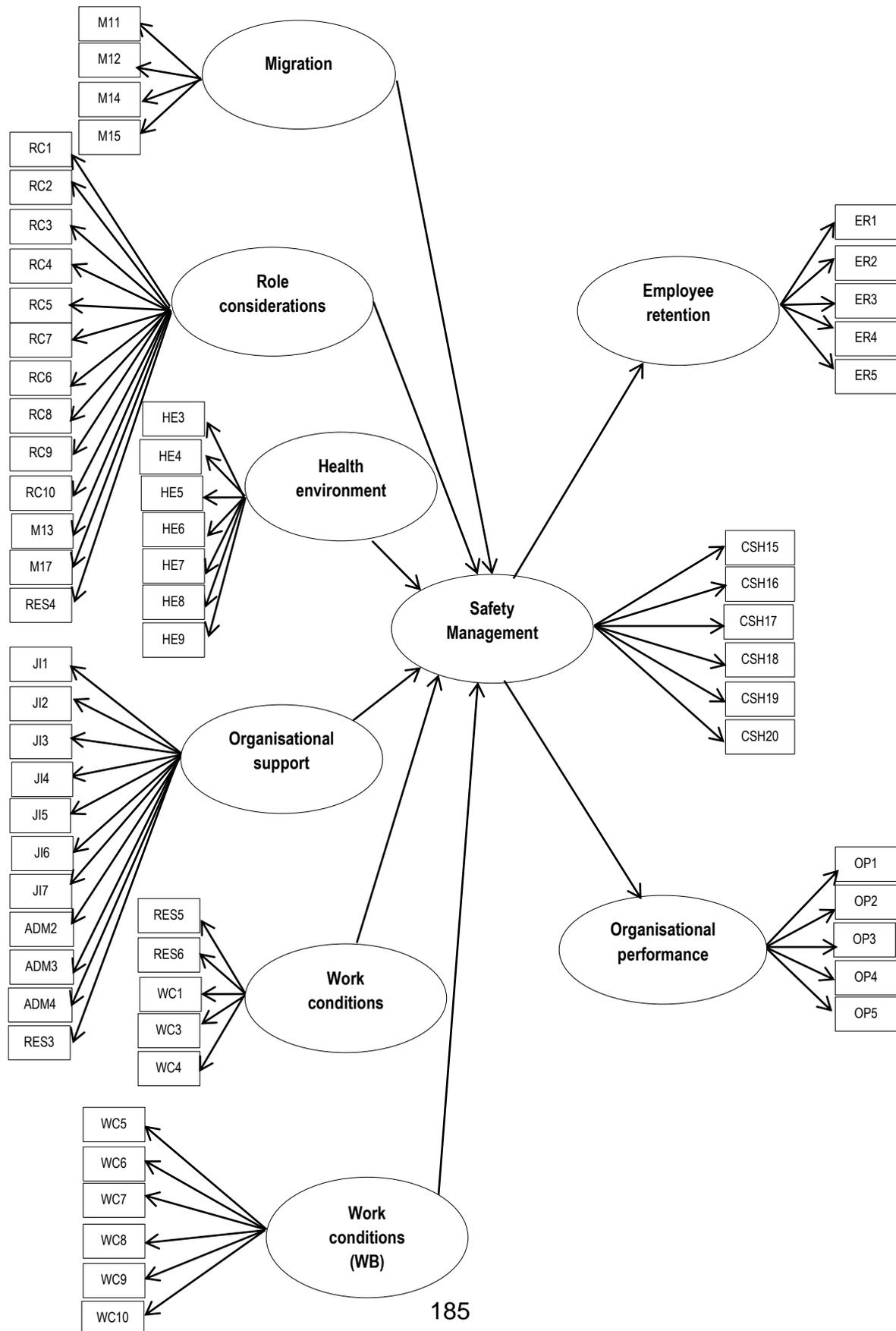


Figure 8.2(b): The adapted model of the relationships among variables based on employees' views regarding CSH related to safety management



8.3.5 Reformulation of hypotheses

The hypotheses that were tested had to be reformulated as a result of the formulation of the adapted model.

The hypotheses subjected to empirical verification (Figure 8.3a) were:

H¹: There is a relationship between migration and employee commitment to implement safety measures.

H¹ is modified into H^{1.1}

H^{1.1}: There is a relationship between migration and employee commitment to implement safety measures related to safety compliance.

H²: There is a relationship between role considerations (as measured by role conflict and role ambiguity) and employee commitment to implement safety measures.

H² is modified into H^{2.1}

H^{2.1}: There is a relationship between role considerations (as measured by role conflict and role ambiguity) and employee commitment to implement safety measures related to safety compliance.

H³: There is a relationship between health environment and employee commitment to implement safety measures.

H³ is modified into H^{3.1}

H^{3.1}: There is a relationship between health environment and employee commitment to implement safety measures related to safety compliance.

H⁴: There is a relationship between job identification (as measured by professional registration and job specification) and employee commitment to implement safety measures.

H⁴ is modified into H^{4.1}

H^{4.1}: There is a relationship between organisational support and employee commitment to implement safety measures related to safety compliance.

H⁶: There is a relationship between work conditions and employee commitment to implement safety measures.

H⁶ is modified into H^{6.1} and H^{6.2}

H^{6.1}: There is a relationship between work conditions related to an enabling environment and employee commitment to implement safety measures related to safety compliance.

H^{6.2}: There is a relationship between work conditions related to benefits and employee commitment to implement safety measures related to safety compliance.

H⁸: There is a relationship between employee commitment to implement safety measures and employee retention.

H⁸ is modified into H^{8.1}

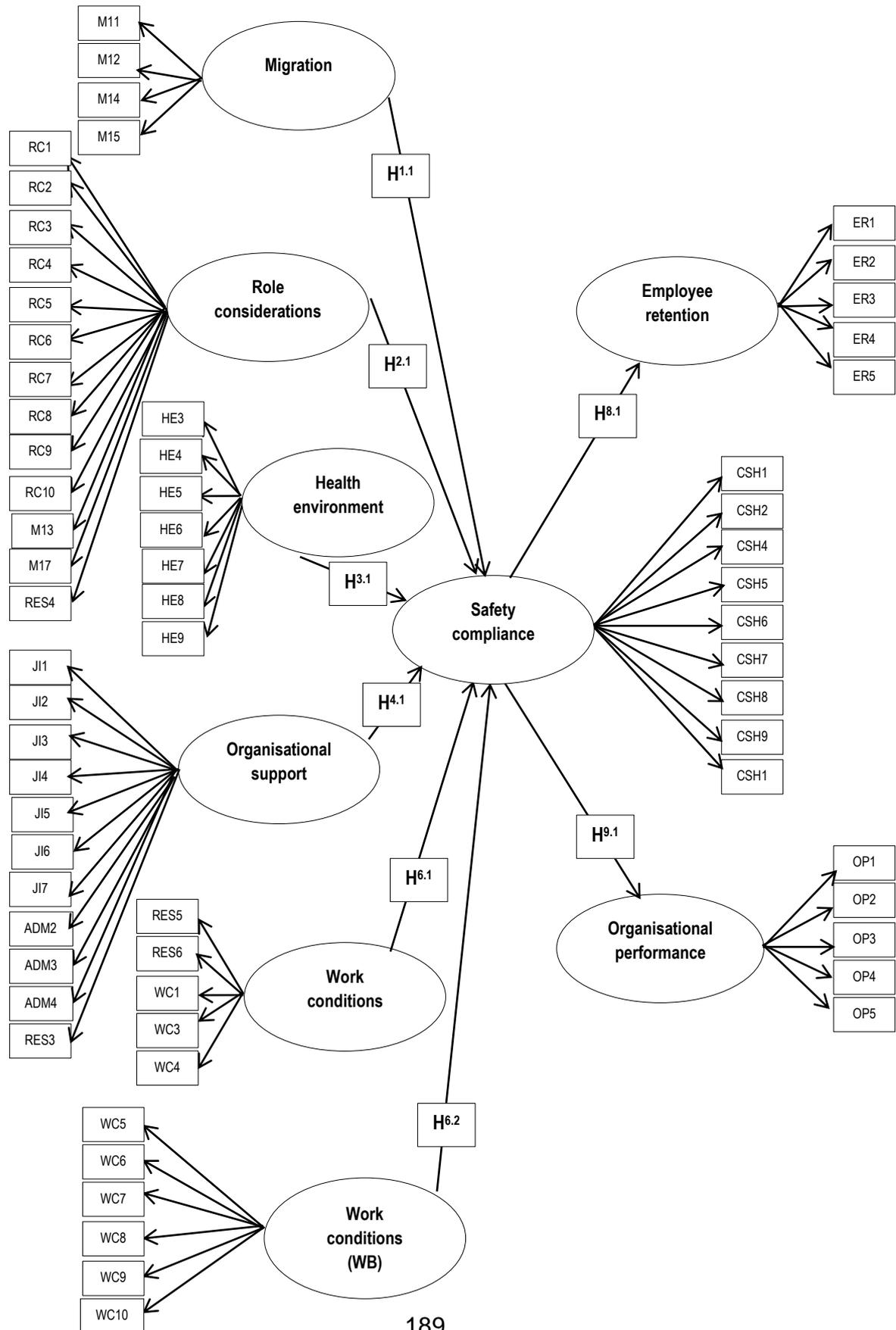
H^{8.1}: There is a relationship between employee commitment to implement safety measures related to safety compliance and employee retention.

H⁹: There is a relationship between employee commitment to implement safety measures and organisational performance.

H⁹ is modified into H^{9.1}

H^{9.1}: There is a relationship between employee commitment to implement safety measures related to safety compliance and organisational performance.

Figure 8.3(a): The hypothesised model of views of employee commitment to implement safety measures related to safety compliance (CSH) 1



The hypotheses subjected to empirical verification (Figure 8.3b) were:

H¹: There is a relationship between migration and employee commitment to implement safety measures.

H¹ is modified into H¹⁰

H¹⁰: There is a relationship between migration and employee commitment to implement safety measures related to safety management.

H²: There is a relationship between role considerations (as measured by role conflict and role ambiguity) and employee commitment to implement safety measures.

H² is modified into H¹¹

H¹¹: There is a relationship between role considerations (as measured by role conflict and role ambiguity) and employee commitment to implement safety measures related to safety management.

H³: There is a relationship between health environment and employee commitment to implement safety measures.

H³ is modified into H¹²

H¹²: There is a relationship between health environment and employee commitment to implement safety measures related to safety management.

H⁴: There is a relationship between job identification (as measured by professional registration and job specification) and employee commitment to implement safety measures.

H⁴ is modified into H¹³

H¹³: There is a relationship between organisational support and employee commitment to implement safety measures related to safety management.

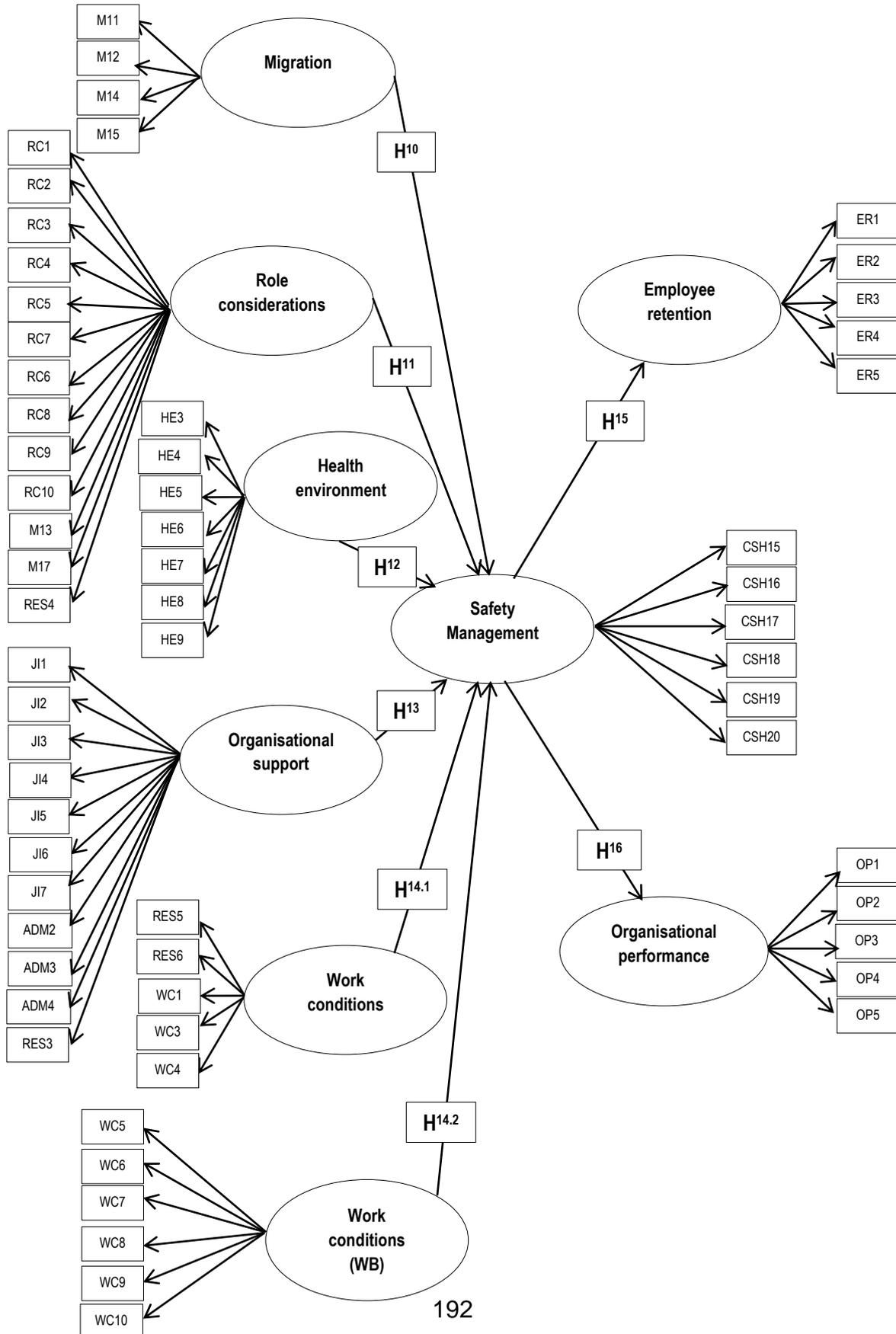
H⁶: There is a relationship between work conditions and employee commitment to implement safety measures.

H⁶ is modified into H^{14.1} and H^{14.2}

H^{14.1}: There is a relationship between work conditions related to an enabling environment and employee commitment to implement safety measures related to safety management.

H^{14.2}: There is a relationship between work conditions related to benefits and employee commitment to implement safety measures related to safety management.

Figure 8.3(b): The hypothesised model of employees' views of commitment to the implementation of safety measures related to management



The items that were expected to measure the three variables, namely, Job Identification (JI), Resources (RES), and Administrative Support (ADM) did not load as individual factors. Therefore, the three hypotheses, H⁴, H⁵ and H⁷ were not tested in the modified model as Figure 8.2 did not include the JI, RES and ADM variables. The hypothesised relationships are assessed in a modified theoretical model in this study.

8.4 REGRESSION ANALYSIS

Ibrahim, Daut, Irwan, Irwanto, Gomesh and Farhana (2012:1405) define regression analysis as a statistical process for estimating the relationship among variables. The techniques for modelling and analysing several variables are comprised in regression analysis, when the focus is on the relationship between a dependent variable and one or more independent variables. Moreover, it assists an individual in understanding how the typical value of the dependent variable changes when any one of the independent variables is varied, and the other independent variables are fixed.

Furthermore, Erillis and Alakus (2014:71) describe regression analysis as the expression of a mean relationship between dependent and independent variables in the form of a mathematical function. Furthermore, there is a linear relationship between independent and dependent variables. Linear regression and multiple linear regression are two basic kinds of regression. Multiple regression is utilised by researchers for complicated data analysis (Nimon & Oswald, 2013:650; Uyanik & Guler, 2013:234).

An approach for modelling the relationship between a scalar dependent variable denoted as y and one or more explanatory variables (or independent variables) denoted as x is termed linear regression. It is also the most basic and commonly utilized predictive analysis. The relationship between two variables is modelled by linear regression by fitting a linear equation to observed data (Alexopoulos, 2010:23). One variable is considered to be a dependent variable, and the other is considered to be an explanatory variable. Linear regression is executed either to study the relationship between the response variable and predictor variable, or to predict the response variable based on the predictor variables (MacKinnon, Fairchild & Fritz,

2007:1). The researcher sought to ascertain the casual effect of one variable on another. The regression analysis in this study was employed to assess the influence of the selected variables on employee commitment towards the implementation of safety measures in public health institutions, as depicted in Figure 8.3, in order to evaluate whether the identified variables applied a significant influence on employee commitment to the implementation of safety measures in public health institutions. The empirical factor structure, as summarised in Table 8.8, is therefore subjected to regression analysis.

8.4.1 The influence of employees' views on CSH related to safety compliance

Table 8.9 provides a summary of the influence of migration, role considerations, health environment, organisational support, work conditions related to an enabling environment and work conditions related to benefits of CSH related to safety compliance.

8.4.1.1 The influence of migration, role considerations, health environment, organisational support, work conditions related to an enabling environment and work conditions related to benefits of CSH related to safety compliance

In total, the R^2 of 0.299 explains the 30% of variability in the model is explained by the moderating variable (commitment to the implementation of safety measures related to safety compliance in health institutions), as shown in Table 8.9. Table 8.9 indicates that migration ($b = 0.108$, $p < 0.001$), health environment ($b = 0.075$, $p < 0.01$), organisational support ($b = 0.234$, $p < 0.001$), work conditions related to an enabling environment ($b = 0.179$, $p < 0.001$) and, to some extent, work conditions related to benefits ($b = 0.066$, $p < 0.01$) are positively related to commitment to the implementation of safety measures related to safety compliance in health institutions. This implies that an enabling work environment is more effective than work related benefits in promoting employee commitment in health institutions.

However, Table 8.9 shows that role considerations exerted a negative influence ($b = -0.127$, $p < 0.001$) on commitment to the implementation of safety measures in the health institutions. This implies that the respondents feel that they experience

substantial role ambiguity and role conflict as they embark on management roles, primarily as a result of inadequate role definition on their behalf, unethical challenges, and the lack of prior insight into managerial roles. Therefore, role ambiguity and role conflict have an impact on health employees' commitment to the implementation of safety measures in public health institutions.

Table 8.9: Regression analysis: The effect of Migration (MI), Role considerations (RC), Health environment (HE), Organisational support (OS), Work conditions related to an enabling environment (WC1-EE) and Work conditions (WC2-B) on CSH related to safety compliance (CSH-C)

REGRESSION SUMMARY FOR DEPENDENT VARIABLE: COMMITMENT TO IMPLEMENT SAFETY AND HEALTH MEASURES RELATED TO SAFETY COMPLIANCE (CSH 1)						
Parameter	Beta b*	Std. Error	B	Std. Error	t-value	p-value
Migration (MI)	0.152	0.030	0.108	0.022	5.006	0.001***
Role Considerations (RC)	-0.232	0.033	-0.127	0.018	-6.962	0.001***
Health Environment (HE)	0.104	0.035	0.075	0.025	2.963	0.001***
Organisational support (OS)	0.294	0.040	0.234	0.032	7.279	0.001***
Enabling environment (WC 1-EE)	0.190	0.035	0.179	0.033	5.472	0.001***
Benefits (WC-2B)	0.093	0.038	0.066	0.027	2.476	0.01**
R	R²	F	Std Error of estimate		P	
55%	0.29927624	72.606	0.75208		p<	
.00000						
* = p < 0.05						
** = p < 0.01						
*** = p < 0.001						

8.4.2 The influence of employees' views on CSH related to safety management

Table 8.10 provides a summary of the influences of migration, role considerations, health environment, organisational support, work conditions related to an enabling environment and work conditions related to the benefits of CSH related to safety management.

8.4.2.1 The influences of migration, role considerations, health environment, organisational support, work conditions related to an enabling environment and work conditions related to benefits of CSH related to safety management

Table 8.10 indicates that migration ($b = 0.087$, $p < 0.001$), organisational support ($b = 0.342$, $p < 0.001$), work conditions related to an enabling environment ($b = 0.270$, $p < 0.001$) and, to some extent, work conditions related to benefits ($b = 0.066$, $p < 0.01$) are positively related to commitment to the implementation of safety measures related to safety management in the health institutions. This indicates that an enabling environment is effective in improving employee commitment in the health institutions, more so than the work benefits they receive. In total, the R^2 of 0.347 explains the 35% of variability in the model is explained by the moderating variable (commitment to the implementation of safety measures related to safety management in the health institutions) as shown in Table 8.10. However, Table 8.10 further shows that health environment ($r = 0.015$, ns) does not exert significant influence on commitment to the implementation of safety measures related to management.

Table 8.10 further indicates that role considerations exerted a negative influence ($b = -0.107$, $p < 0.001$) on commitment to the implementation of safety measures in the healthcare sector institutions. This implies that the respondents feel that they experience substantial role ambiguity and role conflict as they embark on management roles, primarily because of inadequate role definition on their behalf, unethical challenges, and the lack of prior insight into manager roles. Therefore, role ambiguity and role conflict have a significant impact on health employees' commitment to the implementation of safety measures related to both safety compliance and safety management in public health institutions.

Table 8.10: Regression analysis: The effect of Migration (MI), Role considerations (RC), Health environment (HE), Organisational support (OS), Work conditions related to an enabling environment (WC1-EE) and Work conditions (WC2-B) on safety management

REGRESSION SUMMARY FOR DEPENDENT VARIABLE: COMMITMENT TO IMPLEMENT SAFETY AND HEALTH MEASURES RELATED TO SAFETY MANAGEMENT IN THE HEALTH INSTITUTIONS (CSH -M)						
Parameter	Beta b*	Std. Error	B	Std. Error	t-value	p-value
Migration (MI)	0.104	0.029	0.087	0.024	3.572	0.001***
Role Considerations (RC)	-0.166	0.032	-0.107	0.021	-5.169	0.001***
Health Environment (HE)	0.015	0.034	0.013	0.029	0.446	0.656
Organisational support (OS)	0.367	0.039	0.342	0.036	9.387	0.001***
Enabling environment (WC 1-EE)	0.245	0.034	0.270	0.037	7.285	0.001***
Benefits (WC-2B)	0.080	0.037	0.066	0.030	2.186	0.01*
R	R²	F	Std. Error of estimate		P	
59%	0.34670649	90.220	0.85078		p< .00000	
* = p < 0.05						
** = p < 0.01						
*** = p < 0.001						

8.4.3 The influence of commitment to the implementation of safety measures (CSH) on outcomes

Table 8.11 shows the effect of CSH related to safety compliance and CSH related to safety management on employee retention in health institutions. In addition, Table 8.12 further provides a summary of the effect of CSH related to safety compliance and CSH related to safety management on organisational performance in health institutions.

8.4.3.1 The effect of CSH related to safety compliance and CSH related to safety management in the health institutions on employee retention

Table 8.11 shows that the R² of 0.326 indicates that 33% of the variability in the model is explained by the dependent variable ‘employee retention’. This indicates that CSH related to safety compliance (b = 0.238, p < 0.001) and CSH related to safety management (b = 0.548, p < 0.001) have a positive relationship with employee retention.

Table 8.11: Regression analysis: the effect of CSH related to safety compliance and CSH related to safety management on employee retention

REGRESSION SUMMARY FOR DEPENDENT VARIABLE: EMPLOYEE RETENTION						
Parameter	Beta b*	Std. Error	B	Std. Error	t-value	p-value
CSH – Safety compliance	0.167	0.033	0.238	0.047	5.046	0.001** *
CSH – Safety management	0.450	0.033	0.548	0.040	13.595	0.001** *
R	R²	F	Std. Error of estimate		P	
57%	0.32608118	247.74	1.0488 .00000		p<0	
* = p < 0.05 ** = p < 0.01 *** = p < 0.001						

8.4.3.2 The effect of CSH related to safety compliance and CSH related to safety management in health institutions on organisational performance

Table 8.12 indicates that CSH related to safety compliance (b = 0.311, p < 0.001) and CSH related to safety management have a positive relationship with organisational performance (b = 0.458, p < 0.001). Table 8.12 also shows that the R² of 0.382 indicates that 38% of variability in the model is explained by organisational performance.

Table 8.12: Regression analysis: The influence of CSH related to safety compliance and CSH related to safety management on organisational performance

REGRESSION SUMMARY FOR DEPENDENT VARIABLE: ORGANISATIONAL PERFORMANCE						
Parameter	Beta b*	Std. Error	B	Std. Error	T value	P-value
CSH – Safety compliance	0.249	0.032	0.311	0.040	7.854	0.001***
CSH – Safety management	0.430	0.032	0.458	0.034	13.555	0.001***
R	R²	F	Std Error of estimate P			
62%	0.3823884	317.00	0.87985 p<0 .00000			
* = p < 0.05						
** = p < 0.01						
*** = p < 0.001						

The t-value of variables results determine the significance of the partial correlation of the variables reflected in the regression coefficient (Hair *et al.*, 2010:208). This indicates that the t-values reported in Table 8.9, Table 8.10 and Table 8.11 indicate that the higher the t-values, the stronger the impact of the independent variables and intervening variables on the dependent variables. Table 8.10 indicates that commitment to implement safety measures (CSH) has a strong effect on organisational performance (OP) with the highest t-value (t = 21.720), as well as a substantial effect on employee retention (ER) with a high value (t = 14.777), as indicated in Table 8.11, which indicates that both variables are statistically significant at the 0.001. Table 8.9 shows that migration has a strong effect with a t-value (t = 7.625) followed by a moderate impact of work environment with a t-value (t = 4.205) on employee commitment to implement safety measures (CSH).

Table 8.9 further indicates a moderate effect of job identification (measured by professional registration and job specification) with a t-value (4.197) followed by a moderate impact of health environment with a t-value (t = 3.853) on employee commitment to implement safety measures (CSH). Interestingly, Table 8.9 also reveals a strong negative impact of role considerations, measured by role conflict and role ambiguity, with a t-value (t = -2.617) on employee commitment to implement safety measures (CSH), and is statistically significant at 0.01.

8.5 CORRELATION ANALYSIS OF THE HYPOTHESES

This section presents the correlation analysis of the hypotheses.

8.5.1 Correlation analysis

Correlation analysis is a statistical method used to investigate a possible linear relationship between two quantitative, continuous variables (Kilic, 2012:191). It is utilized to measure the degree of linear association between two variables. This analysis is simple both to calculate and to interpret (Mukaka, 2012:69). The coefficient of correlation is presented as r and it may have values between (-) 1 and (+) 1 (Ratner, 2009:139). The larger the absolute value of the coefficient, the stronger the relationship between the variables. A good and accepted association is if the r coefficient is equal to or greater than 0.70. A perfect linear relationship is indicated by an absolute value of 1, and 0 indicates that there is no linear relationship between variables (Ratner, 2009:139). The direction of the relationship is indicated by the sign of the coefficient.

Table 8.13 indicates that there is a significant correlation of 0.225 between MI (migration) and employee commitment to implement safety measures related to safety compliance (CSH-C), and a moderate correlation of 0.210 between employee commitment to implement safety measures related to safety management (CSH-M). However, role considerations (RC) and employee commitment to implement safety measures related to safety compliance (CSH-C) have a significant low correlation with a coefficient of 0.126. Table 8.13 further reveals a low correlation between role considerations and employee commitment regarding the implementation of safety measures related to safety management with a coefficient of 0.172.

Table 8.13 reveals that Health environment (HE) is positively correlated to employee commitment to implement safety measures related to safety compliance (CSH-C) with a coefficient of 0.364 and to employee commitment regarding the implementation of safety measures related to safety management (CSH-M) with a coefficient of 0.351. According to Table 8.13, organisational support (OS) is positively correlated to CSH-C with a coefficient of 0.480 and to CSH-M with a coefficient 0.538. Table 8.13 further

reveals that work conditions related to an enabling environment (WC1-EE) is positively correlated to CSH-C with a coefficient of 0.418, and is positively correlated with employee commitment regarding the implementation of safety measures related to safety management (CSH-M) with a coefficient of 0.485. Furthermore, work conditions related to employee benefits (WC2-B) has a significant correlation with employee commitment to the implementation of safety measures related to safety compliance (CSH-C) with a coefficient of 0.376, and a positive correlation with employee commitment regarding safety measures related to safety management (CSH-M) with a coefficient of 0.404.

Table 8.13 indicates that organizational performance (OP) and CSH-C have a highly positive correlation with a coefficient of 0.521, and that CSH-C is positively correlated to employee retention (ER) with a coefficient of a 0.452. Table 8.13 further indicates that employee retention (ER) and employee commitment regarding the implementation of safety measures related to safety management (CSH-M) have significant positive correlation with a coefficient of a 0.556, and that CSH-M is significantly correlated with a coefficient of 0.588.

Table 8.13: Correlation matrix of variables of the study

Variable	MI	RC	HE	OS	WC1-EE	WC2-B	CSH-C	CSH-M	ER	OP
MI	1.000									
RC	0.465	1.000								
HE	0.302	0.450	1.000							
OS	0.285	0.434	0.615	1.000						
WC1-EE	0.160	0.337	0.446	0.627	1.000					
WC2-B	0.373	0.513	0.552	0.629	0.535	1.000				
CSH-C	0.225	0.126	0.364	0.480	0.418	0.376	1.000			
CSH-M	0.210	0.172	0.351	0.538	0.485	0.404	0.633	1.000		
ER	0.290	0.408	0.470	0.656	0.536	0.565	0.452	0.588	1.000	
OP	0.234	0.336	0.484	0.598	0.465	0.508	0.521	0.556	0.684	1.000
Migration (MI) Role Considerations (RC) Health Environment (HE) Organisational support (OS) Work conditions related to an enabling environment (WC1-EE) Work conditions related to benefits (WC2-B) Commitment to the implementation of safety measures related to safety compliance (CSH-C) Commitment to the implementation of safety measures related to safety management (CSH-M) Organisational Performance (OP) Employee Retention (ER)										

8.5.2 Findings on hypotheses

This section presents the findings on the hypotheses for safety compliance (a) and safety management (b).

(a) Findings on the first set of hypotheses:

H^{1.1}: There is a relationship between migration and employee commitment to implement safety measures related to safety compliance.

Tables 8.9 and 8.13 reported a statistically significant positive relationship between migration and employee commitment to implement safety measures related to safety compliance ($b = 0.108$, $p < 0.001$). This means that there is a significant positive

correlation between migration and employee commitment to implement safety measures related to safety compliance with a correlation coefficient of 0.225. Therefore $H^{1.1}$ is accepted.

H^{2.1}: There is a relationship between role considerations (as measured by role conflict and role ambiguity) and employee commitment to implement safety measures related to safety compliance.

Tables 8.9 and 8.13 reported a statistically significant negative relationship between role considerations and employee commitment to implement safety measures related to safety compliance ($b = -0.127$, $p < 0.001$). This means that there is a significant negative correlation between role considerations and employee commitment to implement safety measures related to safety compliance with a correlation coefficient of 0.126. $H^{2.1}$ is accepted.

H^{3.1}: There is a relationship between health environment and employee commitment to implement safety measures related to safety compliance.

Tables 8.9 and 8.13 reported a statistically significant positive relationship between the health environment and employee commitment to implement safety measures related to safety compliance ($b = 0.075$, $p < 0.01$). Therefore, there is a significant positive correlation between the health environment and employee commitment to implement safety measures related to safety compliance with a correlation coefficient of 0.364. $H^{3.1}$ is accepted.

H^{4.1}: There is a relationship between organisational support and employee commitment to implement safety measures related to safety compliance.

Tables 8.9 and 8.13 reported a statistically significant positive relationship between organisational support and employee commitment to implement safety measures related to safety compliance ($b = 0.234$, $p < 0.001$). This means that there is a significant positive correlation between organisational support and employee commitment to implement safety measures related to safety compliance with a correlation coefficient of 0.480. Therefore, $H^{4.1}$ is accepted.

H^{6.1}: There is a relationship between work conditions related to an enabling environment and employee commitment to implement safety measures related to safety compliance.

Tables 8.9 and 8.13 reported a statistically significant positive relationship between work conditions related to an enabling environment and employee commitment to implement safety measures related to safety compliance ($b = 0.179$, $p < 0.001$). This indicates a significant positive correlation between work conditions related to an enabling environment and employee commitment to implement safety measures related to safety compliance with a correlation coefficient of 0.418. *H^{6.1} is accepted.*

H^{6.2}: There is a relationship between work conditions related to benefits and employee commitment to implement safety measures related to safety compliance.

Tables 8.9 and 8.13 reported a statistically significant positive relationship between work conditions related to benefits and employee commitment to implement safety measures related to safety compliance ($b = 0.066$, $p < 0.01$). This indicates a significant positive correlation between work conditions related to benefits and employee commitment to implement safety measures related to safety compliance with a correlation coefficient of 0.376. *H^{6.2} is accepted.*

H^{8.1}: There is a relationship between employee commitment to implement safety measures related to safety compliance and employee retention.

Tables 8.11 and 8.13 revealed a statistically significant positive relationship between employee commitment to implement safety measures related to safety compliance and employee retention ($b = 0.238$, $p < 0.001$). This means that there is a significant positive correlation between employee commitment to implement safety measures related to safety compliance and employee retention in the health institutions with a correlation coefficient of 0.452. *H^{8.1} is accepted.*

H^{9.1}: There is a relationship between employee commitment to implement safety measures related to safety compliance and organisational performance.

Tables 8.12 and 8.13 reported a statistically significant positive relationship between employee commitment to implement safety measures related to safety compliance and organisational performance ($b = 0.311$, $p < 0.001$). This means that there is a significant positive correlation between employee commitment to implement safety measures related to safety compliance and organisational performance in health institutions with a coefficient of 0.521. Thus, $H^{9.1}$ is accepted.

(b) Findings on the second set of hypotheses:

H^{10} : There is a relationship between migration and employee commitment to implement safety measures related to safety management.

Tables 8.10 and 8.13 reported a statistically significant positive relationship between migration and employee commitment to implement safety measures related to safety management ($b = 0.087$, $p < 0.001$). This means that there is a significant positive correlation between migration and employee commitment to implement safety measures related to safety management with a correlation coefficient of 0.210. Therefore, H^{10} is accepted.

H^{11} : There is a relationship between role considerations (as measured by role conflict and role ambiguity) and employee commitment to implement safety measures related to safety management.

Tables 8.10 and 8.13 reported a statistically significant negative relationship between role considerations and employee commitment to implement safety measures related to safety management ($b = -0.107$, $p < 0.001$). This means that there is a significant negative correlation between role considerations and employee commitment to implement safety measures related to safety management with a correlation coefficient of 0.172. Therefore, H^{11} is accepted.

H^{12} : There is a relationship between health environment and employee commitment to implement safety measures related to safety management.

Tables 8.10 and 8.13 reported that health environment ($r = 0.015$, ns) does not exert significant influence on employee commitment to the implementation of safety

measures related to safety management. This means that there is no significant correlation between health environment and employee commitment to implement safety measures related to safety management. Therefore, *H¹² is rejected*.

H¹³: There is a relationship between organisational support and employee commitment to implement safety measures related to safety management.

Tables 8.10 and 8.13 reported a statistically significant positive relationship between organisational support and employee commitment to implement safety measures related to safety management ($b = 0.342$, $p < 0.001$). This means that there is a significant positive correlation between organisational support and employee commitment to implement safety measures related to safety management with a correlation coefficient of 0.538. Therefore, *H¹³ is accepted*.

H^{14.1}: There is a relationship between work conditions related to an enabling environment and employee commitment to implement safety measures related to safety management.

Tables 8.10 and 8.13 reported a statistically significant positive relationship between work conditions related to an enabling environment and employee commitment to implement safety measures related to safety management ($b = 0.270$, $p < 0.001$). This indicates a significant positive correlation between work conditions related to an enabling environment and employee commitment to implement safety measures related to safety management with a correlation coefficient of 0.485. Thus, *H^{14.1} is accepted*.

H^{14.2}: There is a relationship between work conditions related to benefits and employee commitment to implement safety measures related to safety management.

Tables 8.10 and 8.13 reported a statistically significant positive relationship between work conditions related to benefits and employee commitment to implement safety measures related to safety management ($b = 0.066$, $p < 0.01$). This further indicates a significant positive correlation between work conditions related to benefits and

employee commitment to implement safety measures related to safety management with a correlation coefficient of 0.404. Therefore, $H^{14.1}$ is accepted.

H¹⁵: There is a relationship between employee commitment to implement safety measures related to safety management and employee retention.

Tables 8.11 and 8.13 revealed a statistically significant positive relationship between employee commitment to implement safety measures related to safety management and employee retention ($b = 0.548$, $p < 0.001$). This means that there is a significant positive correlation between employee commitment to implement safety measures related to safety management and employee retention in the health institutions with a correlation coefficient of 0.556. Thus, H^{15} is accepted.

H¹⁶: There is a relationship between employee commitment to implement safety measures related to safety management and organisational performance.

Tables 8.12 and 8.13 reported a statistically significant positive relationship between employee commitment to implement safety measures related to safety management and organisational performance ($b = 0.458$, $p < 0.001$). This means that there is a significant positive correlation between employee commitment to implement safety measures related to safety management and organisational performance in the health institutions with a coefficient of 0.588. Thus, H^{16} is accepted.

Table 8.4(a) and Table 8.4(b) provide an illustration of the hypothesised results of employees' views of commitment to the implementation of safety measures related to safety compliance and safety management, respectively.

Figure 8.4(a): The hypothesised results of employees' views of commitment to implement safety measures related to safety compliance (CSH) 1

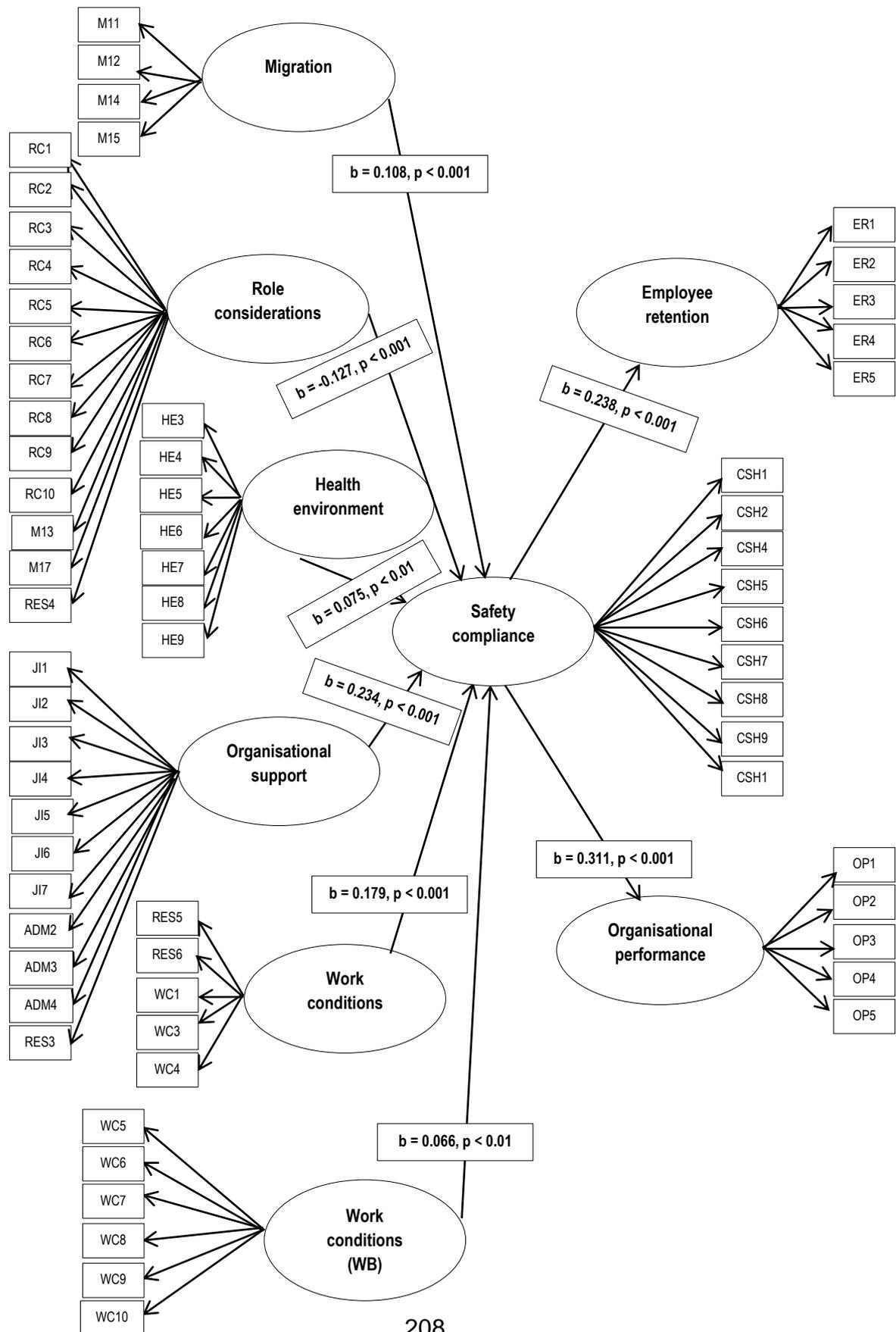
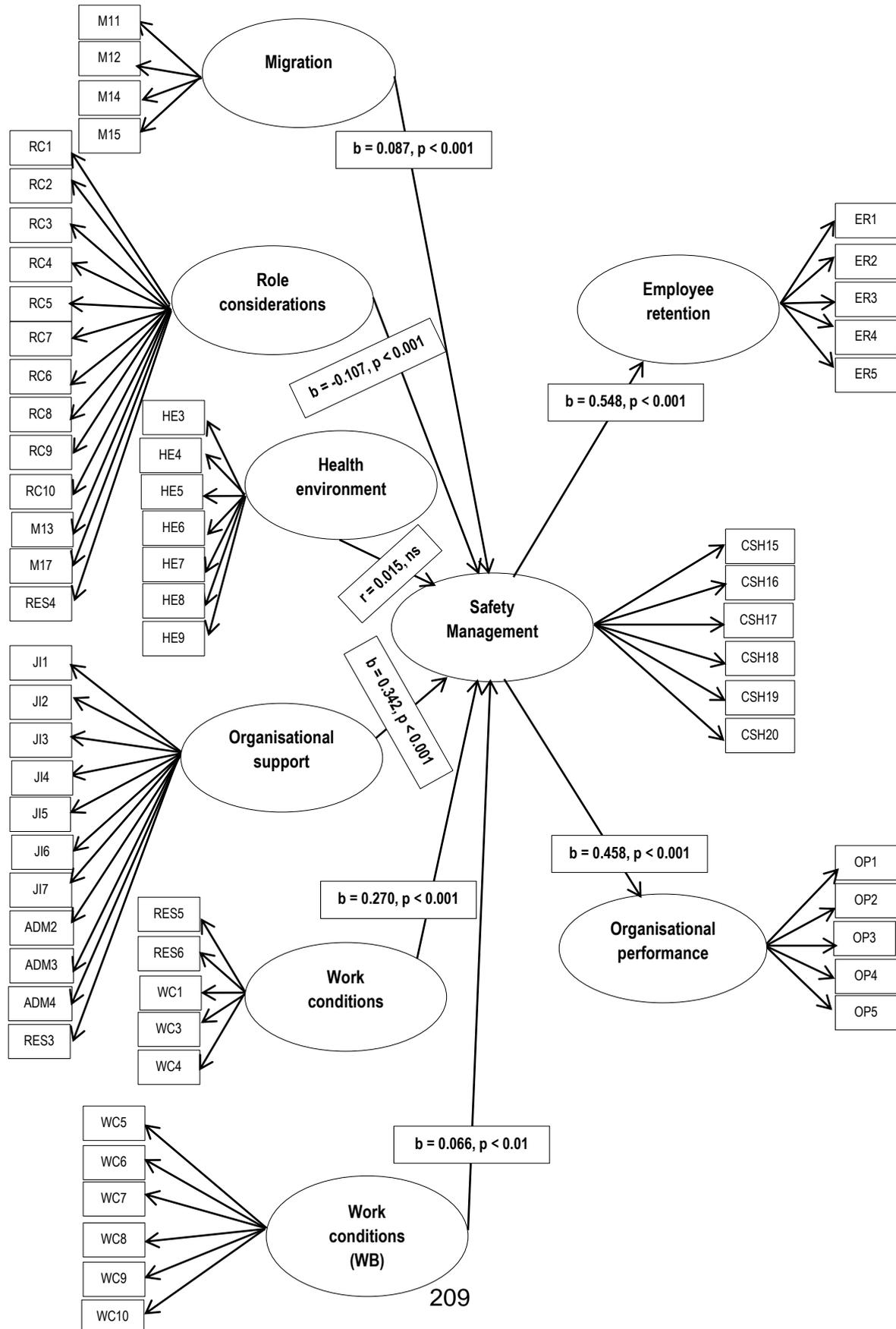


Figure 8.4(b): The hypothesised results of employees' views of commitment to the implementation of safety measures related to safety management



8.6 SUMMARY

Chapter Eight presented the empirical evaluation of employee commitment to the implementation of safety measures in healthcare institutions. The summary of the objectives and hypotheses of the study were presented in this chapter. This study performed a full analysis of the primary data, using Statistica Software version 12. Furthermore, this chapter provided the results of the analysis of the data in five distinct phases: exploratory factor analysis (EFA), reliability, descriptive analysis, regression and correlation analysis.

This chapter showed that migration, role considerations (role conflict and role ambiguity), health environment, organisational support, work conditions (related to an enabling environment and employee benefits), commitment to safety and health measures (related to safety compliance and safety management), organisational performance and employee retention were retained in this study after the comprehensive EFA. In addition, administrative support and resources were rejected because they lacked sufficient validity. Due to the EFA, the hypotheses and theoretical model were modified to suit the study. The modified theoretical model and hypotheses were subjected to further analysis (regression and correlation).

Furthermore, Chapter Eight provided the results of the regression and correlation analyses. These results identified the hypotheses that were accepted and rejected. According to the results presented in this chapter, the hypotheses related to migration, role considerations, health environment, organisational support, work conditions, commitment to safety and health measures (safety compliance and safety management), organisational performance and employee retention were accepted. These variables were found to be significantly related to commitment to implement safety measures.

Chapter Nine will provide a summary of the objectives and problem statements of the study. Furthermore, the findings, managerial implications and recommendations of the study will be provided in Chapter Nine. The chapter will also provide a discussion of the limitations of the study and its contribution to the existent body of knowledge, as well as areas for future research.

CHAPTER NINE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

9.1 INTRODUCTION

Chapter Nine provides a summary of the study, as well as the conclusions drawn from the research findings, and the recommendations of the study. This chapter provides the answers to the research problems and questions of the study. Furthermore, the empirical evaluation and managerial implications of the findings for each variable are discussed herein. Chapter Nine provides a synopsis of the chapters, conclusions related to the research problem and the research questions. The recommendations regarding strategies that can be applied by healthcare institutions in implementing safety measures are also presented in this chapter. Furthermore, the contribution, limitations and conclusion of the study are presented in the chapter.

9.2 SUMMARY OF THE STUDY

Chapter One presented the background of the study, the problem statement, and the research framework. The purpose, significance, objectives, research problems and questions, as well as the hypotheses were presented in this chapter. In addition, the chapter provided a brief literature review on the theoretical concepts of the study, which was followed by the definitions of the key concepts of the study. Chapter One introduced the research methodology and design utilised to conduct the study. The scope and delimitations of the study, as well as prior research were presented in chapter one.

Chapter Two discussed theories and factors that enhanced employee commitment to implementing safety measures in public healthcare institutions. In order to deal with the research gaps, the chapter explored various definitions and concepts related to employee commitment, and formulated a clear theoretical foundation of employee commitment in the workplace. In addition to this, the importance of employee commitment was outlined. The chapter also discussed the benefits and challenges of employee commitment in the workplace. Furthermore, role considerations and factors influencing employee commitment in the workplace were discussed in this chapter.

Chapter Three provided an overview of safety implications in the healthcare environment. The background of safety and the healthcare environment was explored and discussed in the chapter. The levels of nurses in the healthcare environment were also outlined in Chapter Three. Furthermore, the chapter discussed numerous laws relevant to the study, and the role of the law in managing the healthcare environment. The importance of health and safety (safety measures) in the public healthcare sector was also discussed. Furthermore, the barriers in the healthcare environment, as well as the implications of ethics in the healthcare environment were discussed in this chapter.

Chapter Four investigated the impact of implementing safety measures in the healthcare environment. This chapter provided a background and orientation to implementing safety measures in the healthcare environment. The safety measures discussed in the chapter include: health and safety at the workplace, availability of staff, training, reporting and follow-up, sharp injuries, work environment, workplace violence and work conditions. In addition, Chapter Four highlighted and discussed the factors that inhibit the implementation of safety measures.

Chapter Five presented an overview of the occupational health behaviour of healthcare employees. Furthermore, occupational health hazards experienced in the working environment were highlighted and discussed in this chapter. Chapter Five provided a discussion of the importance of wellbeing amongst healthcare employees. The challenges faced by healthcare employees in the workplace were also discussed herein; this includes challenges such as job insecurity and working hours. This chapter provided discussions on the implementation and control of safety measures in the workplace. The roles of management in relation to health behaviour, occupational health culture in the healthcare environment, and the role of an organisation regarding health behaviour were also addressed in this chapter.

Chapter Six presented a model for employee commitment to the implementation of safety measures in public healthcare institutions. The chapter provided empirical findings and results from existent research that support the hypotheses formulated in this study. Specifically, Chapter Six provided findings to support the statement that migration, role considerations, health environment, job identification, resources, work

conditions and administrative support are negatively related to employee commitment to the implementation of safety measures in public healthcare institutions. Furthermore, this chapter provided a discussion of empirical findings supporting the notion that employee commitment to the implementation of safety measures in public healthcare institutions is positively related to the dependent variables, that is, employee retention and organisational performance.

Chapter Seven discussed the research methodology that was utilised to carry out the research study, as well as the purpose of the study and research paradigm. The chapter focused on providing a discussion of quantitative research methods, as this was the method utilised to conduct the study. Furthermore, this chapter provided a comprehensive discussion of the research design, population, sampling and data collection methods (primary and secondary) employed in this study. The questionnaire design, administration of the questionnaire, demographic profile of the respondents and the criteria for evaluating the measuring instrument (reliability and validity) were also explained in this chapter. Furthermore, Chapter Seven discussed the techniques used in analysing the primary data.

Chapter Eight provided the results of the empirical evaluation of employee commitment to the implementation of safety measures in healthcare institutions. The objectives and hypotheses of the study were presented in this chapter. In addition, an outline of the phases of data analysis was provided in this chapter. Chapter Eight presented and discussed the internal reliability and validity of the research instruments, as well as the descriptive statistical analysis. Furthermore, the empirical results and findings of the regression and correlation analyses were presented and discussed herein. Chapter Eight discussed the research findings in relation to the study's hypotheses.

9.3 CONCLUSIONS OF THE RESEARCH PROBLEM OF THE STUDY

An extensive review of the relevant literature and the empirical results of this study were consulted in order to provide answers to the research problems and questions identified in this study. This section presents the conclusions drawn from the findings of the study for each of the research problems and questions.

Are employees committed to the implementation of safety measures in health institutions?

Chapters Two and Six of this study suggest that employee commitment is crucial to the implementation of safety measures in the health institutions. Nurses are considered to be committed to their organisations if they display a readiness to continue association with their organisation, and make countless efforts to attain the organisational objectives. Laschinger and Finegan (2005:6) and Lok, Westwood and Crawford (2005:6) concur with this notion.

In addition, Chapters Two and Six indicate that committed employees are said to work hard in order to advance themselves, thus increasing their value to the employer. They create personal sacrifices to ensure the organisation's success; they are dynamic; they endorse their organisation as a good place to work and they have pride in their organisation. In addition, committed employees intend to stay in the organisation for a long period of time and they assist management to realise the organisational goals and objectives in a resourceful way. This notion is in line with the findings of Laschinger and Finegan (2005:6), Lockwood (2007:1) and Lok, Westwood and Crawford (2005:6).

The empirical results of Hillriegel and Slocum (2004:54) and Hsu and Wang (2008:359) reveal that nurses with the highest level of commitment perform better, and are less likely to leave the organisation. Olivier (2010:17) reports that employers will enjoy distinctive competitive advantages when employees are committed. Furthermore, Chapters Two and Six provide evidence that committed employees are loyal and are less likely to quit the organisation. Due to this loyalty, psychological attachment and bond that employees have with their organisations, they are more

likely to adhere to the implementation of safety measures in the public health sector. The empirical findings of this study support this notion.

What are the barriers to employee commitment to the implementation of safety measures in health institutions?

Chapter Two provided an extensive discussion of the literature on the barriers to employee commitment. The literature reviewed in Chapter Two highlights the barriers to employee commitment to the implementation of safety measures in health institutions. These barriers prevent nurses' commitment to implementing safety measures in the health sector. The identified barriers for the purpose of this study are: migration; role considerations; health environment; work conditions; job identification; resources; and administrative support.

Chapter Six of this study explains that migration hinders nurses' commitment to safety measures. Nurses migrate to countries abroad in order to take up attractive job offers. In order to migrate, nurses will have to resign or retire from their job in their own country. Nurses who are committed and satisfied with their current employment are unlikely to leave their jobs and their country of origin. In contrast, nurses who are less committed to their organisation will consider migration. Barninghausen and Bloom (2011:485) and Rutten (2009:291) concur with this view.

Chapters Two and Six of this study show that role considerations (role conflict and role ambiguity) is considered a barrier that will hinder employees' commitment to implementing safety measures in the public health sector. Role conflict occurs when nurses are confronted by different role expectations and they experience challenges in making every role partner satisfied (Onyemah, 2008:299). Role ambiguity occurs when nurses lack understanding of how to perform the tasks assigned to them (Du Toit & Van Staden, 2005:85). The level of employee commitment to the implementation of safety measures will be low if they constantly experience role conflict and ambiguity. In other words, employee commitment will decrease when employees are constantly faced with performing conflicting functions and they lack an understanding of how to perform the functions assigned to them. Role conflict and ambiguity reduce employee commitment and increase employee tension, anxiety, fear

and hostility. Onyemah (2008:299) and Slattery *et al.* (2008:2268) concur with this notion.

Chapters Three, Four, Five and Six provide broad discussions on health environment and work conditions. These chapters specify that a poor and unfavourable health environment, and poor work conditions, will negatively impact on employees' commitment to implementing safety measures in the public health sector. Nurses wish to commit themselves to their organisations but the barriers in the health environment prevent this commitment. A healthcare environment that is challenging places a great deal of stress on nurses. The empirical findings of Aiken, Clarke, Sloane, Lake and Cheney (2008:223) reveal that poor environment increases employee stress and burnout levels, as well as dissatisfaction with their jobs.

Furthermore, poor work conditions such as poor facilities, uncomfortable physical environment, high level of noise, insufficient training, poor medical equipment, insufficient salaries and incentives, staff shortage and poor management reduce the level of employee commitment in the workplace (Oosthuizen, 2005:117; Xaba & Phillips, 2001:6). Unpleasant work conditions put stress on nurses and adversely affect the level of their commitment, productivity and performance. Therefore, healthcare institutions need to think about how to secure the long-term commitment of their nurses. Failure to create the right environment will encourage disgruntled nurses to search for new jobs with better work conditions. This view is in line with the findings of Michie and Williams (2003:3).

In addition, the empirical findings of this study explored the crucial role and the efficiency of organisational support provided to nurses in the public health sector. It emerged that this is indeed necessary to enhance employee commitment to the implementation of safety measures in the public health institutions.

9.3.1 Presentation and conclusion to the research questions

The research questions of this study were based on the purpose and objectives of the study. The following research questions were addressed in the study:

RQ1: Does the migration of employees impact upon employee commitment to the implementation of safety measures in public health institutions?

Chapters One and Six of this study provide literature and findings that show that migration has a negative impact on employee commitment to the implementation of safety measures in the public health sector. Migration is described as the movement of healthcare employees from their country of origin to countries abroad, for the purpose of gaining employment in a healthcare institution. South Africa has experienced an increase in the migration rate of nurses in the past few years. The migration of nurses has impacted negatively on the quantity and quality of healthcare services received by patients. Furthermore, the migration of nurses is bringing the South African healthcare system to a collapse. Nurses migrate because they are not satisfied with the work conditions and safety measures in the work environment. Grignon *et al.* (2012) and Kinfu *et al.* (2008:56) concur with this notion. The findings of Chen *et al.* (2004:1984) and Clemens (2007:1) reveal that nurses migrate as a result of the level of stress and the poor work conditions in the healthcare environment. The empirical findings of this study reveal that migration has an impact on employees' commitment to the implementation of safety measures in the public health sector. This implies that migration hinders employee commitment. In other words, if there is an increase in migration, there will be less commitment from employees.

RQ2: Is the scope and responsibility of the job properly structured to promote employee commitment to the implementation of safety measures in public health institutions?

Chapter Three of this study shows that the scope and responsibilities of nurses' jobs are properly structured to promote employee commitment to the implementation of safety measures in public health institutions. Chapter Three further indicates that the South African Nursing Council (SANC) provides a proper structure for nurses and regulates the practices of nurses. Furthermore, SANC outlines the scope and responsibilities of all levels of nurses. Despite the structure and responsibilities outlined by SANC, nurses still experience role conflict and role ambiguity in their institutions. Chapters One and Six of this study report that role conflict refers to a situation in which management or

supervisors obligate nurses to carry out multiple, conflicting roles. Job ambiguity refers to a situation wherein nurses lack an understanding of how to perform the roles assigned to them (Onyemah, 2008:299; Slattery *et al.*, 2008:2268). Mahfuz (2011:171) suggests that role conflict and role ambiguity are negatively associated with employee performance, commitment and satisfaction. Furthermore, high levels of role conflict and role ambiguity in public health institutions increase the tension, anxiety, fear, hostility and fatigue felt by nurses. In addition, nurses experience feelings of guilt for not being able to understand and achieve the tasks that are assigned to them (Du Toit & Van Staden, 2005:85; Khan *et al.*, 2014:21; Onyemah, 2008:299; Slattery *et al.*, 2008:2268). The empirical findings of this study support the statement that role considerations (role conflict and role ambiguity) is related to employee commitment to the implementation of safety measures in public health institutions. This implies that nurses would commit to the implementation of safety measures when they experience role conflict and role ambiguity.

RQ3: Are job demands impacting upon employee commitment to the implementation of safety measures in public health institutions?

Chapters Five and Six provide discussions related to the job demands of nurses and the requisite resources. In order for nurses to meet the demands of their jobs, the relevant resources are supposed to be made available to them. In other words, management and HRM are required to provide sufficient resources to enable nurses to meet the job demands. Mphande (2013:2) supports this view. The literature review in Chapter Five further indicates that nurses work long hours in order to meet the healthcare demands of patients. Chapter Six shows that nurses in the public health sector have limited resources to effectively meet their job demands. In other words, nurses lack resources such as medical technology and equipment, information, and the human resources to effectively perform their duties. The lack of these resources often places nurses under pressure.

Furthermore, Chapters Five and Six of this study indicate that nurses struggle with how best to utilise these limited resources in order to achieve the greatest reduction in injuries, for the optimal cost. Stimpfel *et al.* (2012:2501) affirm that, overtime due to a shortage of nurses, there is an escalation in the use of extended work shifts and. Furthermore, Kumar (2011:4) asserts that numerous healthcare institutions lack access to modern medical technology. The unavailability of resources (human, technology and equipment) to meet

job demands increases working hours; it also increases nurses' stress, fatigue, burnout and dissatisfaction with their job. In addition, the empirical findings of this study support that the strenuous demands of the job, coupled with inadequate resources to perform their duties, impact negatively on employee commitment to implement safety measures in public health institutions.

RQ4: Is the environment conducive to promoting commitment to the implementation of safety measures in public health institutions?

Chapters Three, Four and Six discuss the background and implementation of safety measures in the work environment. Biggio and Cortes (2013:10) report that the health and wellbeing of nurses results from interaction between themselves and the work environment. In other words, the health and wellbeing of nurses is dependent on the work environment and their ability to comply with safety measures therein. According to Cipriano (2016), a plethora of research reports the lack of safety and health in the healthcare environment. Nurses are exposed to risks, diseases, hazards and infections in the work environment. Moreover, nurses are in constant fear of being violently attacked by patients or patients' families. Hughes (2008:1) states that the effective management of healthcare employee safety and health protection is a decisive factor in reducing the extent and severity of work-related injuries and illnesses, and their related costs.

Judge, Heller and Klinger (2008:361) support that the wellbeing of healthcare employees is associated with their attitudes towards the work environment of the organisation for which they work. In addition, a conducive work environment has a positive influence on employee satisfaction, positive emotions and relational interactions; it also promotes the health and wellbeing of employees. An unsafe work environment is, however, associated with high employee turnover and reduced employee morale, performance and commitment. The empirical findings of this study reveal that nurses will be committed to and comply with the implementation of safety measures if the work environment is conducive to their work.

RQ5: Are employees obligated by professional registration and job specifications to commit themselves to the proficient implementation of safety measures in public health institutions?

Chapters Three and Six of this study provide discussions on the professional registration and job specifications of nurses. Professional registration and job specification are part of the job identification of nurses in public health institutions. In other words, job identification is measured by the professional identification and job specification of

nurses. According to the literature review provided in Chapters Three and Six, nurses in South Africa are required to register with the South African Nursing Council (SANC). In addition, nurses in South Africa are subject to the ethical codes of the Professional Association of Nurses, the Democratic Nursing Organisation of South Africa, SANC and Hospersa. These health boards control the standards and the clinical practices of all nurses in South Africa. In addition, these health boards provide job descriptions as well as rules and regulations that ensure that all nurses are obligated to commit themselves to the proficient implementation of safety measures in public health institutions. This notion is concurred by Du Toit and Van Staden (2005:162), Health Professions Act 56 of 1974 (1974:2), Muller *et al.* (2005:255) and SANC (2005).

Furthermore, the Health Professional Act outlines the rules and regulations of nurses in relation to the training, registration and practice of nurses in South Africa. Nurses will be dismissed from their practice if they fail to adhere to the medical acts, ethical codes, medical rules and regulations provided by policy makers and professional medical bodies. Therefore, nurses are obligated, by professional registration and job specification, to commit themselves to the proficient implementation of safety measures in public health institutions. Du Toit and Van Staden (2005:162), Health Professions Act 56 of 1974 (1974:2), Muller *et al.* (2005:255) and SANC (2005) concur with this view.

RQ6: Are healthcare resources enabling and adequately provided to promote employee commitment to the implementation of safety measures in public health institutions?

Medical resources such as equipment, technology, human resources, and medical supplies are required for the successful functioning of nurses in the public health sector. The availability and adequacy of medical resources enables nurses to provide quality services with less effort. James and Miza (2015:1128) report that nurses in South Africa lack the sufficient medical resources to perform their job functions. Furthermore, the lack of resources is the number one factor contributing to conflict in the workplace, thus increasing the risk of safety. According to James and Miza (2015:1128), the lack of medicines and resources in public health institutions instigates fights between nurses and patients. The empirical findings of Nguyen *et al.* (2015) reveal that nurses are less committed to, and are demotivated by, health environments with limited resources. In addition, inappropriate medical equipment hampers the delivery of high quality healthcare. Furthermore, Nguyen *et al.* (2015) suggest that, in order for nurses to commit

themselves to their work, management should focus on providing enabling and adequate medical resources (equipment, drug supplies and infrastructure) to nurses. The empirical results of this study reveal that nurses will be committed to implementing safety measures in their institutions if management provides them with enabling resources such as advanced medical technology, and user friendly and accessible infrastructure.

RQ7: Is administrative support sufficient to promote employee commitment to the implementation of safety measures in public health institutions?

Chapters One and Six of this study provided discussions on administrative support. Management and HRM are required to provide administrative support to nurses in the areas of clerical duties, procurement, information technology, and payments. In addition, management and HRM are also required to provide administrative support through the recruitment of nurses and by ensuring that sufficient medical supplies are available. The administrative support provided by management and HRM helps to support the core functions of nurses in public healthcare institutions. Du Toit and Van Staden (2005:161) support this notion.

Tshabalala (2015:3-4) reports that public health institutions in South Africa are underfunded and, as a result, management lacks the ability to provide sufficient administrative support to nurses. This implies that administrative support is not sufficient to promote employee commitment to the implementation of safety measures in public health institutions. Public health institutions lack proper infrastructure, adequate staff, efficient and modernised medical technology, medical supplies (medicines), and equipment (Tshabalala, 2015:3-4). According to Letvak (2014), nurses will be subjected to physical and emotional stress if management fails to provide them with administrative support. In other words, nurses will be satisfied, and committed to the implementation of safety measures, if administrative support is provided by management. The findings of Kieft *et al.* (2014:249) reveal that nurses will improve patient experiences of the quality of nursing care if they are provided with administrative support.

RQ8: Will employee commitment to the implementation of safety measures promote employee retention in the public health sector?

Chapter Six reveals that retention refers to the efforts made by public health institutions to maintain a working environment that encourages nurses to remain with the institution.

Chapters One and Six of this study provide evidence that the implementation of safety measures in the public health sector will achieve employee retention. The literature reviewed in Chapter Six indicates that employees will consider working for long in health institutions that are free from hazards, injuries, infections and other adverse risks. In contrast, nurses are likely to resign or retire from their job if their health and wellbeing is exposed to sickness, workplace death, hazards and injuries. Liang (2013:1), Liu (2014:3) and Vance (2006:1) concur with this view. Chapter Six indicates that, in order to minimise employee turnover and improve employee retention, healthcare institutions are employing strategies and putting practices in place to enable skilled employees to remain working with them for a long period of time. In other words, HRM are implementing safety measures to reduce the occurrence of workplace incidence, injuries, hazards and death. Purcell (2005:30) concurs with this notion by asserting that employee retention is a systematic effort by employers to create and foster a good environment that encourages current employees to remain employed in the organisation. Numerous researchers report that nurses resign and retire from public health institutions due to poor work conditions, fear of workplace death, risk of contracting infections and the risk of injury at work. In addition, nurse turnover in the public health sector increases as a result of the long hours of work, workload, work-related stress, lack of resources, and poor relations with co-workers and with supervisors (Liang, 2013:1; Liu, 2014:3). The American Psychological Association (2008) asserts that these factors experienced by nurses in public health institutions are strong determinants of the retention of nurses. The empirical findings of Henderson and Tullock (2008:30) reveal that nurses quit their jobs in order to gain employment elsewhere, because they desire better work conditions. In addition, the findings of Bennett and Minty (2005:16) and Seleka (2011) reveal that a safe work environment is positively related to employee retention, commitment, motivation, satisfaction, productivity and performance. The empirical findings of this study reveal that commitment to safety compliance and safety management in the public health institutions will promote employee retention. In other words, nurses are likely to remain with their organisation if management effectively complies with and manages the implementation of safety measures.

RQ9: Will employee commitment to the implementation of safety measures increase organisational performance in the health institutions?

Chapters One and Six of this study discuss organisational performance. Zunitza and Michie (2015:19) postulate that organisational performance refers to the actual output of an organisation, as measured against its input. In the context of this study, organisational performance refers to an overall analysis of a healthcare institution's performance in comparison to its stated goals and objectives.

Public health institutions require highly committed nurses to achieve their goals and objectives. In order for nurses to work towards the achievement of goals and objectives, Schultz *et al.* (2003:75) advises public health institutions to provide employees with an enabling environment. In other words, a safe and conducive work environment is critical in encouraging nurses to perform their duties effectively and efficiently, thus achieving organisational performance. Chandrasekar (2011) reports that a safe and conducive work environment has a positive impact on the health and wellbeing of employees. Furthermore, healthy employees are more likely to be committed, productive and work towards organisational performance.

Furthermore, Chapter Six of this study provides evidence that the implementation of safety measures in the public health sector will achieve organisational performance. It is explained that when employees express satisfaction in the health and safety measures of the organisation, they will improve their level of productivity and performance. Employees will be motivated to achieve the stated goals and objectives of the organisation if the work environment is safe and conducive. In other words, organisations will achieve high performance if the healthcare environment is safe from hazards and occupational diseases, which negatively impact on the health and wellbeing of employees. Chandrasekar (2011) and Yu and Bang (2013) affirm this view.

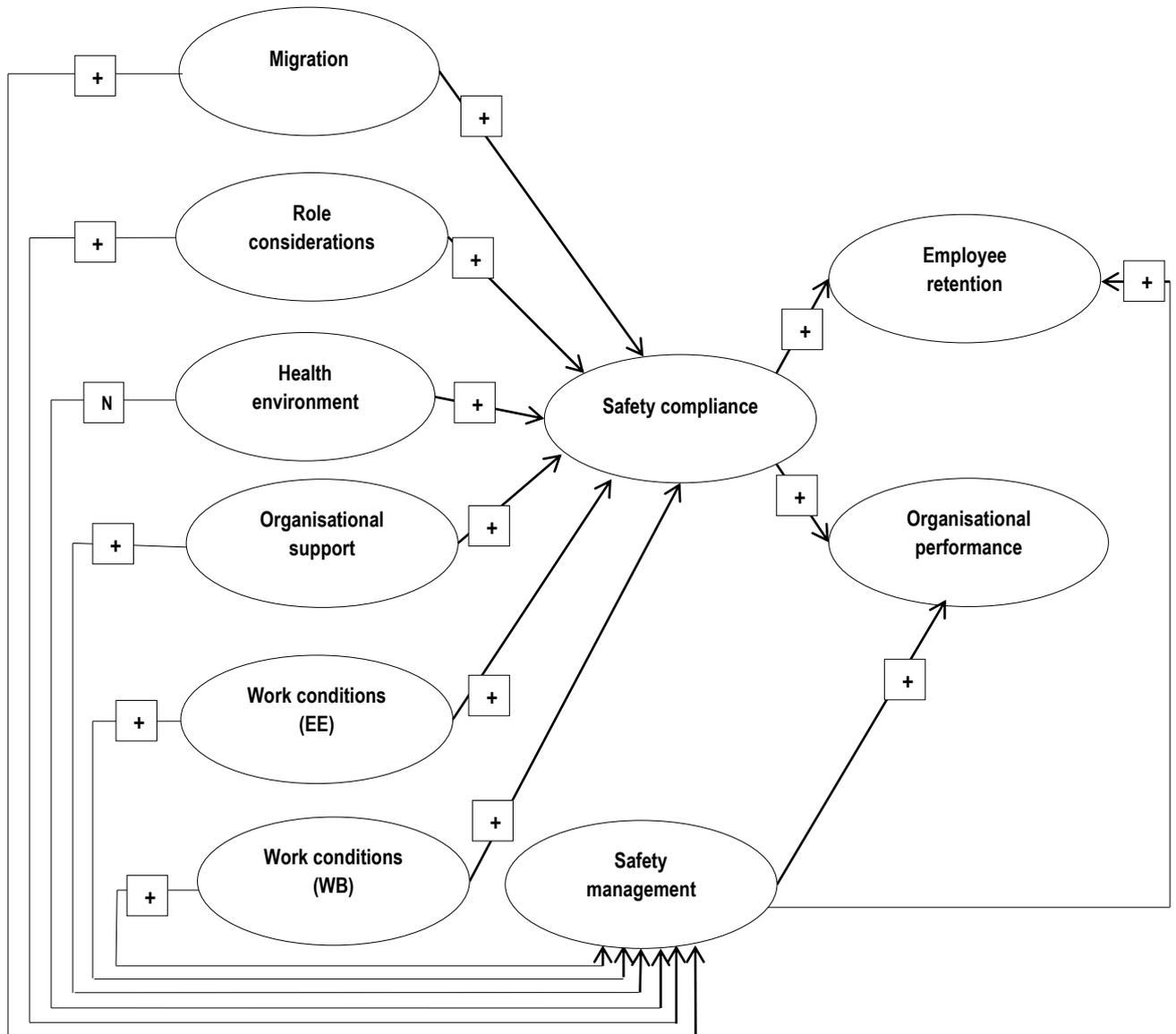
The empirical findings of this study reveal that employee commitment to the implementation of safety measures increases organisational performance in public health institutions. This implies that high levels of performance will be achieved if safety compliance and safety management are implemented in the work environment of public health institutions. Furthermore, nurses will be committed to improving organisational performance if their work environment is safe and free from workplace hazards, injuries and death.

9.4 SUMMARY OF EMPIRICAL RESULTS AND MANAGERIAL IMPLICATIONS

The study revealed that employee commitment to the implementation of safety measures in public health institutions is influenced by various factors, such as, migration, role considerations, health environment, organisational support, work conditions. The empirical results reported in Chapter Eight are depicted in Figure 9.1. Figure 9.1 shows that there is a relationship between migration, role considerations (as measured by role conflict and role ambiguity), health environment, organisational support, work conditions related to an enabling environment, work conditions related to benefits, and employee commitment to the implementation of safety measures related to safety compliance. Furthermore, Figure 9.1 illustrates that a significant and positive relationship exists between employee commitment to the implementation of safety measures related to safety compliance, employee retention and organisational performance.

Figure 9.1 further illustrates that there is a relationship between migration, role considerations (as measured by role conflict and role ambiguity), health environment, organisational support, work conditions related to an enabling environment, work conditions related to benefits and employee commitment to the implementation of safety measures related to safety management. Furthermore, there is a relationship between employee commitment to the implementation of safety measures related to safety management, employee retention and organisational performance. Figure 9.1 is presented as follows.

Figure 9.1: Empirical evaluation of the proposed influence and outcome of employee commitment to the implementation of safety measures related to safety compliance and safety management



9.4.1 Empirical findings and implications based on migration and employee commitment to the implementation of safety measures in public healthcare institutions

Migration refers to the movement of people from one place to another. In other words, it is the act of leaving one's country of origin with the intent of settling or permanently living in a foreign country (Clemens, *et al.* 2014). In addition, migration refers to any movement of one month or more that involves the crossing of a magisterial boundary, or any change from one type of settlement area (rural or urban) to another, by one or more persons involved in a change of residence (Dustmann, Fadlon & Weiss, 2011:66). In the context of this study, migration is defined as the movement of nurses from South Africa to countries abroad in order to gain employment in healthcare institutions.

The empirical results of this study reveal that there is a relationship between migration and employee commitment to the implementation of safety measures related to safety compliance. Furthermore, the empirical findings show that there is a significant and positive relationship between migration and employee commitment to implement safety measures related to safety management. The nurses feel that there is a risk of occupational exposure (e.g. to TB or HIV). Furthermore, nurses feel that there are inadequate medical supplies and equipment in the health institution. Nurses believe that they will only be able to work in a better managed health environment; they also believe that they are able to earn a better salary or more realistic remuneration.

9.4.2 Empirical findings and implications based on role considerations and employee commitment to the implementation of safety measures in public healthcare institutions

Role considerations, for the purpose of this study, is split into two categories: role conflict and role ambiguity. For the purpose of this study, role considerations refers to situations in which all the roles, responsibilities and functions of nurses are specified in order to reduce role conflict and role ambiguity. Role conflict refers to incompatible requirements and expectations that the employees receive from their supervisors or co-workers (Rosen, Chang, Djurdjevic & Eatough, 2010:458). For the purpose of this

study, role conflict further refers to a situation in which nurses are torn in multiple directions and are unable to find a way to satisfy every role partner. Tang and Chang (2010:873) describe role ambiguity as the lack of clarity in the expectations associated with a specific role. For the purpose of this study, role ambiguity occurs when nurses are not certain or even aware of their roles, functions and responsibilities in the healthcare institutions.

The research findings reveal that there is a negative relationship between role considerations (as measured by role conflict and role ambiguity) and employee commitment to the implementation of safety measures related to safety compliance and safety management. The empirical results show that the nurses feel they often have to work under vague clinical orders. Nurses believe that they are not sure what their clinical responsibilities entail and are uncertain about how their jobs are linked to other clinical responsibilities. Nurses feel that they often work without a clear understanding of the necessary prioritization of the task at hand. Moreover, nurses feel that they often receive instructions without the necessary resources to execute them.

Nurses feel that, although there are adequate funds available to hire specialists with scarce skills, they often have to work with other colleagues who are quite incompetent. Nurses believe they often receive conflicting requests from two or more supervisors, and that clear, planned goals and objectives for job-related activities do not exist. Nurses are always under pressure to perform duties that are beyond their scope of practice, and they often find themselves breaking the rules or violating policy in order to carry out a clinical procedure or prescription. In addition, nurses believe that they will be exposed to fewer occupational risks abroad if they were to consider leaving their current jobs.

9.4.3 Empirical findings and implications based on health environment and employee commitment to the implementation of safety measures in public health institutions

For the purpose of this study, health environment refers to those aspects of human health, including quality of life, that are determined by physical, chemical, biological, social and psycho-social factors in the environment. Furthermore, physical health environment refers to the tangible components of service delivery. Environmental health is the art and science of protecting against environmental factors that adversely impact upon human health or the ecological balances to long term human health and environmental quality, be it in the natural or human made environment (Muller, Bezuidenhout & Jooste, 2005:525). Work health environment comprises of the conditions, circumstances and influences that affect the organisation's ability to achieve its objectives (Parent-Thirion *et al.*, 2012:160).

Empirical findings reveal that there is a relationship between healthcare environment and employee commitment to the implementation of safety measures related to safety compliance. Nurses feel that their colleagues are always friendly; they thus feel confident, owing to the relevant assistance received from their colleagues. Nurses believe that they work with colleagues who are professionals and that they are always provided with sufficient and competent colleagues to assist them in their job. Nurses feel that there are always sufficient doctors per patient, and that they always work under sufficient lighting when doing their job (e.g. examining patients and performing surgical procedures). Furthermore, nurses feel that they will be willing to work extra hours and be on standby/on-call in their job if the health environment is conducive.

9.4.4 Empirical findings and implications based on organisational support and employee commitment to the implementation of safety measures in public health institutions

Organisational support refers to all support received from human resources, clerical duties, procurement, information technology and payments sections to support the core functions of nurses in the workplace (Muller *et al.*, 2005:255). The responsibility of administrative personnel is to secure the resources necessary for the functioning of professional personnel (Institute of Science and Technology, 2015). For the purpose of this study, organisational support refers to all support received from the human resources, procurement, information technology and payments sections to support the core functions of nurses in the healthcare sector institutions.

The empirical findings reveal that there is a relationship between organisational support and employee commitment to implementing safety measures related to safety compliance and safety management. Nurses feel that their workplace develops specialized training programs based on outputs from formal safety and health risk assessments. In addition, nurses feel that their workplace develops opportunities for safety and health professionals to ensure the continued enhancement of expertise. Furthermore, nurses believe that their workplace maintains a safe and clean working environment, in compliance with healthcare procedures and regulations; they also indicated that their workplace conducts training and competency needs assessment.

Nurses believe that their workplace adheres to infection-control protocols. Their workplace advises patients on self-health maintenance and preventive medication. They have indicated that their workplace evaluates the relevant safety and health impacts in all formal risk assessments. Nurses feel that they are satisfied with the induction program that is offered to them by their supervisor; furthermore, nurses feel that they are satisfied with the work orientation offered to them by their immediate supervisor. Nurses believe that they receive very strict competency requirements, based on the health and safety regulations set for certain positions. Nurses affirm that they always have access to computers and the internet, as necessary to execute their duties.

9.4.5 Empirical findings and implications based on work conditions related to an enabling environment and employee commitment to the implementation of safety measures in public health institutions

Work conditions related to an enabling environment refers to the surroundings or physical conditions in the working environment that influence nurses' commitment to safety measures in the workplace (Parent-Thirion *et al.*, 2012:160; Guvana, 2008:29). For the purpose of this study, enabling environment refers to environmental settings that influence nurses' commitment to the implementation of safety measures in the workplace environment. Work conditions in an enabling environment include the following: proper equipment, sufficient lighting, moderate temperature, proper décor and layout, comfortable and convenient ambiance, reduced stress and noise levels as well as a safe and user friendly environment. The empirical findings reveal that there is a relationship between work conditions related to an enabling environment and employee commitment to the implementation of safety measures related to safety compliance and safety management.

Nurses believe that advanced technology is available for conducting healthcare procedures (e.g. x-rays, surgical operations). Nurses further believe that there is user-friendly and accessible infrastructure to conduct healthcare procedures. Nurses feel that there are specific policies covering disciplinary/grievance procedures. Nurses feel that they are placed in a position that matches their professional capabilities in the job. Nurses believe that they are entitled to engage in written agreements with trade unions, employee representatives.

9.4.6 Empirical findings and implications based on work conditions related to benefits and employee commitment to the implementation of safety measures in public healthcare institutions

For the purpose of this study, work conditions related to benefits refers to the incentives provided by management to influence nurses' commitment to the implementation of safety measures in the workplace (Parent-Thirion *et al.*, 2012:160; Guvana, 2008:29). Examples of work conditions related to benefits are: pension or retirement plans, bonuses and compensation, medical scheme, basic salary, paid employee leave, flexible hours, praises, recognition and job autonomy. The empirical findings of this study indicate that there is a relationship between work conditions related to benefits and employee commitment to the implementation of safety measures related to safety compliance and safety management.

Nurses believe that they are always allowed to work flexible hours in their jobs. Nurses feel that they are always compensated when they work more than the normal required hours. Nurses believe that their benefits are comparable to those offered by other healthcare institutions. Nurses feel that they are provided a sufficient pension package on retirement, and that they are offered benefits over and above the minimum statutory options regarding leave, such as maternity, paternity and family responsibility leave. In addition, nurses believe that they occupy job positions based on their qualifications.

9.4.7 Empirical findings and implications based on employee commitment to the implementation of safety measures (CSH) in health institutions

This section provides the empirical findings and managerial implications based on employee commitment to the implementation of safety measures related to safety compliance and safety management.

9.4.7.1 Empirical findings and implications based on employee commitment to the implementation of safety measures (CSH) related to safety compliance

Safety compliance is the extent to which employees comply with the required safety standards and regulations, procedures and legal obligations of their workplace (Adams, Du Plessis, Gumbie & Willis 2007; Zin & Ismail, 2012:744). Furthermore, Truxillo, Bauer and Erdogan (2015:469) refer to safety compliance as the core safety behaviour of healthcare institutions. For the purpose of this study, safety compliance is the ability of healthcare institutions to adhere to the rules and regulations of safety measures in their practices. Healthcare institutions are required to comply with the safety standards and regulations provided by the government.

The empirical findings of this study reveal that there is a relationship between migration, role considerations (as measured by role conflict and role ambiguity), health environment, organisational support, work conditions related to an enabling environment, work conditions related to employment benefits and employee commitment to the implementation of safety measures related to safety compliance. Furthermore, there is a significant and positive relationship between employee commitment to the implementation of safety measures related to safety compliance and employee retention as well as organisational performance.

Nurses indicate that a copy of the healthcare safety manual is available to them and that they adhere to it in their workplace. Nurses believe that they comply with all safety and health standards and accept responsibility for their own safety and health. Nurses always speak up if they are faced with health malpractice or anything that might endanger employees and patients; they also communicate any unsafe conditions to their supervisors. Nurses are always cautious not to accept or refuse work for which they have not been properly trained. Nurses always ensure that every task or job that they perform is done safely and with no adverse health consequences. In this regard, nurses always ask for help if their skills and/or physical capabilities are not adequate to the task.

Nurses ensure that sharp containers and disposable gloves are readily available in their work area. The empirical findings of this study reveal that nurses feel that they ensure that every task is performed safely, with no adverse health consequences. Nurses feel that they will speak up when something is not right, and communicate any unsafe conditions to their supervisors.

9.4.7.2 Empirical findings and implications based on employee commitment to the implementation of safety measures (CSH) related to safety management

Safety management is referred to as the identification and evaluation of hazards in the healthcare institution (Albert, Hallowel & Kleiner, 2014:152). Furthermore, Roughton and Crutchfield (2013:93) assert that safety management refers to the strategies put in place by healthcare institutions to manage, create and maintain a work environment that is safe and conducive for their employees. The development of safe work procedures, the availability and utilisation of safe equipment and the implementation of protective measures to reduce risks and hazards are examples of safety management. In the context of this study, safety management refers to the actions put in place by healthcare institutions to manage the safety elements in the workplace.

The empirical investigation of this study shows that there is a relationship between migration, role considerations (as measured by role conflict and role ambiguity), organisational support, work conditions related to an enabling environment, work conditions related to benefits and employee commitment to the implementation of safety measures related to safety management. Furthermore, there is a relationship between employee commitment to the implementation of safety measures related to safety management and employee retention and organisational performance.

The implications of this study show that nurses believe that managers do their part to ensure employees' protection from occupational diseases such as HIV/AIDS. Nurses are aware that unsafe work practices are corrected by supervisors. Nurses are confident (self-assurance) or fully accept that they had the opportunity to be properly trained to use personal protective equipment devices, so that they can protect themselves from exposure to hazards or infectious diseases. Nurses feel that they

always keep their work area clean and ensure that it is neither cluttered nor crowded. In addition, nurses feel that they have open communication between themselves and their supervisors.

9.4.8 Empirical findings and implications based on employee commitment to the implementation of safety measures in public healthcare institutions and employee retention

Employee retention refers to the ability of management to encourage employees to be obliged to remain in the organisation for a long period of time (Purcell, 2005:30; Mrara, 2010:27). For the purpose of this study, employee retention is referred to as an effort by public healthcare institutions to maintain a working environment that encourages current nurses to remain with the organisation. Equally, it is the ability of an organisation to retain its valuable employees through various methods or strategies, such as offering competitive remuneration or benefits, appropriate recruitment and selection, good management or leadership, as well as the availability of training and developmental opportunities.

The empirical findings reveal that employee commitment to the implementation of safety measures related to safety compliance exerts a positive influence on employee retention. Furthermore, there is a significant relationship between employee commitment to the implementation of safety measures related to safety management and employee retention.

Nurses believe that their organisations ensure that they remain in their jobs, because they provide assurance of a safe clinical environment. In addition, nurses believe that they remain with their organisations because proficient professionals are utilised to respond to their needs. Nurses believe that their organisations create an enabling environment in which nurses are able to respond to health concerns effectively. Nurses believe that they stay with their organisation because management offers them a variety of incentives, informal and formal service training, and employment related promotions. Furthermore, nurses believe that they remain with their organisation because they are provided with user-friendly equipment and technology to access useful healthcare facility.

9.4.9 Empirical findings and implications based on employee commitment to the implementation of safety measures in public health institutions and organisational performance

Organisational performance encompasses the actual output of an organisation as measured against its goals and objectives for survival and prosperity (Tucker & Thorne, 2010:27). Bowlby (2012:626) defines organisational performance as a practice-based framework that builds on the synergy between planning and assessment; it results in the discernment of impact and value. For the purpose of this study, organisational performance refers to an overall analysis of a healthcare institution's performance as compared to its stated goals and objectives.

The empirical findings reveal that there is a relationship between employee commitment to the implementation of safety measures related to safety compliance and organisational performance. Furthermore, the empirical findings reveal that employee commitment to the implementation of safety measures related to safety management exerts a positive influence on organisational performance.

Nurses believe that in the organisations in which they are employed are committed to striving for sustainable productivity and ensuring that resources are optimally utilised in order to improve organisational performance. Nurses believe that their organisation performs well if they are committed to obtaining increased recognition among national public health institutions and presenting a favourable public image within society. Furthermore, nurses believe that the performance of their organisation increases when they are committed to employee empowerment (training) in order to improve institutional efficiency.

9.5 RECOMMENDATIONS ON EMPLOYEE COMMITMENT TO THE IMPLEMENTATION OF SAFETY MEASURES

The study provides the following recommendations regarding employee commitment to the implementation of safety measures in public healthcare institutions.

9.5.1 Recommendations on migration

Migration, in this study, refers to the movement of nurses from their country of origin to a foreign country for the purpose of employment. South Africa has been experiencing an increased rate of migration of nurses in recent years. This study reveals that South African nurses will migrate because they are exposed to occupational risks and hazards in their working environment. Furthermore, nurses will migrate because there are inadequate medical supplies and equipment, poor safety management in the work environment and low monetary benefits and remuneration for work done.

The International Organisation for Migration (IOM) (2004:1) reports that healthcare institutions cannot function effectively without human resources for health. Borat, Meyer and Mlatsheni (2002:4) support that the migration of nurses is disadvantageous because it impacts negatively on the quality of service provided as well as the efficiency and productivity of nurses. Therefore, to reduce the migration of nurses, it is recommended that government, policy makers and management should:

- ensure that they educate and train more nurses that can be absorbed into the national healthcare system;
- set-up on-going training programmes for the development of nurses;
- enforce a restrictive licensing measure (barrier to foreign recruitment) to discourage nurses from finding and gaining employment abroad;
- increase the pay package and monetary benefits of nurses;
- ensure that they provide broader incentive packages that address the living conditions of nurses;
- provide exchange programmes to their employees so as to enable them to develop, acquire knowledge and learn new skills;

- implement retention strategies by offering performance-related pay and overtime pay;
- ensure that they implement strategies to create, improve, manage, monitor and maintain conducive work environment for employees; and
- ensure that there are sufficient medical supplies and top-notch medical equipment in place for employees to work with.

9.5.2 Recommendations on role considerations

In this study, role considerations refers to situations in which the job roles, responsibilities and functions of nurses are specified in order to reduce role conflict and role ambiguity. Role conflict occurs when there are multiple incompatible demands in work-related issues placed upon an employee such that compliance will be difficult for all work demands (Onyemah, 2008:299; Tang & Chang, 2010:871). For the purpose of this study, role conflict refers to a situation wherein employees are torn in multiple directions and unable to find a way to satisfy every role partner.

Tang and Chang (2010:871) define role ambiguity as a lack of certainty in the roles, functions and responsibilities of employees. In addition, Slattery, Selvarajan and Anderson (2008:2268) define role ambiguity as a situation in which the role expectations of employees are not clearly specified. For the purpose of this study, role ambiguity occurs when nurses are not certain or aware of their roles, functions and responsibilities in the healthcare institutions. Role conflict and role ambiguity increase employee stress and pressure, and they have a negative impact on employee performance, satisfaction, creativity and motivation. Tang and Chang (2010:871) support these findings. The following recommendations to minimise nurses' role considerations are put forward. Management should:

- clearly outline roles, functions and responsibilities to employees in order to reduce role conflict and role ambiguity;
- enhance and effectively communicate workplace guidelines and clinical procedures to employees;
- solicit employees for questions on role clarity and management should provide immediate feedback to employee questions;

- ensure that they clearly define the priorities of each employee;
- provide employees with on-going training and education that focuses on role clarifications/identifications, functions, responsibilities and delegation of authority;
- provide role clarification models, activities and checklists that may clarify and help employees to better understand their roles and functions;
- foster and maintain a stress-free working environment by allowing employees to partake in decision-making with regard to work roles, responsibilities and functions;
- provide clear instructions on roles and functions in order to ensure that nurses are not confused about the tasks to be completed;
- encourage collaboration and pair less experienced employees with more experienced and knowledgeable employees. Employees who are confused about roles and functions will have an opportunity to know and perform functions if they work with experienced employees;
- clearly articulate the goals of the organisation to all employees. In addition, management should put planned goals and objectives for job-related activities in place, in order to achieve organisational success;
- ensure that supervisors give do not give conflicting roles and functions that are not included in the job descriptions of employees;
- ensure that healthcare supervisors and employees have up-to-date information on their role and functions so that they can manage their roles accordingly; and
- enforce strict compliance of clinical procedures and ensure that failure to adhere to these attracts dismissal.

9.5.3 Recommendations on health environment

This study defines health environment as those elements (physical, chemical, biological, social and psychological) within healthcare institutions that impact on the health and wellbeing of employees. The health and wellbeing of employees can be negatively or positively affected by their work environment. In other words, the health environment can either improve the wellbeing or harm the health (injuries and hazards) of employees. OHS Policy for the health sector (2010) supports that a harmful health environment negatively influences employee commitment to the implementation of safety measures in public health institutions.

This study outlines that employee satisfaction, performance and retention are negatively affected by a poor health environment. Employees are not committed to work because they feel that they are exposed to hazards, risks, diseases and injuries. Furthermore, nurses decline working extra hours in harmful health environments. Therefore, to improve employee performance, health and wellbeing as well as commitment to the implementation of safety measures this section provides recommendations on all factors within the health environment.

Physical, chemical and biological factors comprise of all the tangible, material objects and conditions in the health environment, which influence the health and wellbeing of employees. In order to reduce diseases, risks and hazards in the health environment, management should:

- ensure proper maintenance of the outer and inner appearance of the building to avoid collapse;
- ensure proper maintenance of medical equipment to avoid failure and injuries during medical procedures;
- control environmental hazards by reducing air, water and noise pollution;
- ensure proper lighting, ambiance and moderate temperature for employees and patients;
- ensure that the environment is conducive for employees and patients;
- ensure that the environment is supportive and user friendly for the sick and disabled. In other words, management should provide sidewalks, supportive

railings and wheelchairs for the sick and disabled in order to avoid injuries resulting from fall;

- ensure that general workers thoroughly clean all parts of the hospital (floors, toilets, lounge) and patients' rooms to avoid the spread of diseases;
- ensure that nurses adhere to the rules regarding personal protective equipment (PPE). In other words, nurses should ensure hand hygiene, wear proper gloves and gowns and use facial protection to control and reduce the risk of injuries and the spread of disease;
- ensure that they control and maintain a safe supply of food and drinking water for all employees and patients;
- hire security guards to stop disputes and fights from taking place in public health facilities;
- ensure that all nurses treat and dispose solid and toxic waste. Employees should take care when utilising sharps and dispose of them in a safety bin after being used on a patient;
- ensure that they put safety symbols and signs in place, so as to avoid hazards in the environment; and
- discover mechanisms of diseases caused by environmental exposure and control them.

Social and psychological factors refers to the influence of actions by employees in the work environment (Hoyle, 2005:328). In addition, social and psychological factors relates to interactions between employees and the individual expectations of employees (recognition, responsibility, job security, advancement affiliation and occupational stress). Positive emotions and good working relationships can enhance the wellbeing of employees. The health and wellbeing of employees can be influenced by the level of commitment to safety and health measures displayed by other colleagues. In other words, the nonchalant attitude of an employee towards safety and health measures might expose other employees to risks and hazards. Therefore, to promote safety in the health environment, employees and management should:

- encourage team-work, support and friendliness in the institution;

- provide relevant and sufficient assistance to employees by assigning them to work with mentors (professionals, supervisors or skilled and experienced employees);
- ensure that they recruit more professionals to provide sufficient healthcare services to patients. This will help reduce fatigue and burnout;
- ensure that they implement safety and health policies that must be adhered to by all employees;
- provide all employees with on-going training and induction focused on health and safety in the environment. In other words, management should consistently train employees on how to take additional infection control steps to minimise contamination and infections;
- ensure strict compliance with all safety measures in the health environment in order to avoid risks and hazards;
- ensure that all employees are responsive and responsible in enforcing health and safety measures; and
- promote a safety and health culture in the institution.

9.5.4 Recommendations on organisational support

Organisational support refers to the degree to which organisations provide support for employees' needs and the degree to which employees feel that they are valued and supported by their organisation. In this study, organisational support refers to the degree to which management meets the health and safety needs as well as the socio-economic needs of their employees. Employees believe that management is required to value their contributions and care about their wellbeing in the organisation. This is true in healthcare institutions where stress, risks, diseases and hazards are evident. Management are required to value the contributions of employees and care about their wellbeing by providing support in the area of risk assessment and health and safety management. In order to ensure organisational support, management must value employees through an effective rewards programme.

The effort and performance of employees should be rewarded with financial and non-financial benefits. Management can also provide the relevant and sufficient support by assigning experienced mentors, partners, professionals or supervisors to assist

employees in their work. Organisational support is crucial to reduce stress, employee turnover and absenteeism. Employee affections for and commitment to the organisation, as well as employee retention and performance, will improve if organisational support is carefully managed. In order to successfully manage organisational support, management should:

- provide favourable working conditions as well as a safe and clean working environment for employees and ensure that working conditions and environment are in compliance with healthcare procedures and regulations;
- advise patients on self-health maintenance and medication control and reduce the spread of diseases/infections;
- provide induction programmes for nurses;
- ensure that employees and supervisors adhere to infection-control protocols.
- provide work-life balance policies that support the lives and demands (work, self, family and friends) of employees in and out of the job;
- reward employee performance with job enrichment, promotions, pay, compensation, paid holiday or leave, health insurance and a retirement or a pension fund;
- ensure that it provides employees with esteemed approval and sincere and oral appreciation for the job performed;
- ensure that they promote and maintain a good work relationship with employees. Management should ensure that supervisors and employees are have a good relationship;
- provide support and show empathy, care and attention to the needs of employees;
- pay attention and value the opinions of employees;
- continuously provide constructive feedback to the questions of employees; and
- promote fairness by treating all employees equally in terms of how decisions are made and how benefits are distributed.

9.5.5 Recommendations on work conditions related to an enabling environment

Work conditions related to an enabling environment refers to the surrounding environment or physical conditions in the working environment that support and influence the way in which nurses perform their duties. An enabling environment is crucial to improving employee productivity, performance, retention and commitment. Employees will be stressed and dissatisfied with their job if their work environment is unpleasant and is not conducive. In other words, an environment that is not enabling includes, for example, dilapidated buildings, poor lighting, hot temperatures, unpleasant smell/odour from surroundings, improper décor and layout, uncomfortable ambiance, high noise levels.

Employees who work in an unpleasant environment will experience high levels of stress and burnout. There is also a high likelihood of employees taking up offers of employment from private health institutions or migrating to other countries where the environment is enabling for them to perform work. In addition, enabling environment also refers to the degree to which management provides work policies covering disciplinary procedures and sufficient information related to employees' work. Employees will further perceive their environment to be enabling if management assigns them to positions that match their capabilities. Therefore, to create an enabling environment, management should:

- maintain the physical conditions of the work environment. In other words, management should maintain the inner and outer appearance of the building;
- provide proper hygiene in the health institutions. Management must ensure proper hygiene in areas such as floors, toilets, offices, rooms, waiting areas, cafeteria, kitchens, theatres and wards, as well as proper conditions in the work environment and lounge;
- ensure that the environment has a pleasant odour, moderate temperatures, proper décor and layout, comfortable ambiance and low noise levels;
- ensure that the work environment/infrastructure is user-friendly and accessible by employees and patients. The environment should be conducive and accessible for employees to conduct healthcare procedures;

- provide employees with access to medical equipment needed for performing work procedures.
- ensure that all medical equipment is maintained and operational for use in surgical/medical procedures.
- explore the possibility of the use of advanced technology in the work environment. Advanced technology will enable health institutions to gain a competitive advantage. Further, advanced technology will help to provide medical treatment, thus providing solutions to staff shortage;
- purchase and utilise movable and immovable medical equipment that can aid treatments and medical procedures with patients;
- ensure consistency in the provision of adequate supplies and equipment to perform tasks;
- provide employees with relevant and sufficient information needed for work decisions and place employees in positions that match their capabilities in the job;
- provide feedback and assist employees in problem solving, and encourage interpersonal relationships between employees; and
- provide a relaxation area to help employees release stress, and to promote employee engagement and rapport.

9.5.6 Recommendations on work conditions (benefits)

Work conditions related to benefits refers to the financial or non-financial incentives provided by management to influence nurses' commitment to the implementation of safety measures in the workplace. Employees will be motivated to put more effort into their work if management rewards their performance with non-financial and financial benefits. Further, employees will express dissatisfaction and have intentions to leave the organisation if they are not well compensated for their efforts.

The findings of Dewhurst, Guthridge and Mohr (2009:1) support that attention and praise from top management as well as providing the employee with the opportunity to lead a project or task improves employee motivation and effectiveness. Lameck's (2011:62) findings further reveal that employees will be willing to exert more effort in performing if they are compensated by management. This study reveals that

employees' health is directly influenced by work conditions related to benefits. In addition, financial and non-financial benefits have a positive impact on employee productivity, performance, retention, motivation and job satisfaction. Therefore, to provide work conditions related to benefits, management should:

- ensure that Human Resource Management (HRM) designs a compensation plan that is imperative to the success and survival of the organisation;
- ensure that HRM identifies compensation strategies that provide the greatest return on investment;
- ensure that employees are compensated for the extra hours that they expend at work;
- ensure that HRM provides financial and non-financial benefits that are attractive, better or comparable to those offered by other healthcare institutions;
- provide employees with benefits that satisfy their need for social security. Management should also provide retirement and pension benefits for employees;
- offer employees the minimum statutory requirements regarding leave (e.g. maternity, paternity, family responsibility);
- compensate employees by allowing them to work flexible hours;
- provide employees with non-financial benefits such as praise and recognition, attention, free vouchers, mentorship or training programmes, enhanced decision-making, paid holiday or leave, awards or prizes, parking spaces and work-life policies; and
- provide employees with financial benefits such as profit-related and share option schemes, increased pay, bonuses and commissions.

9.5.7 Recommendations on safety compliance

Safety compliance is essential to promoting the health and wellbeing of employees in every health institution. The health institution is a place where employees are required to perform dangerous tasks that might have a negative impact on their health. In other words, employees are required to treat and care for patients with infections and life-threatening diseases. Optimal care and compliance with health and safety measures

will ensure that employees are safe and protected from hazards, risks, injuries, diseases and workplace death.

Management has a part to play in ensuring that they act in accordance with established safety standards, regulations, guidelines and legislation so as to safeguard the health and wellbeing of employees and patients. Furthermore, healthcare institutions will attract litigation from the government if they fail to comply with safety regulations and legislation. In this regard, the regulatory burden will be avoided if health institutions comply with health and safety laws. Therefore, the following recommendations on safety compliance are provided, below, to assist healthcare institutions to promote the wellbeing of employees and avoid legal problems. Thus, it is recommended that management and HRM should:

- ensure that they are always up-to-date with the safety regulations and legislation provided by the government;
- conduct regular safety checks. Fire drills and inspections of all hazardous equipment must be conducted regularly;
- invite a third party (independent body) to conduct safety and health evaluations in the workplace so as to ensure unbiased judgment on health and safety standards;
- ensure that they carefully identify and address deficiencies by using compliance and enforcement measures;
- ensure that employees understand how to avoid exposure to hazards and how to adhere to all operational guidelines;
- ensure that employees are provided with relevant and timely information on safety and health regulations. This will promote employee involvement and compliance with health and safety regulations;
- ensure that all employees have a current copy of the healthcare safety manual at hand so as to promote personal responsibility and compliance with all safety and health standards;
- always solicit employees for questioning on safety compliance and encourage employees to communicate unsafe conditions that may be detrimental to their health;

- encourage employees to seek help when their physical abilities and skills are not adequate to the task assigned to them;
- ensure that employees are assigned to tasks that do not result in adverse health consequences;
- provide incentives to motivate or encourage employees to voluntarily improve safety and health in the workplace;
- ensure that all medical equipment and devices are reliable so as not to compromise patients' care;
- ensure that caregivers maintain appropriate control over medical procedures;
- enact a policy of zero-tolerance for employees who fail to comply with safety rules and regulations;
- create a platform for employees to report failure to follow due procedure for sharp injury; and
- create widespread awareness of occupational hazards and safety compliance. Handbills and posters should be displayed throughout the work environment to remind employees about safety compliance.

9.5.8 Recommendations on safety management

Safety management is an important factor that must be taken into account by management, supervisors and HRM. Safety management is completely different to safety compliance (complying with safety rules and regulations). Safety management focuses on how management, supervisors and HRM can manage all safety elements in the health environment. In other words, safety management focuses on how management and supervisors must establish rules, provide control measures and maintain a safe and conducive work environment for employees and patients. Patient and employee safety should be a matter of utmost interest for management and supervisors. Therefore, safety in the health environment must be managed to avoid the spread of diseases, exposure to hazards and workplace death. In order to ensure the health and wellbeing of employees and patients, management should:

- train and educate employees to understand and recognise hazards and potential risks;

- ensure that they prevent and control operational hazards and risks in the workplace;
- train employees on how to protect themselves and patients from potential hazards to which they may routinely be exposed. Management should also offer training focused on the utilisation of personal protective equipment;
- take action to detect and minimise the occurrence of similar safety/hazardous incidents in the workplace. In other words, management should ensure that they take action to reduce medication errors, fall incidents, diagnostic errors and adverse events and risks;
- identify potential hazards and develop a systematic approach and stringent measures to minimise or prevent accidents, hazards and other adverse occupational occurrences;
- welcome the use of advanced technology and well maintained medical equipment to reduce medical errors, diagnostic errors and surgical error;
- utilise information and communication technology (ICT) to provide on-going information to employees regarding the severity of adverse events and risks, and how to minimise these;
- always communicate to employees when actions are taken to reduce risks and hazards. This will enable employees to be aware that management is taking action to ensure their protection from occupational hazards;
- ensure that all employees maintain clean work areas and avoid cluster or crowds around their work area;
- ensure that employees safely dispose of all sharp devices that come into contact with blood;
- make provisions for personal protective equipment, safety devices, and sharp disposal containers;
- identify and inform employees about patients with a history of aggressive or violent behaviour;
- transfer violent patients to units with higher staffing ratios or with staff trained to deal with violent behaviour;
- not allow employees to be alone with patients during intimate physical examination, and not allow employees to enter seclusion rooms alone;

- improve labour productivity without employees needing to work longer hours, and establish suitability of safety mechanism design; and
- ensure that employees dispose of certain medical devices used on patients to avoid transmitting diseases and infections.

9.5.9 Recommendations on organisational performance

Organisational performance relates to the extent to which organisations, viewed as a social system, fulfil their objectives (Lebans & Euske, 2006:71). In order for management to achieve their goals, certain factors need to be in place. Management must ensure that they enhance employee personal development, presentation, proficiency, knowledge and experience. Furthermore, organisations will achieve high performance if they improve in areas such as leadership, structure of working units, systems and procedures, enabling support and empowerment. Furthermore, management will achieve high organisational performance if they offer rewards to employees and provide employees with the opportunity to perform tasks or projects.

This study shows that healthcare institutions will achieve high performance if employees adhere to the infection-control protocols in their workplace. Management will achieve organisational performance if employees are satisfied with the induction and orientation programmes offered to them by their supervisors. Organisations will achieve performance if management provides accessible technology (computers and internet) for employees to execute their duties. The evaluation of relevant safety and health impacts, in all formal risk assessment, will improve organisational performance. In relation to healthcare systems, the following recommendations are provided for organisational performance. Management should:

- observe infection-control procedures in the workplace, for employees;
- ensure that they advise patients on self-health maintenance and preventive medication;
- ensure that employees are pleased with the induction programme that is offered to them;
- ensure that employees are happy with the work orientation offered to them;

- provide firm capability requirements, based on health and safety regulations set for certain positions;
- provide employees with access to computers and internet, as required to carry out their responsibilities; and
- ensure that employees adhere to strict competency requirements regarding the health and safety regulations set for certain positions.

9.5.10 Recommendations on employee retention

Employee retention refers to the technique adopted by organisations to maintain an effective workforce and, at the same time, meet operational requirements (Mehta, Kurbetti & Dhankhar, 2014:154). Employee turnover is reduced by adequate remuneration, work conditions, health and safety from risk of infection and injury at work, work and social life balance, relation with co-workers and supervisors, advancement, promotion and training, opportunities and sense of meaning.

This study reveals that nurses will leave their organisation because management does not provide them with the assurance of a safe clinical environment. Moreover, they are not provided with proficient professionals to respond to their needs and they are not offered a variety of incentives, informal and formal service training, or employment-related promotion. The organisation is likely to experience employee turnover if they fail to create an environment that responds effectively to the health concerns of its employees. The absence of user-friendly equipment and technology to access useful healthcare facilities will increase employees' propensity to leave the organisation. Therefore, to retain skilled and valuable nurses, management should:

- implement strategies that can make work environment conducive for employees to ensure that they remain with the organisation;
- improve work conditions in order for employees to perform their duties effectively and efficiently;
- provide employees with an organisation that responds effectively to health concerns;
- ensure that employees are not exposed to a high risk of contracting infectious diseases;

- provide employees with the assurance of a safe clinical environment and proficient professionals to respond to their needs;
- provide balance between the social and work life of employees, and encourage good relations with the co-workers and supervisors of employees;
- provide employees with opportunities for promotion, development, personal growth and advancement;
- offer valuable financial and non-financial incentives to employees; and
- provide and effectively manage user-friendly equipment, medical technology and resources so as to ensure better access to quality healthcare.

9.6 CONTRIBUTION OF THE STUDY

This study contributes to the existent body of knowledge by providing literature regarding the influence of employee commitment to the implementation of health and safety measures in the workplace; by identifying and resolving the need for informed decisions regarding the adoption of effective safety measures in public health institutions; and by developing a theoretical model on the perceptions of safety measures. The theoretical model developed for this study can be used by future researchers, as well as public and private health practitioners to understand the influence of employee commitment on the implementation of safety measures. In addition, the theoretical model can be used as a basis for other studies that seek to explore employee commitment to the implementation of safety measures in public health institutions.

The empirical findings of this study make a valuable contribution to the body of knowledge in that they provide information that can be used by the South African healthcare system to ensure safety compliance and safety management. In other words, this study provides findings that can assist the government as well as private and public health institutions to understand factors in the health environment that can affect the actualisation of organisational objectives. This study helps to provide awareness of the importance of encouraging employee commitment to safety and health measures in public healthcare institutions. This study will enlighten public and

private health institutions on the factors in the health environment that can be improved upon to promote employee retention and organisational performance.

Furthermore, this study offers guidelines for the implementation of safety measures in public healthcare institutions. Public healthcare institutions can utilise this study to identify and understand the factors that contribute to the high migration rate. This will assist public healthcare institutions to minimise expenditure (reduce costs) in training new employees; through this, organisational performance and employee retention will be improved. This study can be utilised by government, policy makers and management to understand the importance of employee commitment, organisational support and work conditions in public healthcare institutions.

This study contributes to the body of knowledge by uncovering the dimensions of work conditions; in other words, the study expands the current understanding of working conditions. The theoretical model and empirical results of this study reveal that work conditions are related to benefits and an enabling environment. Therefore, management can utilise these findings to focus on providing work conditions related to benefits and an enabling environment for employees. The provision of benefits and an enabling environment will enhance employees' commitment to the implementation of safety and health measures.

This study enlightens management on how they can value and meet the socio-economic needs of employees in public health institutions. This study provides strategies on how management and employees can ensure safety compliance and safety management in the work environment (physical, chemical, biological, social and psychological). In addition, this study makes a unique contribution to the field of health and safety by presenting strategies that can be utilised by public health institutions to learn how they can provide organisational support for employees. Management will learn that providing support in the area of employee recruitment and medical resources will improve employee commitment to safety and health measures.

This study can be utilised by the government to identify and implement systematic approaches that will inspire nurses to demonstrate commitment and vigilance in ensuring their safety and health in the workplace. This study will allow the government

to implement stringent regulations that are focused on improving the health and safety of employees in the organisation. In addition, this study provides valuable information that can be used by the government to implement safety policies that will help organisations to control and minimise hazards, the spread of diseases and other adverse occupational risks.

9.7 LIMITATIONS TO THE STUDY

This study was limited by several factors beyond the control of the researcher. The limitations of this study include: time constraints, the long and strenuous process of getting approval from the National Health Research Ethics Council, and slow response from the relevant managers and employees, and financial constraints. These limitations had a negative impact on the timeframe for data collection.

Furthermore, the researcher received slow, late and poor responses from employees. This study experienced limitations in terms of missing and incomplete data, and poorly completed questionnaires had to be discarded. These limitations increased the printing costs of questionnaires and transportation costs for the distribution of the questionnaires; in this regard, more questionnaires had to be printed and distributed in order to make up for the questionnaires that were discarded. As a result of the time and financial constraints, this study focused on investigating the influence of employee commitment to the implementation of health and safety measures in workplaces located in the Eastern Cape and KwaZulu-Natal provinces, instead of more provinces as initially envisaged.

9.8 RECOMMENDATIONS FOR FUTURE RESEARCH

This study recommends that similar studies are carried out on other provinces in South Africa. This will generate awareness of the importance of safety and health measures in public health institutions. Further research should be undertaken with the aim of exploring a comparative study of employee (with specific reference to nurses) commitment in both public and private health institutions. Furthermore, an empirical investigation could be conducted on the effects of work conditions related to an enabling environment and work conditions related to employment benefits on

employee performance and migration. Furthermore, future researchers should perform empirical investigations on the underlying dimensions discovered in this study. In other words, the challenges and enhancing mechanisms of organisational support, safety compliance and safety management in public health institutions should be investigated by future researchers.

9.9 CONCLUSION OF THE STUDY

This study investigated the influence of employee commitment on the implementation of health and safety measures in the workplace. This study also investigated the influence of employee commitment to the implementation of safety measures on employee retention and organisational performance. The empirical results of this study reveal that there is a relationship between migration, role considerations, health environment, organisational support, work conditions (enabling environment and benefits) and employee commitment to the implementation of safety measures related to safety compliance. Furthermore, the empirical findings of this study indicate that a significant and positive relationship exists between employee commitment to the implementation of safety measures related to safety compliance and employee retention and organisational performance.

In addition, the empirical findings reveal that there is a relationship between migration, role considerations (role conflict and role ambiguity), health environment, organisational support, work conditions (enabling environment and benefit) and employee commitment to the implementation of safety measures related to safety management. Furthermore, there is a relationship between employee commitment to the implementation of safety measures related to safety management and employee retention and organisational performance. This study closed the gap in the existent body of knowledge by providing literature and empirical findings on employee commitment to the implementation of health and safety measures in the workplace. The South African health system can use this study to understand the factors in the work environment that impact on the health and wellbeing of employees. Furthermore, an improvement in work conditions and work environment is important to keep employees and patients satisfied. Employees will want to retain their employment and the motivation to enhance organisational performance if management complies with

and maintains safety measures in the work environment. The wellbeing and availability of nurses is fundamental to the provision of quality care. The health and wellbeing of employees might be threatened if they are constantly exposed to hazards, life threatening diseases and adverse occupational risks. Employees who are unsatisfied with the conditions in the work environment will likely retire from the organisation, absent themselves from work duties or take up job opportunities abroad. In order to avoid these consequences, government and management should implement effective regulations on safety measures that are aimed at improving the work conditions and working environment for employees and patients.

Furthermore, government and management should employ the strategies provided in this study to minimise or prevent the factors that influence (migration, role conflicts and ambiguity, work conditions (enabling environment and benefits) and organisational support) public health institutions. Public health institutions will appreciate the benefits of employee retention and organisational performance if these influential factors are resolved or minimised. Furthermore, South Africa will enjoy the availability of sufficient, skilled and healthy employees to provide quality services, if government together with the management of healthcare institutions improve safety measures in the work environment.

REFERENCES

- Abdullah, N.A.C., Spickett, J.T., Ruchev, K.B. & Dhaliwal, S.S. 2009. Validity and reliability. *International Review of Business Research Papers*, 5(3):111-141.
- Abu-Jarad, I.Y., Yusof, N.A. & Nikbin, D. 2010. A review paper on organisational culture and organisational performance. *International Journal of Business and Social Science*, 1(3):26-46.
- Acar, A.Z. & Acar, P. 2014. Organisational culture types and their effects on organisational performance in Turkish hospitals. *Emerging Markets Journal*, 3(3):17-31.
- Adams, D., du Plessis, A.G., Gumbie, A. & Willis, R.P.H. 2007. *Introduction to safety practice in South African mines*. Braamfontein: Creda Communication.
- Adams, J., Khan, H.T.A. & Raeside, R. 2014. *Research methods for business and social science students*. New Delhi, India: Sage.
- Adefolalu, A.O. 2014. Needle stick injuries and health workers: A preventable menace. *Annals of Medical and Health Sciences Research*, 4(2):159-160.
- Adejumo, P.O. & Olatunji, B.T. 2014. Exposure to work-related sharp injuries among nurses in Nigeria. *Journal of Nursing Education and Practice*, 4(1):229-236.
- Adhia, H., Nagendrea, H. & Mahadevan, B. 2010. Impact of yoga way of life on organizational performance. *International Journal of Yoga*, 3(2):55-66.
- Adzei, A. 2012. Motivation and retention of health workers in Ghana's district hospitals. *Journal of Health Organisation and Management*, 26(4):467-485.
- Agrawal, A. 2009. Medication errors: Using information technology systems. *British Journal of Clinical Pharmacology*, 67(6):681-686.
- Aguis, R. 2010. *What is 'Environmental health'?* [Online]. Available: <http://www.agius.com/hew/resource/envhlth.htm> [Accessed 29 November 2016].
- Agwu, M.O. 2014. Organisational culture and employees' performance in the National Agency for Food and Drugs Administration and Control (NAFDAC) Nigeria. *Global Journal of Management and Business Research, Administration and Management*, 14(2):1-11.

Agyeman-Duah, J.N.A., Theurer, A., Munthali, C., Alide, N. & Neuhann, F. 2014. Understanding the barriers to setting up a healthcare quality improvement process in resource-limited settings; A situational analysis at the Medical Department of Kamuzu Central Hospital in Lilongwe, Malawi. *BMC Health Service Research*, 14:1-10.

Agyemang, C.B. 2013. Perceived organisational climate and organisational future on organisational citizenship behavior: Empirical study among Ghanaian banks. *European Journal of Business and Management*, 5(26):132-142.

Aiken, L.H., Buchan, J., Ball, J. & Rafterly, A.M. 2008. Transformative impact of magnetic designation: England case study. *Journal of Clinical Nursing*, 17(24):3330-3337.

Aiken, L.N., Clarke, S.P., Sloane, D.M., Lake, E.T. & Cheney, T. 2008. Effects of hospital care environment on patient mortality and nurse outcome. *Journal Nursing Administration*, 38(5):223-229.

Akintayo, D.I. 2010. Work-family role conflict and organizational commitment among industrial workers in Nigeria. *Journal of Psychology and Counselling*, 2(1):1-8.

Akpan, E.I. 2011. Effective safety and health management policy for improved performance of organisations in Africa. *International Journal of Business and Management*, 6(3):159-165.

Alameddine, M., Mourad, Y. & Dimassi, H. 2015. A national study on nurses' exposure to occupational violence in Lebanon: Prevalence, consequences and associated factors. *PLoS ONE*, 10(9):1-15.

Albert, A., Hallowell, M.R. & Kleiner, B.M. 2014. Emerging strategies for construction safety & health hazards recognition. *Journal of Safety, Health & Environmental Research*, 10(2):152-161.

Albright, J.A. ethics and constitutional government. *Journal of Long-Term Effects of Medical Implants*, 17(1):35-39.

Alexopoulos, E.C. 2010. Introduction to Multivariate Regression Analysis. *Hippokratia Quarterly Medical Journal*, 14(1):23-28.

Ali, A.Y.S., Ali, A.A. & Adan, A.A. 2013. Working conditions and employee's productivity in manufacturing companies in Sub-Saharan African context: case of Somalia. *Educational Research International*, 2(2):67-78.

Ali, F., Wassie, B. & Greblo, A. 2012. HIV/AIDS control programmes in developing countries: The role of human resource. *Journal of AIDS and HIV Research*, 4(5):121-127.

Alli, B.D. 2008. *Fundamental principles of occupational health and safety*. Geneva, Switzerland: ILO Cataloguing in Publication Data.

Altermatt, E.R. 2007. Coping with academic failure. *The Journal of Early Adolescence*, 27(4):479-508.

Alumran, A., Hou, X-Y., Sun, J., Yousef, A. & Hurst, C. 2014. Assessing the construct validity and reliability of the parental perception on antibiotics (PAPA) scales. *BMC Public Health*, 14(73):1-9.

American Psychological Association (APA). 2008. *Stress in America*. [Online]. Available: <http://www.stressinamerica> [Assessed 12 October 2015].

Amnesty International. 2009. *Out of reach: The cost of maternal health in Sierra Leone*. London, UK: Amnesty International Publications.

Amponsah-Tawiah, K. & Mensah, J. 2016. Occupational health and safety and organisational commitment: Evidence from the Ghanaian mining industry. *Safety and Health at Work*, 7(3):225-230.

Amukugo, H.J., Amakali, K. & Sipa, K. 2015. Perceptions of health workers regarding the occupational health services rendered at Onandjokwe hospital, Namibia. *Journal of Hospital Administration*, 4(6):1-13.

Andale, S. 2014. *Construct validity: Simple definition, statistics used*. [Online]. Available: <http://www.statisticshowto.com/construct-validity/> [Accessed 10 August 2016].

Andrew, S. & Halcomb, E.J. 2009. *Mixed methods research for nursing and the health sciences*. New Jersey, NJ: Wiley & Sons.

Arastoo, H., Hakimovich, A.P. & Esfandiarpour, S. 2015. Assessment of barriers to establish OHS: A country. *Industrial Health*, 53(4):378-384.

Argyris, C. 1998. Empowerment: The emperor's new clothes. *Harvard Business Review*., 76(3):98-105.

Armour, M.A. 2003. *Harzadous Laboratory Chemicals and Disposal Guide*. London, NY: Lewis Publishers.

Aronsson, G. & Blom, V. 2010. Work conditions for workers with good long-term health. *International Journal of Workplace Health Management*, 3(2):160-172.

Ary, D., Jacobs, L.C., Sorensen, C. & Razavieh, A. 2009. *Introduction to research in education*. Belmont, California: Wadsworth-Cengage Learning.

Asiedu, M., Sarfo, J.O. & Adjei, D. 2014. Organisational commitment and citizen behavior: Tools to improve employee performance; an internal marketing approach. *European Scientific Journal*, 10(4):288-305.

Ataguba, J. & Akazili, J. 2010. Healthcare financing in South Africa: Moving towards universal coverage. *Health Care Financing*, 28(2):74-78.

Atieno, O.P. 2009. An Analysis of the Strengths and Limitations of Qualitative and Quantitative Research Paradigms. *Problems of Education in the 21st Century*, 13:13-18.

Awases, M., Gbary, A., Nyoni, J & Chatora, R. 2004. *Migration of health professionals in six countries: A synthesis report*. [Online]. Available: http://www.google.co.za/url?sa=t&rct=j&q=&esrc=s&source=web&cd=2&cad=rja&uact=8&ved=0ahUKEwjBjuOZtMnRAhVqJ8AKHfo2BCYQFggeMAE&url=http%3A%2F%2Fwww.afro.who.int%2Findex.php%3Foption%3Dcom_docman%26task%3Ddoc_download%26gid%3D3230&usg=AFQjCNGK5E1j0brQhd2nqh9Kry3Z8pm-bQ [Accessed 20 June 2016].

Ayodele, J. 2014. Trust in government and the politics of fuel subsidy removal in Lagos, Nigeria. *Inkanyiso: Journal of Humanities and Social Sciences*, 6(1):31-40.

Babbie, E. & Mouton, J. 2003. *The practice of social research*. Cape Town, South Africa: Oxford University Press.

- Babbie, E. 2005. *The basics of social research*. 3rd ed. Canada, United States: Thomson Wadsworth.
- Babbie, E. 2007. *Practice of social research*. United States: Cengage Learning.
- Babbie, E.R., Haley, F. & Zaino, J. 2003. *Adventures in social research: Data analysis using SPSS 11.0/11.5 for Windows*. California, CA: Pinee Forge Press.
- Baer, M. & Frese, M. 2003. Innovation is not enough: Climates for initiative and psychological safety, process innovations, and firm performance. *Journal of Organizational Behaviour*, 24:45-68.
- Bajpai, N. 2011. *Business research methods*. New Delhi, India: Pearson Education.
- Bajpai, V. 2014. The challenges confronting public hospitals in India, their origins, and possible solutions. *Advances in Public Health*, 1-27.
- Bakker, A.B. & Demerouti, E. 2007. The job demands-Resources model: State of the art. *Journal of Managerial Psychology*, 22(3):309-328.
- Bakker, A.B. & Schafeli, W.B. 2008. Positive organisational behavior: *Journal of Organisational Behavior*, 29(2):147-154.
- Bambacas, M. & Patrikson, M. 2008. Interpersonal communication skills that enhance organisational commitment. *Journal of Communication Management*, 12(1):51-72.
- Baran, M.L. & Jones, J.E. 2016. *Mixed Methods Research for Improved Scientific Study*. Hershey, Pennsylvania: Information Science Reference/IGI Global.
- Barhem, B., Younies, H. & Younis. M. 2010. Employee satisfaction in the health care sector: A comparative study of private and public health care organisations in the UAE. *Journal of Health Management*, 12(1):19-38.
- Baril-Gingras, G., Bellemare, M. & Brun J.P. 2006. The contribution of qualitative analyses of occupational health and safety interventions: An example through a study of external advisory interventions. *Safety Science*, 44:851-874.
- Barninghausen, T. & Bloom, D.E. 2011. "The global health workforce", In Sherry Glied and Peter C. Smith (eds.), *Oxford Handbook of Health Economics*, Oxford: Oxford University Press.

Bashir, M., Afzal, M.T. & Azeem, M. 2008. Reliability and validity of qualitative and operational research paradigm. *Pakistan Journal of Statistics and Operation Research*, 4(1):1-10.

Basic conditions of employment act. 1997. *Department of Labour. Republic of South Africa*. [Online] Available: <http://www.labour.gov.za/DOL/downloads/legislation/acts/basicconditions-ofemployment/Amended%20Act%20%20Basic%20Conditions%20of%20Employment.pdf> [Accessed 20 November 2016].

Bates, D.W., Cohen, M. & Leape, L.L. 2001. Reducing the frequency of errors in medicine using information technology. *Journal of the American Medical Informatics Association*, 8:299-308.

Battles, J., Dixon, N., Borotkanics, R., Rabin-Fastmen, B. & Kaplan, H. 2006. Sense making of patient safety risks and hazards. *Health Services Research*, 41(2):1555-1575.

Bauman, C.W. & Skitka, L.J. 2012. *Corporate social responsibility as a source of employee commitment satisfaction. Research in Organisational Behavior*, 32:63-86.

Baybutt, P. 2015. Managing process risks. *Process Safety Progress*, 34(2):80-106.

Beauchamp, T.L & Childress, J.F. 2001. *Principles of Biomedical Ethics*. Oxford, UK: Oxford University Press.

Begat, I., Ellfsen, B. & Severinsson, E. 2005. Nurses' satisfaction with their work environment and the outcomes of clinical nursing supervision on nurses' experiences of well-being – A Norwegian study. *Journal of Nursing Management*, 13(3):221-30.

Benatar, S.R. 2013. The challenges of health disparities in South Africa. *South African Medicine Journal*, 103(3):154-155.

Bennet, D. 2002. Health and safety management systems. Liability or asset? *Journal of Public Health*, 23(2):153-710.

Bennett, K & Minty, H. 2005. The manager as a career coach. *HR Future*, June.

Beri, G.C. 2010. *Business statistics*. New York, NY: Tata McGraw-Hill Education.

- Berry, W.H. 2010. *Self-monitoring, organisational commitment, and relationships to Intentions to Quit*. [Online]. Available: <http://search.proquest.com/ebrary/docview/205436866> [Accessed 10 June 2015].
- Betrand, D. & Shafer, M. 2016. Defining hazards. *American Meteorological Society*, 96(12):1-13.
- Bevan, S. 2010. *The business case for employee's health and well-being: A report prepared for investors in People*. [Online]. Available: <http://investorsinpeople.ph/wp-content/uploads/2013/08/The-Business-Case-for-Employee-Health-and-Wellbeing-Feb-2010.pdf> [Accessed 20 August 2015].
- Bhanji, S.M. 2013. Health care ethics. *Journal of Clinical Research and Bioethics*, 4:141-153.
- Bhattacharjee, S. & Gosh, S. 2011. Safety improvement approaches in the construction industry: A review and future directions. *Proceedings of 47th ASC Annual International Conference*.
- Bhavna, A. & Swati, G. 2012. Maximum success: Become an employer of choice. *International Journal of Novel Research in Marketing and Economics*, 2(1):27-34.
- Bhorat, H., & Meyer, J. & Mlatsheni, C. 2002. Skilled labour migration from developing countries: Study on South and Southern Africa. [Online]. Available: <http://www.queensu.ca/samp/migrationresources/braindrain/documents/bhorat.pdf> [Accessed 16 September 2015].
- Biggio, G. & Cortes, C.G. 2013. Well-being in the workplace through interaction between individual characteristics and organisational context. *International Journal for Qualitative Studies on Health Well-being*, 8:10-19.
- Black, S.E. 1999. Do better schools matter? Parental valuation of elementary education. *The Quarterly Journal of Economics*, 114(2):577-599.
- Blaikie, N. 2003. *Analysing quantitative data from description to explanation*. USA, Thousand Oaks, California: Sage.
- Blair, P.L. 2013. Lateral violence in nursing. *Journal of Emergency of Nursing*, 39(5):75-78.

- Bless, C. & Smith, C.H. 2000. *Fundamentals of social research methods: An African perspective*. Cape Town, South Africa: Juta.
- Blessing, L.T.M & Chakrabarti, A. 2009. *DRM, a design research methodology*. New York, NY: Springer Science & Business Media.
- Bottani, E., Monica, L. & Vignali, G. 2009. Safety management systems: performance differences between adopters and non-adopters, *Safety Science*, 47:155-162.
- Bowlby, R. 2012. Living the future: Organizational performance assessment. *Journal of Library Administration*, 52(6/7):626-652.
- Bradley, S., Kamwendo, F., Chipeta, E., Chimwaza, W., de Pinho, H. & McAuliffe, E. 2015. Too few staff, too many patients: a qualitative study of the impact on obstetric care providers and on quality of care in Malawi. *BMC Pregnancy Childbirth*, 15:65-70.
- Bragg, T. 2002. Improve employee commitment. *Industrial Management*, 7(8):18-20.
- Brennen, B.S. 2012. *Qualitative research methods for media studies*. New York, NY: Routledge.
- Brooks, G. 2002. Knowledge based structures and organisational commitment. *Management Decision*, 40:566-573.
- Brown, J. 2007. Factors affecting employee job satisfaction. *Australian Journal of Business and Management Research*, 1(9):113-123.
- Brown, S., McHardy, J., McNabb, R. & Taylor, K. 2011. Workplace performance, worker commitment and loyalty. *IZA Discussion Paper No, 5447*.
- Bryman, A. 2012. *Social research methods*. London, UK: Routledge.
- Burns, N. & Grove, S.K. 2001. *The practice of nursing research: Conduct, critique, and utilization*. St. Louis, Missouri/Saunders: Elsevier.
- Burns, R.B. 2000. *Introduction to research methods*. Thousand Oaks, California: Sage.
- Burton, I. 2015. Factors in urban stress. *The Journal of Sociology & Social Welfare*, 17(1):79-92.

- Cagno, E., Giulio, D.A. & Trucco, P. 2003. Risk and causes of risk assessment for an effective industrial safety management. *Journal of Safety Research*, 349(3):227-340.
- Canadian Centre for Management Development. 2002. *A fine balance: A manager's guide to workplace well-being*. [Online]. Available: <http://publications.gc.ca/collections/Collection/SC94-93-2002E.pdf> [Accessed 20 August 2015].
- Carayon, P., Hoonakker, P., & Smith, M.J. 2012. *Human factors in organisational design and management*. In Salvendy, editor. *Handbook of human factors and ergonomics*. New Jersey, NJ: John Wiley & Sons.
- Carton, R.B. & Hofer, C.W. 2006. *Measuring organisational performance: metrics for entrepreneurship and strategic management research*. Northampton, Massachusetts: Edward Elgar Publishing.
- Caruso, C.C., Bushnell, T. & Eggerth D. 2006. Long working hours, safety and health: Towards a national research agenda. *American Journal of Industrial Medicine*, 49(11):930-942.
- Cascio, W.F. 2003. *Changes in workers, work, and organisations* In Borman, W. Klimoski, R. & Ilgen D. 2003. *Handbook of psychology, 12: Industrial and organisational psychology*, 12:401-422.
- Castella, A., Vallino, A., Argentero, P.A. & Zotti, C.M. 2003. Preventability percutaneous injuries in healthcare workers: A year-long survey in Italy. *Journal of Hospital Infections*, 55(4):290-294.
- Chambel, M.L. & Sobral, F. 2011. Training is an investment with return in temporary workers: A social exchange perspective. *Career Development International* 16(2):161-177.
- Chandrasekar, K. 2011. Workplace environment and its impact on organisational performance in public sector organisations. *International Journal of Enterprise Computing in Business Systems*, 1(1):1-19.
- Chang, S., Du, P. & Huang, I. 2006. Nurses' perceptions of severe acute respiratory syndrome: Relationship between commitment and intention to leave nursing. *Journal of Advanced Nursing*, 54(2):171-179.

Chassin, M.R. & Loeb, J.M. 2011. The on-going quality improvement journey: Next stop, high reliability. *Health Affairs*, 30(4):559-568.

Chen, L., Evans, Anand, S., Brown, H., Chowdhury, M., Cueto, M., Dare, L., Dussault, G., Elzinga, G., Fee, E., Habte, D., Hanvoravongchai, P., Jacobs, M., Kuroski, C. Michael, S., Pablos-Mendez, A., Sewankambo, N., Solimano, G., Stiwell, B., de Waal, A. & Wibulpolprasert, S. 2004. Human resources for health: Overcoming the crisis. *Lancet*, 364:1984-1990.

Chen, W.C., Sun, Y.H., Lan, T.H. & Chiu, H.J. 2009. Incidence and risk factors of workplace violence on nursing staffs for chronic psychiatric patients in Taiwan. *International Journal Environmental Research Public Health*, 6(11):2812-2821.

Choi, S.P., Pang, S.M., Cheung, K. & Wong, T.K. 2011. Stabilizing and destabilizing forces in the nursing work environment: a qualitative study on turnover intention. *International Journal of Nursing Studies*, 48(10):1290-301.

Choi, S.D. 2014. Emerging strategies for construction safety and health hazard recognition. *Journal of Safety, Health and Environmental Research*, 10(2):152-161.

Chung, J. & Yazdanifard, R. 2014. The impact of employees' satisfaction on company's well-being and sustainability of the company in the long run. *Global Journal of Management and Business Research: A Administration and Management*, 14(7):1-5.

Cipriano, P.F. 2016. *Work place violence a growing problem for healthcare workers*. [Online]. Available: http://www.huffingtonpost.com/pamela-f-cipriano-phd-rn-neabcfaan/workplace-violence-a-grow_b_8089938.html [Accessed 20 July 2015].

Claassens, M.M., van Schalkwyk, C., du Toit, E., Roest, E., Lombart, C.J., Ernason, D.A., Beyers, N. & Borgdorff, M.W. 2013. Tuberculosis in healthcare workers and infection control measures at primary healthcare facilities in South Africa. *PLoS ONE*, 8(10):1-8.

Clark, C.J., Thomas, S., Khattab, A.D. & Carr, E.C. 2013. Development and psychometric of a screening. *International Journal of Physical Medicine & Rehabilitation*, 1:145-153.

- Clark, R.E. 2003. Fostering the work motivation of individuals and teams. *Performance Improvement. PubMed*, 42(3):21-29.
- Clarke, S.P. & Donaldson, N.E. 2008. Nurse staffing and patient care quality and safety. *PubMed*, 2(11):12-135.
- Clemens, M.A., Ozden, C. & Rapoport, H. 2014. Migration and development research is moving far beyond remittances. *World Development*, 64:121-124.
- Clemes, M. 2007. *Do visas kill? Health effects of African health professional emigration*. Working Paper Number 114. Washington DC: Centre for Global Development.
- Coetzee, M. 2005. *Employee commitment*. [Online]. Available: <http://repository.up.ac.za/bitstream/handle/2263/23942/05chapter5.pdf?sequence=6> [Accessed 10 April 2015].
- Cohen, A. 2003. *Multiple commitments in the workplace: An integrative approach*. Mahwah, New Jersey: Lawrence Erlbaum Associates.
- Cohen, L., Manion, L. & Morrison, K. 2013. *Research methods in education*. London, UK: Routledge.
- Coldwell, D. & Herbst, F. 2004. *Business Research*. Cape Town, South Africa: Juta.
- Collin, S.A., Stein, D.M., Vawdrey, D.K., Stetson, P.D. & Bakken, S.B. 2011. Content overlap in nurse and physician handoff artifacts and the potential role of electronic health records: A systematic review. *Journal of Biomedical Informatics*, 44(4):704-712.
- Collis, J. & Hussey, R. 2003. *Business Research: A practical guide for undergraduate and postgraduate students*. London, UK: Palgrave.
- Collis, J. & Hussey, R. 2009. *Business research: A practical guide for undergraduate & postgraduate students*. United Kingdom, UK: Palgrave Macmillan.
- Colquitt, J.A., Conlon, D.E. & Wesson, M.J. 2001. Justice of the millennium: A Meta-analytic review of 25 years of organisational justice research. *Journal of Applied Psychology*, 86(3):425-445.

- Connell, O.A. & Phillips, J.J. 2004. *Managing employee retention. Research Methods for Media Studies*. New York, NY: Routledge.
- Constable, S., Coats, D., Bevan, S. & Mahdon, M. 2009. *Good Jobs*. [Online]. Available: <http://www.hse.gov.uk/research/rrpdf/rr713.pdf> [Accessed 12 August 2015].
- Cookson, R. 2005. Evidence-based policy making in health care: What it is and what it isn't. *Journal of Health Services Research & Policy*, 10:118-21.
- Cooper, C.L. & Cartright, S. 1994. Healthy mind-healthy organisation: A proactive approach to occupational stress. *Human Relations*, 47:455-471.
- Cooper, D.R. & Schindler, P.S. 2006. *Business research methods*. London, UK: McGraw-Hill Irwin
- Cooper-Hakim, A. & Viswesvaran, C. 2005. The construct of work commitment: Testing an integrative framework. *Psychological Bulletin*, 131(2):241-259.
- Coovadia, H., Jewkes, R., Barron, P., Sanders, D. & McIntyre, D. 2009. The health and system of South Africa: Historical roots of current public health challenges. *The Lancet*, 374:817-834.
- Costa, G. 2010. Shift work and health: Current problems and preventive actions. *Safety Health Work*, 1:112-123.
- Costello, A.B. & Osborne, J.W. 2005. Best practices in exploratory factor analysis: Four recommendations for getting the most from your analysis. *Practical Assessment Research & Evaluation*, 10(7):1-9.
- Crabtree, S. 2005. *Engagement keeps the doctor away*. [Online]. Available: <http://gmj.gallup.com> [Accessed 13 August 2015].
- Creswell, J.W. & Clark, V.L.P. 2011. *Designing and conducting mixed methods research*. Thousand Oaks, California: Sage.
- Creswell, J.W. 2003. *Research design: A qualitative, quantitative and mixed method approaches*. 2nd ed. Thousand Oaks, California: Sage.
- Creswell, J.W. 2009. *Research design: qualitative, quantitative and mixed method approaches*. 3rd ed. Thousand Oaks California: Sage.

- Creswell, J.W. 2014. *Research design: qualitative, quantitative and mixed methods approaches*. 4th ed. Thousand Oaks California: Sage.
- Crisp, N. & Lincoln, C. 2014. Global supply of health professionals. *New England Journal for Medicine*, 370:950-957.
- Dal Poz, M.R., Kinfu, Y., Drager, S. & Kunjumen, T. 2007. *Counting health workers: definitions, data, methods and global results*. [Background paper for World health report 2006: working together for health] Geneva: World Health Organisation: 2006.
- Dannhauser, Z. 2007. *Relationship between servant leadership, follower trust, team commitment and unit effectiveness*. [Online]. Available: http://www.ibrarian.net/nav-on/paper/THE_RELATIONSHIP_BETWEEN_SERVANT_LEADERSHIP__FOLL.pdf?paperid=8527330 [Accessed 10 April 2016].
- Das, B.L. & Baruah, M. 2013. Employee retention: A review of literature. *IOSR Journal of Business and Management*, 14(2):8-16.
- Datta, P. 2007. *Paediatric nursing*. New Delhi, India: Jaypee Brothers, Medical Publishers.
- Davidson, M.C.G. 2003. Does organisational climate add to service quality in hotels? *International Journal of Contemporary Hospitality Management*, 15(5):206-213.
- De Castro, A.B., Cabrera, S.L. & Tagalog, E.A. 2006. Prioritising safe patient handling: The American Nurses Association's handle with care campaign. *Journal of Nursing Administration*, 36(7-8):363-369.
- De Joy, D.M. 1996. Theoretical models of health behaviour and workplace self-protective behaviour. *Journal of Safety Research*, 27(2):61-72.
- Demerouti, A. & Bakker, A.B. 2011. The job demands-resource model: Challenges for future research. *SA Journal of Industrial Psychology/SA Tydskrif vir Bedryfsielkunde*, 37(2):1-9.
- Denzin, N. & Lincoln, Y. 2000. *Handbook of qualitative research*. London, UK: Sage.
- Denzin, N.K & Lincoln, Y.S, 2011. *The SAGE handbook of qualitative research*. Thousand Oaks, California: Sage.

Department of Health. 2003. *Occupational Health Services for Health Care Workers in the National Health Service of South Africa: A Guideline Booklet*. [Online] Available: <http://www.kznhealth.gov.za/occhealth/OHmanual.pdf> [Accessed 14 September 2015].

Department of Health. 2013. *Nursing education and training standards*. [Online] Available: <http://www.sanc.co.za/pdf/Nursing%20Education%20and%20Training%20Standards.pdf> [Accessed on 21 November 2015].

Department of Labor (DOL). 2016. *Organisational safety culture – linking patient and worker safety*. [Online]. Available: <https://www.osha.gov/SLTC/healthcarefacilities/safetyculture.html> [Accessed 12 January 2016].

Department of Labour (DOL). 2004. *Basic Conditions of employment*. [Online] Available: <http://www.labour.gov.za/DOL/downloads/legislation/acts/basic-conditions-ofemployment/Amended%20Act%20%20Basic%20Conditions%20of%20Employment.pdf>. [Accessed 28 May 2016].

Dewhurst, M., Guthridge, M. & Mohr, E. 2009. *Motivating people: Getting beyond money*. [Online]. Available: http://www.mckinsey.com/insights/organization/motivating_people_getting_beyond_money [Accessed 17 November 2015].

Dhai, A., Etheredge, H.R., Vorster, M. & Veriava, Y. 2011. The public's attitude towards strike action by healthcare workers and health services in South Africa. *South African Journal of Bioethics and Law*, 4(2):58-65.

Diamantopoulos, A. & Schlegelmilch, B.B. 2000. *Taking the fear out of data analysis: A step by step approach*. United Kingdom, UK: Cengage Learning.

Diamantopoulos, A. & Schlegelmilch, B.B. 2005. *Taking the fear out of data analysis*. London, UK: Thompson Learning.

Dixt, V. & Bhati, M. 2012. A study about employee commitment and its impact on sustained productivity in Indian auto-component industry. *European Journal of Business and Social Sciences*, 1(6):34-51.

Dolamo, R. 2013. Batho/Ubuntu: The heart of Africa-ethics. *Scriptura*, 112(1):1-10.

Dovlo, D.Y. 2004. Using mid-level cadres as substitutes for internationally mobile health professionals in Africa. A desk review, *Human Resources for Health*, 2 (1):7.

Dovlo, D. 2005. Taking more than a fair share? The migration of health professionals from poor to rich countries, *PLoS Medicine*, 2 (5):12.

Doyle, C., Lennox, L. & Bell, D. 2013. A systematic review of evidence on the links between patient experience and clinical safety and effectiveness. *BMJ Open*, 3(1):1-19.

Drost, E.A. 2011. Validity and reliability in social research. *Education Research and Perspectives*, 38(1):105-123.

Du Plessis, P.J. & Rousseau, G.G. 1999. *Buyer behaviour: A multi-cultural approach*. Oxford, UK: Oxford University Press.

Du Toit, D.A. & Van Staden, S.J. 2005. *Nursing sociology*. Pretoria, South Africa: Van Schaik Publishers.

Dumont, J.C. & Lemaitre, G. 2005. Counting immigrants and expatriates in OECD countries: A new perspective. *OECD Economic Studies*, 1:49-83.

Dustman, C., Fadlon, I. & Weiss, Y. 2011. Return migration, human capital accumulation and the brain drain. *Journal of Development Economics*, 95:58-67.

Edmands, A. 2011. Does stock market fully value intangibles? Employee satisfaction and equity prices. *Journal of Financial Economics*, 10-1:621-640.

Egan, A. 2007. Some counterexamples to casual decision theory. *Philosophical Review*, 116:93-114.

Eiselen, R.J., Uys, T. & Potgieter, N. 2005. *Analyzing survey data using SPSS13: A workbook*. Johannesburg, South Africa. University of Johannesburg. [Online]. Available: www.uj.ac.za/EN/Research/Statkon/Documents/Statkom%20Questionnaire%20Design.pdf. [Accessed 10 February 2016].

Eklof, M., Torner, M. & Pousette, A. 2014. Organisational and social-psychological conditions in healthcare and their importance for patient and staff safety. A critical incident study among doctors and nurses. *Safety Science*, 70:211-221.

- Ekundayoi, J.A. 2014. Occupational stress and employees' productivity in the workplace. *International Journal of Scientific Research in Education*, 7(2):157-165.
- El-Jardali, F., Jamal, D., Abdallah, A. & Kassak, K. 2007. Human resources for health planning and management in the Eastern Mediterranean region: Facts, gaps and forward thinking for research and policy. *Human Resources for Health*, 5(9):1-12.
- Elliot, M.C. 2000. The limits of Tartary: Manchuria in imperial and national geographies. *Journal of Asian Studies*, 59(3):603-46.
- Ellis, E. 2013. *Casualty patient's long wait*. Herald, Port Elizabeth. 18 March.
- Enterprise for Health. 2008. *Achieving business excellence – health, well-being and performance*. [Online]. Available: http://www.enterpriseforhealth.org/fileadmin/texte/EfH_Conference_2008/Conference_Guide_2008/efh_conference_book_final.pdf [Accessed 30 August 2015].
- Epstein Becker & Green. 2016. *Five challenges facing employers in the health care industry*. [Online]. Available: <http://www.ebglaw.com/content/uploads/2016/03/Take-5-March-20161.pdf> [Accessed 5th March 2016].
- Epstein, B. & Turner, M. 2015. The Nursing code of ethics: Its value, its history. *The Online Journal of Issues in Nursing*, 20(2):1-10.
- Equal Treatment. 2005. Newsletter of the treatment campaign, Issue18:6-14.
- Eriksen, W., Tambs, K. & Knardahl, S. 2006. Work factors and psychological distress in nurses' aides: A prospective cohort study. *BMC Public Health*, 6:290-299.
- Erilli, N.A. & Alakus, K. 2014. Non-Parametric estimation for data with equal values. *European Scientific Journal*, 10(4):70-82.
- Erixon, F. & Van der Marel, E. 2011. *What is driving the rise in health care expenditures? An inquiry into the nature and causes of the cost disease*. [Online]. Available: http://www.ecipe.org/app/uploads/2014/12/what-is-driving-the-rise-in-health-care-expenditures-an-inquiry-into-the-nature-and-causes-of-the-cost-disease_1.pdf [Accessed 10 February 2015].

- Etikan, I., Musa, A. & Alkassim, R.S. 2015. Comparison of convenience sampling and purposive sampling. *American Journal of Theoretical and Applied Statistics*, 5(1):1-4.
- European Agency for Safety and Health at Work. 2014. *Risk assessment for care workers*. [Online]. Available: <http://www.osha.mddsz.gov.si/resources/files/efact35.pdf> [Accessed 10 June 2015].
- Fabrigar, L.R. & Wegener, D.T. 2012. *Exploratory Factor Analysis: Understanding Statistics*. Oxford, UK: Oxford University Press.
- Fedor, D.B., Caldwell, S. & Herold D.M. 2006. The effects of organisational changes on employee commitment: A multilevel investigation. *Personnel Psychology*, 59(1):1-29.
- Ferns, T. & Meerabeau, L. 2008. Verbal abuse experienced by nursing students. *Journal of Advanced Nursing*, 61(4):436-44.
- Feysia, B., Herbst, C., Lemma, W. & Soucat, A. 2012. *The health workforce in Ethiopia: Addressing the remaining challenges*. [Online]. Available: <http://documents.worldbank.org/curated/en/433741468250204395/pdf/662180PUB0EPI00pia0health0workforce.pdf> [Accessed 5 August 2015].
- Fidel, A. 2009. *Discovering statistics using SPSS for windows*. London, UK: Sage.
- Fidel, R. 2008. Are we there yet? Mixed method research in Library and Information Science. *Library and Information Science Research*, 30:265-272.
- Fiorito, J., Bozeman, D.P., Young, A. & Meurs, J.A. 2007. Organisational commitment, human resource practices and organisational characteristics. *Journal of Managerial Issues*, 19(2):186-207.
- Flin, R., Burns, C., Mearns, K., Yule, S. & Robertson, E.M. 2006. Measuring safety climate in healthcare. *Quality & Safety in Healthcare*, 15(2):109-115.
- Fossey, E., Harvey, C., McDermott, F. & Davidson, I. 2002. Understanding and evaluating qualitative research. *Australian and New Zealand Journal of Psychiatry*, 36:717-732.

- Fox, D.M. 2005. Evidence-based health policy: The politics of systematic reviews in coverage decisions. *Health Affairs*, 24:114-22.
- Fox, N., Hunn, A. & Mathers, N. 2009. *Sampling, sample size calculation*. [Online]. Available:<https://www.researchgate.net/file.PostFileLoader.html?id=56d5daf-44048541166203baf&assetKey=AS%3A334891628679169%401456855794737>. [Accessed 12 October 2015].
- Fox, W. & Bayat, M.S. 2007. *A guide to managing research*. Cape Town, South Africa: Juta.
- Frazer, L. & Lawley, M. 2000. *Questionnaire design and administration: A practical guide*. New Jersey, NJ: Wiley & Sons.
- Ganguly, S. 2011. Human error vs. work place management in modern organizations. *International Journal of Research in Management and Technology*, 1(1):13-17.
- Genius, S.J. & Lipp, C. 2013. Ethical diversity and the role of conscience in clinical medicine. *International Journal of Family Medicine*, 587541:1-18.
- Gershon, R.M. 2004. Measurement of organisational culture and climate in healthcare. *Journal of Nursing Administration*, 34(2):33-40.
- Ghani, M.K., Hamid, Z., Mohd Zain, M.Z., Rahim, A.H., Kamar, K.A. & Abdul Rahman, M.A. 2010. *Safety in Malaysian construction: The challenges and initiatives*. Construction Research Institute Malaysia (CREAM), CIDB Malaysia.
- Gibson, J.L., Ivancevich, J.M, Donnelly, JH. & Konapaske, R. 2006. *Organisation behaviour structure processes*. New York, N.Y: Irwin McGraw-Hill.
- Gilbert, M.G. 2004. *The meaning of technology: Selected readings from American sources*. Barcelona, Spain: Centre de Publicacions del Campus Nord.
- Glanz, K., Rimer, B.K. & Viswanath, K. 2008. *Health behaviour and Health education: Theory, research and practice*. San Francisco, CA: Jossey-Bass.
- Goins, R.T., Williams, K.A., Carter, M.W., Spencer, M. & Solovieva, T. 2005. Perceived barriers to health care access among rural older adults: A qualitative study. *Journal of Rural Health*, 21(3):206-213.

- Golafshani, P. 2003. *Understanding reliability and validity in qualitative research*. [Online]. Available: <http://www.nova.edu/ssssQR/QR8-4/golafshani.pdf> [Accessed 1 November 2009].
- Goniewicz, M., Wloszczak-Szubzda, A., Niemcewicz, M., Witt, M., Marciniak-Niemcewicz, A. & Jarosz, M.J. 2012. Injuries caused by sharp instruments among healthcare workers-international and Polish perspectives. *Annals of Agricultural and Environmental Medicine*, 19(3):523-527.
- Goodin, H. 2003. The nursing shortage in the United States of America: An integrated review of the literature. *Journal of Advanced Nursing*, 17(24):335-350.
- Govender, M., Mueller, D.B. & Basu, D. 2011. Purchasing of medical equipment in public hospitals: The mini-HTA tool. *The South African Medical Journal*, 101(11):807-808.
- Grabovac, I. & Mustajbegovic, J. 2015. Healthy occupational culture for a worker-friendly workplace. *AHIT*, 66(1):1-8.
- Grant, A.M., Dutton, J.E. & Rosso, B.D. 2008. Giving commitment: Employee support programs and the prosocial sense making Process. *Academy of Management Journal*, 51(5):898-918.
- Gray, D.E. 2009. *Doing research in the real world*. London, UK: Sage.
- Griffiths, J. 2008. *Safety behaviour in the public health sector institutions*. [Online] Available:<http://www.who.int/dietphysicalactivity/griffiths-stakeholder-involvement.pdf>. [Accessed 28 April 2015].
- Grignon, M., Owusu, Y., & Sweetman, A. 2012. The International migration of health professionals. IZA Discussion Papers 6517, institute for the Study of Labor (IZA).
- Guest, G., Namey, E.E. & Mitchell, M.L. 2012. *Collecting qualitative data: A field manual for applied research*. Thousand Oaks, California: Sage.
- Guidelines on occupational safety. 2007. *Occupational safety and health act*. [Online] Available: <http://www.osall.org.za/docs/2011/03/Uganda-Occupational-Safety-and-Health-Act-2007.pdf>. [Accessed 11 January 2016].

Guvana, D.D. 2008. *Retention of medical doctors in the public health sector: A case study of the Port Elizabeth Hospital complex*. [Online]. Available: <http://contentpro.seals.ac.za/iii/cpro/DigitalItemPdfViewerPage.external?id=2405543500079503&itemId=1009549&lang=eng&file=%2Fiii%2Fcpro%2Fapp%3Fid%3D2405543500079503%26itemId%3D1009549%26lang%3Deng%26nopassword%3Dtrue%26service%3Dblob%26suite%3Ddef#locale=eng&gridView=true> [Accessed 12 May 2016].

Hair, J., Babin, B., Money, A. & Samouel, P. 2003. *Essentials of business research methods*. New Jersey, NJ: Wiley & sons.

Hair, J.F., Anderson, R.E., Tatham, R.L. & Black, W.C. 1998. *Multivariate data analysis*. New Jersey: Prentice Hall.

Hair, J.F., Black, W.C., Babin, B.J. & Anderson, R.E. 2003. *Multivariate data analysis*. Pearson New International Edition. London: Pearson Education Limited.

Hair, J.F., Black, W.C., Babin, B.J. & Anderson, R.E. 2010. *Multivariate data analysis*. New Jersey, Prentice Hall.

Hair, J.F., Black, W.C., Babin, J.B. & Anderson, R.E. 2014. *Multivariate data analysis*. Essex, England: Pearson.

Halsey, L.G., Curran-Everett, D., Vowler, S.L. & Drummond, G.B. 2015. The fickle *P* value generates irreproducible results. *Nature Methods*, 12:179-185.

Handler, B. 2010. Teacher as curriculum leader: A consideration of the appropriateness of that role assignment to classroom-based practitioners. *International Journal of Teacher Leadership*, 3(3):32-42.

Harris, J.R. & Richard, S. 2012. Current machine safety: New & updated consensus standards: *Prof Saf*, 57(5):50-57.

Harris, T.E. & Nelson, M.D. 2008. *Applied organisational communication: Theory and practice in a global environment*. New York, NY: Lawrence Erlbaum.

Hartwell, T.D., Steele, P., French, M.T., Porter, F.J., Rodman, N.F. & Zarkin, G.A. 1996. Aiding troubled employees: The prevalence, cost, and characteristics of

employee assistance programs in the United States. *American Journal of Public Health*, 86(6):804-808.

He, Y., Li, W. & Lai, K.K. 2011. Service climate, employee commitment and customer satisfaction: Evidence from the hospitality industry in China. *International Journal of Contemporary Hospitality Management*, 23(5):592-607.

Heale, R. & Twycross, A. 2015. Validity and reliability in quantitative studies. *Evidence Based Nursing*, 18(3):66-67.

Health and Safety Authority. 2016. *Healthy, safe and productive lives*. [Online] Available: <http://www.hsa.ie/eng/>. [Accessed 24 May 2016].

Health and Safety Executive. 2004. *Successful health and safety management*. London, UK: HSE Books.

Health and Safety Executive. 2013. *Sharp instruments in healthcare regulations. Guidance for employers and employees*. [Online]. Available: <http://www.hse.gov.uk/pubns/hsis7.pdf>. [Accessed 13 June 2015].

Health Professions Act 56 of 1974. 1974. *Health Professions Act*. [Online]. Available: https://www.google.co.za/search?q=health+professions+act+56+of+1974&rlz=1C1MSIM_enZA633ZA639&oq=Health+Profe&aqs=chrome.3.69i57j0l5.7348j0j8&sourceid=chrome&ie=UTF-8# [Accessed 20 August 2015].

Heathfield, S.M. 2016. *Job specification: How can a job specification help you with recruiting and selecting employees?* [Online]. Available: <https://www.thebalance.com/job-specification-1918170> [Accessed 4 December 2016].

Hee, O.C. & Abidin, A.B.Z. 2016. The moderating effects of job satisfaction on the relationship between personality traits and customer-oriented behaviour in the Malaysian Health Tourism Industry. *International Business Research*, 9(6):72-79.

Hegney, D., Tuckett, A., Parker, D. & Eley, R.M. 2010. Workplace violence. Differences in perceptions of nursing work between those exposed and those not exposed: A cross-sector analysis. *International Journal of Nursing*, 16(2):188-202.

Hellriegel, D. & Slocum, J.W.J. 2004. *Organisational behavior*. Sydney, Australia: Thomson Learners.

- Hemphill-Pearson, B. 2008. *Assessment in occupational therapy mental: An integrative approach*. New Jersey, NJ: Slack.
- Henderson, L.N. & Tullock, J. 2008. Incentives for retaining and motivating health workers in Pacific and Asian Countries. *Human Resources for Health*, 6(18):1-20.
- Henshaw, J.L. Gaffney, S.H. Madl, A.K. & Paustenback, D. 2007. The employer's responsibility to maintain a safe and healthful work environment: An historical review of societal expectation and industrial practices. *Employee Responsibilities and Right Journal*, 19(3):173-192.
- Hernon, P. & Schwartz, C. 2009. Reliability and validity. *Library and Information Science Research*, 31:1-2.
- Hesse-Biber, S.N. 2010. *Mixed methods research: Merging theory with practice*. New York, NY: Guilford Press.
- Hester, J.P. & Setzer, R. 2013. Mentoring: Adding value to organisational culture. *The Journal of Value-based Leadership*, 6(4):1-23.
- Hill, E.L. 2004. Executive dysfunction in autism. *Trends Cognitive Science*, 8(1):26-32.
- Hochwarter, W.A. & Thompson, K.R. 2010. The moderating role of optimism on politics-outcomes relationships: A test of competing perspectives. *Human Relations*, 63(9):1371-1394.
- Houser, R.A. 2014. *Counselling and educational research: Evaluation and application*. Thousand Oaks, California: Sage.
- Hovden, J., Albrechtsen, E. & Herrera, I.A. 2010. Is there a need for new theories, models and approaches to occupational accident prevention? *Safety Science*, 48(8):950-956.
- Hoyle, D. 2005. *Automotive quality systems handbook: Incorporating ISO/TS 16949:2002*. Oxford, United Kingdom: Butterworth-Heinemann.
- Hsu, S.H. & Wang, Y. 2008. The development and empirical validation of the employee satisfaction index model. *Total Quality Management*, 19(4):353-366.

Hughes R.G 2008. *Patient safety and quality: An Evidence-based handbook for nurses*. [Online] Available: <https://archive.ahrq.gov/professionals/clinicians-providers/resources/nursing/resources/nursesfdbk/nursesfdbk.pdf>. [Accessed 27 April 2016].

Hughes, P. & Ferrett, E. 2011. *Introduction to health and safety at work*. The Handbook for the NEDBOSH National General Certificate. New York, NY: Routledge.

Hunt, M.L. & Hughey, S.W. 2010. Workplace violence: Impact and prevention. *KCA Journal*, 29(1):39-43.

Ibrahim, I.I., Noor, S.M., Nasirun, N. & Ahmad, Z. 2012. Safety in the office: Does it matter to the staff? *Procedia-Social and Behavioral Science*, 50:730-740.

Ibrahim, S., Daut, I., Irwanto, M., Gomesh, N. & Farhana, Z. 2012. Linear regression model in estimating solar radiation in Perlis. *Energy Procedia*, 18:1402-1412.

Indermun, V. & Bayat, M. 2013. The job satisfaction – employee performance relationship: A theoretical perspective. *International Journal of Innovative Research in Management*, 11(2):1-9.

International Labour Organisation (ILO) 1996-2016. Geneva.

International Organisation for Migration (IOM). 2004. The migration of health care workers: Creative solutions to manage health workforce migration. *Seminar on Health and Migration*, 9-11 June. Geneva, Switzerland.

Irefin, P. & Mechanic, M.A. 2014. Effect of employee commitment on organizational performance in Coca Cola Nigeria Limited Maiduguri, Borno State. *Journal of Humanities and Social Sciences (IOSR-JHSS)*, 19(3):33-41.

Jack, H., Canavan, M., Ofor-Atta, A., Taylor, E. & Bradley, E. 2013. Recruitment and retention of mental health workers in Ghana. *PLoS ONE*, 8(2):1-10.

Jackson, J.A. 1986. *Migration aspects of modern society*. New York, NY: Longman Inc.

Jackson, R.J. & Kochtitzky, C. 2010. *Creating a healthy environment: The input of the built environment on public health*. [Online]. Available: <http://www.sprawlwatch.org/health.pdf> [Assessed 17 September 2016].

Jafaragae, F., Parvizy, S., Mehrdad, N. & Rafii, F. 2012. Concept analysis of professional commitment in Iranian nurses. *Iranian Journal of Nursing and Midwifery Research*, 17(7):472-479.

Jain, A.J., Giga, S.I. & Cooper, C. 2009. Employee wellbeing, control and organisational commitment. *Leadership and Organizational Development Journal*, 30(3):256-273.

Jain, A.J., Giga, S.I. & Cooper, C. 2013. Stress, health and well-being: The mediating role of employee and organisational commitment. *International Journal of Environmental Research and Public Health*, 10(10):4907-4924.

James, S. & Miza, T.M. 2015. Perceptions of professional nurses regarding introduction of the Batho Pelo principles in State hospitals. *PubMed*, 38(1):1128-1139.

Janisse, T. & Tallman, K. 2001. *Care experience physician work environment update: Physician key drivers [presentation]*. Oakland, CA. Care Experience Council.

Jarrin, O.F. 2010. Core elements of US nurse practice acts and incorporation of nursing diagnosis language. *International Journal of Terminologies and Classification*, 21(4):166-176.

Jasawalla, A.R. & Sashittal, H.C. 2003. Building collaborative new product processes: Why instituting teams are not enough. *Advanced Management Journal*, 68(1):27-30.

Jaskiewicz, W. & Tulenko, K. 2012. Increasing community health worker productivity and effectiveness: A review of the influence of the work environment. *Human Resources for Health*, 10:38-51.

Jayasuriya, R., Whittaker, M., Halim, G. & Matineau, T. 2012. Rural health workers and their work environment: The role of international factors on job satisfaction of nurses in rural Papua New Guinea. *Health Services Research*, 12:156.

Jennings, B., Bailey, M.A., Bottrell, M. & Lynn, J. 2006. The ethics of using Q1 methods to improve health care quality and safety. *Hasting Centre Report*, 36(4):1-40.

Jennings, B.M. 2008. Work stress and burnout among nurses: Role of the work environment and work conditions. In Hughes R.G. Patient safety and quality: An evidence-based handbook for nurses. Rockville (MD): Agency for Healthcare Research and Quality (US).

Jivani, S. 2014. *Job analysis job description and job specification*. [Online]. Available: <https://www.linkedin.com/pulse/20140916051732-51307174-job-analysis-job-description-and-job-specification> [Accessed 16 April 2016].

Johnson, B. & Christensen, L. 2004. *Educational research: Quantitative, qualitative and mixed approaches*. New Jersey, NJ: Pearson Prentice Hall.

Joreskog, K. & Sorbom, D. 1993. Introduction in testing structural equation models, Kenneth, A., Bollen and J. Scott Long. Newsbury Park, CA: Sage.

Joseph, K.E. & Dai, C. 2009. The influence of organisational culture on organisational involvement and worker productivity. *International Journal of Business and Management*, 4(9):243-250.

Joseph, T.D. 2013. Work related stress. *European Journal of Business and Social Sciences*, 1(10):73-80.

Ju, S., Kong, L., Hussin, Z. & Jusoff, K. 2008. The influence of employee benefits towards organisational commitment. *Asian Social Science*, 4(8):147-150.

Judeh, M. 2011. Role ambiguity and role conflict as mediators of the relationship between socialization and organizational commitment. *International Business Research*, 4(3):171-181.

Judge, T.A., Heller, D. & Klinger, R. 2008. The dispositional sources of job satisfaction: A comparative test. *Applied Psychology. An International Review*, 57(3):361-372.

Kachieng'a, M.O. 1999. Technology Management in the Public Health Sector: Professional view from equipment maintenance experts. *The South African Journal of Engeneering*, 13(1):101-118.

Kakizaki, M., Ikeda, N., Ali, M., Enkhtuya, B., Tsolmon, M., Shibuya, K. & Kuroiwa, C. 2011. Needle stick and sharps injuries among health care workers at public tertiary hospitals in an urban community in Mongolia. *BMC Research Notes*, 14(4):184-190.

Kanchana, P. & Panchanathan, N. 2012. The influence of demographic factors on organisational commitment. *IJEMR*, 2(5):1-13.

Karatepe, O.M., Yorganci, I. & Haktanir, M. 2009. Outcomes of customer verbal aggression among hotel employees. *International Journal of Contemporary Hospitality Management*, 21(6):713-33.

Karia, N. & Ahmad, Z.A. 2000. Quality practices that pay: Empowerment and teamwork. *Malaysian Management Review Journal*, 35:66-76.

Katamba, H.S. 2011. *Factors affecting voluntary nursing staff turnover in Mengo Hospital*. [Online]. Available: http://uir.unisa.ac.za/bitstream/handle/10500/5590/dissertation_katamba_h.pdf;sequence=1 [Accessed 7 May 2016].

Kaur, K., Sandhu, H.S. & Kaur, K. 2010. Career stage effect on organisational commitment: Empirical evidence from Indian banking industry. *International Journal of Business and Management*, 5(12):141-152.

Keskes, I. 2014. Relationship between leadership styles and dimensions of employee organisational commitment: A critical review and discussion of future directions. *Intangible Capital*, 10(1):26-51.

Kessler, R.C., Ormej, J., Petukhova, M., McLaughlin, K.A., Green, J.G, Russo, L.J., Stein, D.J., Zaslavsky, A.M., Gaxiola, A., Alonso, J., Andrade, L., Benjet, C., de Girolamo, G., de Graaf, R., Demyttenaere, K., Fayyad, J., Haro, J.M., Hu, C., Karam, A., Lee, S., Lepine, J.P., Matchsinger, H., Mihaescu-Pintia, C., Posada-Villa, V., Sagar, R. & Ustin, T.B. 2011. Development of lifetime comorbidity in the World Health Organization world mental health surveys. *Arch Gen Psychiatry*, 68(1):90-100.

Khademloo, M. 2013. Health care violence and abuse towards nurses in hospitals in North of Iran. *Global Journal of Health Science*, 5(4):211-216.

Khalid, K., Hilman, H. & Kumar, D. 2012. Get along with quantitative research process. *International Journal of Research in Management*, 2(2):15-29.

Khamisa, N., Oldenburg, B., Pelzer, K. & Ilic, D. 2015. Work related stress, burnout, job satisfaction and general health nurses. *International Journal of Environmental Research and Public Health*, 12(1):652-666.

- Khan, A., Yusoff, R.B., Khan, M.M., Yasir, M. & Khan, F. 2014. Psychometric analysis of role conflict and ambiguity scales in academia. *International Education Studies*, 7(8):1-10.
- Khan, F., Yusoff, R.M.D. & Khan, A. 2014. Job demands, burnout and resources in teaching a conceptual review. *World Applied Sciences Journal*, 30(1):20-28.
- Khan, M.M., Rehman, Z. & Akram, M.W. 2012. The impact of employee commitment and employee satisfaction role of employee performance as a moderating variable. *Singaporean Journal of Business Economics and Management Studies*, 1(2):68-80.
- Khan, R.A.G., Khan, F.A. & Khan, M.A. 2011. Impact of training and development on organizational performance. *Global Journal of Management and Business Research*, 11(7):63-68.
- Khoshknab, M.F., Oskouie, F., Najafi, G., Ghazanfari, N., Tamizi, Z. & Ahmadvand, H. 2015. Psychological violence in the health care settings in Iran: A cross-sectional study. *Nursing Midwifery Studies*, 4(1):1-6.
- Kieft, R.M., de Brouwer, B., Francke, A.L. & Delnoij, D. 2014. How nurses and their work environment affect experiences of the quality of care: A qualitative study. *BioMed Central Health Service Research*, 14(1):249-259.
- Kilic, S. 2012. Interpretation of correlation analysis results. *Journal of Mood Disorders*, 2(4):191-193.
- Kimberlin, C.L. & Winterstein, A.S. 2008. Validity and reliability of measurement instruments used in research. *American Journal of Health-System Pharmacology*, 65(35):2276-2284.
- Kimberly, M. 2014. *Bay medical school is in the pipeline*. [Online]. Available: <http://www.heraldlive.co.za/weekend-post/2014/01/25/bay-medical-school-is-in-the-pipeline/> [Accessed 14 March 2015].
- Kinfu, Y., Dal Poz, M.R., Mercer, H. & Evans, D.B. 2008. The Health worker shortage in Africa: Are enough physicians and nurses being trained? *Bull World Health Organ*, 87(3):225-230.

- Kirch, W. 2008. *Encyclopedia of Public Health*. New York, NY: Springer Science & Business Media.
- Kling, R.N., Yassi, A., Smailes, E., Lovato, C.Y. & Koehoorn, M. 2009. Characterizing violence in health care in British Columbia. *Journal of Advanced Nursing*, 65(8):1655-1663.
- Klopper, H.C., Coetzee, S.K., Pretorius, R. & Bester, P. 2012. Practice environment, job satisfaction and burnout of critical care nurses in South Africa. *Journal of Nursing Management*, 20(5):685-695.
- Knifton, L., Watson, V., Grundemann, R., Dijkman, A., den Besten, H. & ten Have, K. 2011. *A guide for employers to promoting mental health*. [Online]. Available: http://www.enwhp.org/fileadmin/downloads/8th_Initiative/MentalHealth_Broschuere_Arbeitgeber.pdf [Accessed 20 July 2015].
- Kok, P., Gelderblom, D., Oucho, J.O. & Van Zyl, J. 2006. *Migration in South and Southern Africa*. Cape Town, South Africa: HSRC Publishers.
- Koocher, G.P. & Keith-Spiegel, P. 2012. What should I do? *Ethical risks, making decisions and taking action*. [Online]. Available: <http://www.continuingeducation.net/active/courses/course050.php>. [Accessed 12 November 2015].
- Koto, M.V. & Maharaj, P. 2016. Difficulties facing healthcare workers in the era of AIDS treatment in Lesotho. *Journal of Social Aspects of HIV/AIDS*, 13(1):53-59.
- Kotwala, A., Anargh, V., Singh, H., Kulkarni, A. & Mahen, A. 2013. Hand hygiene practices among health care workers (HCW's) in a tertiary care facility in Pune. *Medical Journal Armed Forces India*, 69(1):54-56.
- Koukoulaki, T. 2010. New trends in work environment-new effects on safety. *Safety Science*, 48:936-942.
- Kozak, A., Kersten, M., Schillmoller, Z. & Nienhaus, A. 2013. Psychological work-related predictors and consequences of personal burnout among staff working with people with intellectual disabilities. *Research in Developmental Disabilities*, 34(1):102-115.

- Kramme, R., Hoffmann, K. & Pozos, R.S. 2011. *Springer handbook of medical technology*. New York, NY: Springer Science & Business Media.
- Kran, L.E., Hershner, S., Loeding, L.D., Maski, K.P., Rifkin, D.I, Selim, B.S. & Watson, N.F. 2015. Quality measures for the care of patients with Narcoleps. *Journal of Clinical Medicine*, 11(3):335-355.
- Kranner, I., Minibayeva, F.V., Beckett, R.P. & Seal, C.E. 2010. What is stress? Concepts, definitions and applications in seed science. *New Phytology*, 188(3):655-673.
- Kraus, T.R. 1994. Safety and quality: Two sides of the same coin. *Quality Progress*, 13(2):757-773.
- Kruger, J. & Rootman, C. 2010. *How do small business managers influence employee satisfaction and commitment? Acta Commercii*, 10(1):59-72.
- Kumar, H., Gokhale, Jain, K. & Mathur, D.R. 2013. Legal awareness and responsibilities of nursing staff in administration of patient care in a trust hospital. *Journal of Clinical and Diagnostic Research*, 7(12):2814-2817.
- Kumar, M.S., Goud, B.R. & Joseph, B. 2014. A study of occupational health and safety measures in the laundry department of a private tertiary care teaching hospital, Bengaluru. *Indian Journal of Occupational and Environmental Medicine*, 18(1):13-20.
- Kumar, R. 2005. *Research methodology: A step-by-step guide for beginners*. London, UK: Sage.
- Kumar, R.K. 2011. Technology and healthcare costs. *Annual Paediatric Cardiology*, 4(1):84-86.
- Kunzel, R. & Schulte, D. 1986. Burn-out and reality shock among clinical psychologists. *Zestschrift fur Klinische Psychologie. Forschung und Praxis*, 15:303-320.
- Labonte, R., Sanders, D., Mathole, T., Crush, J., Chikanda, A., Dambisya., Runnels, V., Packer., C., MacKenzie, A., Murphy G.T. & Bourgeault, I.L. 2015. Health worker migration from South Africa: Causes, consequences and policy responses. *Human Resources for Health*, 13(92):1-16.

- Lai, J.B., Magarey, J. & Wiechula, R. 2012. Violence in the perceptions of nursing work between those exposed and those not exposed: A cross-sector analysis. *International Journal of Nursing*, 16(2):188-202.
- Lameck, W.U. 2011. Non-financial motivation as a strategy for improving performance of police force: The case study of police headquarter in Tanzania. *International Journal of Management and Business Studies*, 1(4):57-63.
- Lamm, F., Massey, C. & Perry, M. 2006. Is there a link between workplace health and safety and firm performance and productivity? *New Zealand Journal of Employment Relations*, 32(1):75-90.
- LaMontagne, A.D, Keegel, T., Vallance, D., Ostry, A. & Wolfe, R. 2008. Job strain-attributable depression in a sample of working Australians: Assessing the contribution to health inequalities. *BMC Public Health*, 8(181):1-9.
- Land, L.A. 2008. *The isolation, perceived organizational support (POS) and occupational role stress of mental health practitioners in scholastic and related applied setting*. [Online]. Available: <http://pqdtopen.proquest.com/doc/3-04833862.html?FMT=AI> [Accessed 25 July 2016].
- Landry, G. & Panaccio, A. 2010. Dimensionality and consequences of employee commitment to supervisors: A two-study examination. *The Journal of Psychology*, 144(3):285-312.
- Landsbergis, P.A., Grzywacz, J.G. & LaMontagne, A.D. 2012. Work organisation, job insecurity and occupational health disparities. *American Journal of Health Behaviour*, 28:569-571.
- Laschinger, H. & Finegan, J. 2005. Using empowerment to build trust and respect in the workplace: A strategy for addressing the nursing shortage. *Nursing Economics*, 23(1):6-14.
- Leather, D. 2005. Happy employees, happy outcomes. *People Dynamics*, 23(4):21
- Lebans, M. & Euske, K. 2006. *A conceptual and operational delineation of performance: Business performance measurement*. Cambridge, United Kingdom: Cambridge University Press.

- Leedy, P.D. & Ormrod, J.E. 2001. *Practical research: Planning and design*. New Jersey, NY: Merrill Prentice Hall.
- Lerman, S.E., Flower, D.J., Gerson, B. & Hursh S.R. 2012. Fatigue risk management in the workplace. *JOEM*, 54(2):231-258.
- Letvak, S. 2014. Overview and summary: Healthy nurses: Perspectives on caring for ourselves. *The Online Journal of Issues in Nursing*, 19(3):1-4.
- Lewis, J. & Ritchie, J. 2003. *Qualitative research practice: A guide for social science students and researchers*. London, UK: Sage.
- Liang, Z. 2013. *Knowledge and influencing factors of employee retention*. [Online]. Available: <http://trap.ncirl.ie/909/1/zliang.pdf> [Accessed 30 June 2015].
- Liping, S.N., Hofnie, K., van der Westhuizen, L. & Pendukeni, M. 2006. *Perceptions of about conditions of service: A Namibian case study*. [Online]. Available: <http://www.equinet africa.org/sites/default/files/uploads/documents/DIS35HRiping.pdf> [Accessed 15 September 2016].
- Liu, J.L. 2014. *Main causes of voluntary employee turnover. A study of factors and their relationship with expectations and preferences*. [Online]. Available: <http://repositorio.uchile.cl/bitstream/handle/2250/129705/Main%20causes%20of%20voluntary%20employee%20turnover%20%20a%20study%20of%20factors%20and%20their%20r.pdf?sequence=1> [Accessed 25 September 2016].
- Lloyd, B., Sanders, D. & Lehmann, U. 2010. *Human resource requirements for national health insurance*. *South African Health Review*. [Online]. Available: http://www.hst.org.za/uploads/file-s/sahr10_17.pdf [Accessed 1 October 2015].
- Lockwood, N.R. 2007. *Levering employee engagement for competitive advantage: Human resources' strategic role*. *Society for Human Resource Management*. [Online]. Available: <https://pdfs.semanticscholar.org/acc4/4ab3d4cb3c648cb299-3fe705129-984440ffe.pdf> [Accessed 1 October 2015].
- Loeppke, R. 2008. The value of health and the power of prevention. *International Journal of Workplace Health Management*, 1(2):95-108.

- Lok, P., Westwood, R. & Crawford, J. 2005. Perceptions of organisational subculture and their significance for organisational commitment. *Applied Psychology: An International Review*, 54(4):490-514.
- Lowe, G. 2011. *Creating healthy organisations. How vibrant workplaces inspire employees to achieve sustainable success*. Ontario, Canada: Rotman-UTP Publishing.
- Lu, C. & Yang, C. 2011. Safety climate & safety behaviour in the passenger ferry context. *Accident Analysis & Prevention*, 43:314-329.
- Lumley, E.J., Coetzee, M., Tladiyane, R. & Ferreira, N. 2011. Exploring the job satisfaction and organisational commitment of employees in the information technology environment. *South African Business Review*, 15(1):100-118.
- MacKinnon, D.P., Fairchild, A.J. & Frits, M.S. 2007. Mediation analysis. *Annual Review of Psychology*, 58:1-22.
- Mafini, C. & Dlodlo, N. 2014. The relationship between extrinsic motivation, job satisfaction and life satisfaction amongst employees in a public organisation. *SA Journal of Industrial Psychology/SA Tydskrif vir Bedryfsielkunde*, 40(1):1-13.
- Mahal, P.K. 2012. Human resource practices as determinants of organisational commitment and employee retention. *The UIP Journal of Management Research*, 11(4):37-53.
- Maheshwari, S., Bhat, R. & Saha, S. 2008. Commitment among state health officials and its implications for health sector reform. *Indian Journal of Medical Research*, 127(2):148-153.
- Mahfuz, J. 2011. Role ambiguity and role conflict as mediators of the relationships between orientation and organisational commitment. *International Business Research*, 4(3):171-181.
- Maltin, E.R. 2010. Employee commitment and well-being: A critical review, theoretical framework and research agenda. *Management practice and safety Performance in Offshore Environments*, 77:323-337.

- Manyele, S.V., Ngonyani, H.A. & Eliakimu, E. 2008. The status of occupational safety among health service providers in hospitals in Tanzania. *Tanzania Journal of Health Research*, 10(3):159-165.
- Marchant, G.E., Stevens, Y. & Hennessy, J. 2014. Technology, unemployment and policy options: Navigating the transition to a better world. *Journal of Evolution and Technology*, 24(1):26-44.
- Markos, S. & Sridevi, M.S. 2010. Employee commitment: The key to improving performance. *International Journal of Business and Management*, 5(12):89-96.
- Markovic, S. & Jankovic, S.R. 2013. Exploring the relationship between service quality and customer satisfaction in Croatian Hotel Industry. *Tourism and Management*, 19(2):149-162.
- Martin, B.I. 2006. *Influence of high commitment management on organisational performance: Human resource flexibility as a mediator variable*. [Online]. Available: https://www.researchgate.net/profile/Juan_Llusar/publication/44016158_Influence_of_high_commitment_management_on_organisational_performance_human_resource_flexibility_as_a_mediator_variable/links/53f2fdde0cf272810e52582f.pdf [Accessed 30 June 2015].
- Maslach, C., Schaufeli, W.B. & Leiter, M.P. 2001. Job burnout. *Annual Reviews Psychology*, 52:397-422.
- Matvee, V.A. 2002. *The advantages of employing qualitative and quantitative methods in intercultural research: Perceptions of intercultural communication conference by American and Russian managers*. [Online] Available: <http://www.ru//eng/rcabiblio/m/Matvee0lengshtm/>. [Accessed 17 November 2015].
- Mavodza, J. 2010. *Knowledge management practices and role of an academic library in changing information environment: The case of the metropolitan college of New York*. [Online] Available: http://uir.unisa.ac.za/bitstream/handle/10-500/3945/thesis_mavodza_j.pdf?sequence=1&isAllowed=y [Accessed 22 November 2015].
- Maxfield, M.G. & Babbie, E.R. 2010. *Research methods for criminal justice and criminology*. United Kingdom, UK: Cengage Learning.

- Mayberry, L. 2006. Nursing implications of the 2006 NIH state of the science conference statement: Cesarean delivery on maternal request. *MCN American Journal Maternity Child Nursing*, 31(5):286-289.
- Mayfield, J. & Mayfield, M. 2002. Leader communication strategies: Critical paths to improving employee commitment. *American Business Review*, 20(2):89-94.
- McBurney, D.H. & White, T.L. 2009. *Research methods*. United Kingdom, UK: Cengage Learning.
- McDaniel, C. & Gates, R. 2006. *Marketing research essentials*. Hoboken, NJ: John Wiley & Sons.
- McDonald, A. & Ruiters, G. 2005. *Who cares for healthcare workers?* The state of occupational health and safety in municipal health clinics in South Africa. [Online]. Available: <http://www.municipalservicesproject.org/sites/municipalservicesproject.org/files/publications/OP8%20McDonald%20Ruiters%20Who%20Cares%20for%20Health%20Care%20Workers%202005.pdf> [Accessed 15 July 2015].
- McGlynn, K., Griffin, M.Q., Donahue, M. & Fitzpatrick, J.J. 2012. Registered nurse job satisfaction and satisfaction with professional practice model. *Journal of Nursing Management*, 20(2):260-265.
- McMahon, B. 2007. *Organisational commitment, relationship commitment and their association with attachment style and locus of control*. [Online]. Available: https://smartech.gatech.edu/bitstream/handle/1853/14502/mcmahon_brian_200705_mast.pdf?sequence=1&isAllowed=y [Accessed 3 December 2016].
- Mearns, K., Whittaker, M.S. & Flin, R. 2002. Safety climate, safety management practice and safety performance in offshore environments. *Safety Science*, 41:641-680.
- Mefford, R. 2011. The economic value of a sustainable supply chain. *Business and Society Review*, 116(1):109-143.
- Mehta, M., Kurbetti, A. & Dhankhar, R. 2014. Study on employee retention and commitment. *International Journal of Advance Research in Computer Science and Management Studies*, 2(2):11.

Mehta, P.K. & Burrows, R.W. 2001: Building Durable Structures in the 21st Century. *Concrete International*. 23(3):57-63.

Mehta, S. & Maheshwari, G.C. 2013. Consequence of toxic leadership on employee job satisfaction and organisational commitment. *The Journal of Contemporary Management Research*. 8(2):1-23.

Meier, K.J. & O'Toole, L.J. 2010. *Organisational performance: Measurement theory and an application: Or, common source bias, the Achilles heel of public management research*. APSA 2010 Annual Meeting Paper.

Menza, C., Caldow, C., Jeffery, C. & Monaco, M. 2008. *Analysis of sample frames and subsampling methods for reef fish surveys*. NOAA Technical Memorandum NOS NCCOS 72. [Online]. Available: <http://aquaticcommons.org/2112/1/NCCOSTM72.pdf> [Accessed 20 March 2016].

Mertens, W., Pugliese, A. & Recker, J. 2016. *Quantitative data analysis: A companion for accounting and information systems research*. New York, NY: Springer.

Meyer, J.P. & Herscovitch, L. 2001. Commitment in the workplace: Towards a general model. *Human Resource Management Review*, 11(3):299-326.

Meyer, J.P., Allen, N.J. & Smith, C.A. 1993. Commitment to organisations and occupations: Extension and test of a three component conceptualization. *Journal of Applied Psychology*, 78:538-551.

Michalak, J.M. 2010. Cultural catalyst and barriers of organisational change management: A preliminary overview. *Journal of Intercultural Management*, 2(2):26-36.

Michie, S. & Williams, S. 2003. Reducing psychological ill health and associated sickness absence: A systematic literature review. *Occupational and Environmental Medicine*, 60(1):3-9.

- Mill, J., Nderitu, S. & Richter, S. 2014. Post-exposure prophylaxis among Ugandan nurses: Accidents do happen. *International Journal of Africa Nursing Sciences*, 1:11-17.
- Miller, R. 2006. *Problems in Health Care Law*. Sudbury, Massachusetts: Jones and Bartlett Publishers.
- Mokoka, E., Oosthuizen, M.J. & Ehlers, V.J. 2010. Retaining professional nurses in South Africa: Nurse managers' perspectives. *Health SA Gesondheid*, 15(1):484-493.
- Morken, T. & Johansen, I.H. 2013. Safety measures to prevent workplace violence in emergency primary care centres: A cross-sectional study. *BMJ Health Service Research*, 13:384-389.
- Mosedeghrad, A.M. 2013. Occupational stress and turnover intention: Implications for nursing management. *International Journal of Health Policy and Management*, 1(2):169-176.
- Mosedeghrad, A.M. 2014. Factors influencing healthcare service quality. *International Journal of Health Policy and Management*, 3(2):77-89.
- Mostert, F.F., Rothmann, S., Mostert, K. & Nell, K. 2008. Outcomes of occupational stress in a higher education institution. *Southern African Business Review*, 12(3):102-127.
- Mowafi, H., Nowak, K. & Hein, K. 2007. Facing the challenges in human resources for humanitarian health. *Prehospital and Disaster Medicine*, 22(5):351-9.
- Mphande H. 2013. *Concerns that the government resources may have been abused*. 14 September, Port Elizabeth, Weekend Post.
- Mrara, M.T. 2010. *An investigation of turnover and retention factors of health professional staff within the Eastern Cape department of health*. [Online]. Available: <http://vital.seals.ac.za:8080/vital/access/manager/Repository/vital:754> [Accessed 20 July 2016].
- Mukaka, M.M. 2012. Statistics corner: A guide to appropriate use of correlation coefficient in medical research. *Malawi Medical Journal*, 24(3):69-71.

Muller, M., Bezuidenhout, M. & Jooste, K. 2005. *Healthcare service management*. Cape Town, South Africa: Juta.

Munro, B.H. 2005. *Statistical methods for health care research*. New York, NY: Wolters Kluwer.

Murthy, S.N. & Bhojanna, U. 2009. *Business research methods*. New Delhi, India: Excel Books.

Mustafa, M.S. 2013. *Key factors in performance management: Employee point of view*. [Online]. Available: <http://www.theseus.fi/bitstream/handle/10024/71091/K-EY%20FACTORS%20IN%20PERFORMANCE%20MANAGEMENT.pdf?sequence=1> [Accessed 12 July 2015].

Musyoka, F.N., Adoyo, M.A. & Ongombe, M.O. 2016. Influence of job description on performance of health workers in public hospitals: A case of Mbagathi Hospital, Nairobi City County. *Science Journal of Public Health*, 4(2):88-93.

Muthuviknesh, R. & Kumar, K.A. 2014. The effect of occupational health and safety management on work environment: A prospective study. *International Journal of Advanced Research in Computer Science and Management Studies*, 2(6):63-70.

Mutia P.M. & Sikalieh, D. 2014. Work environment and its influence on productivity levels among extension officers in the ministry of agriculture in Kenya. *International Journal for Innovation Education and Research*, 2(12):82-93.

MVicar, A. 2003. Workplace stress in nursing: A literature review. *Journal of Advanced Nursing*, 44(6):633-642.

Myers, M.D. 2009. *Qualitative research in business and management*. London, UK: Sage.

Naicker, N. 2008. *Organisational culture and employee commitment: A case study*. [Online]. Available: http://ir.dut.ac.za/bitstream/handle/10321/475/Naicker_2008.pdf [Accessed 12 July 2015].

Narayan, A. & Steele-Johnson, D. 2007. Relationships between prior experience of training, gender, goal orientation, and training attitudes. *International Journal of Training and Development*, 11(3):165-180.

National Advisory Council on Nurse Education and Practice. 2010. *Addressing new challenges facing nursing education: Solutions for a transforming healthcare environment*. [Online]. Available: <https://www.hrsa.gov/advisorycommittees/bhpradvisory/nacnep/Reports/eighthreport.pdf>. [Accessed on 11 June 2015].

Ndejjo, R., Musinguzi, G., Yu, X., Buregyeya, E., Musoke, D., Wang, J., Halage, A.A., Whalen, C., Bazeyo, W., Williams, P. & Ssempebwa, J. 2015. Occupational health hazards among healthcare workers in Kampala, Uganda. *Journal of Environmental and Public Health*, 913741:1-9.

Nel, W.H. 2007. *The Eastern Cape provincial treasury: Budget speech and policy statement 2007/2008*. [Online]. Available: <http://www.treasury.gov.za/documents/provincial%20budget/2008/Budget%20Speec.hes/Eastern%20Cape%20-%200Budget%20Speech%20-%2029%20February%20-2008.pdf> [Accessed 25 October 2016].

Nesselroade, J.R. & Cattell, R.B. 2013. *Perspective on individual differences: Handbook of multivariate experimental psychology*. New York, NY: Plenum Press.

Neuman, W.L. 2011. *Social research methods: Qualitative and quantitative approaches*. Boston, Massachusetts: Allyn and Bacon.

Ngulube, P. 2005. Research procedure used by Master of Information Studies students at the University of Natal in 1982 -2002 with special reference to their sampling techniques and survey response rate: A methodological discourse. *The International Information and Library Review*, 37:127-143.

Nguyen, T.H., Wilson, A. & McDonald, F. 2015. Motivation or demotivation of health workers providing maternal health services in rural areas in Vietnam: Findings from a mixed-methods study. *Human Resources for Health*, 13:91-102.

Niles, N. 2010. *Basics of the U.S. Health Care System*. Sudbury, Massachusetts: Jones and Bartlett.

Nimon, K.F. & Oswald, F.L. 2013. Understanding the results of multiple linear regression. *Organizational Research Methods*, 16(4):650-674.

- Norkewicz, M. & Paral, R. 2003. *The metro Chicago immigration fact book*. Chicago, Illinois: Institution for Metropolitan affairs.
- Nsubunga, F.M. & Jaakkola, M.S. 2005. Needle-stick injuries among nurses in sub-Saharan Africa. *Tropical Medicine and International Health*, 10(8):773-781.
- Ntshanga, S. & Mabaso, M. 2009. A pilot study to assess workplace tuberculosis control activities in four districts in KwaZulu-Natal, South Africa. *Public Health*, 123(9):623-624.
- Nunnally, J.C. 1978. *Psychometric theory*. New York: McGraw Hill.
- Nzinga, J., Mbindyo, P., Mbaabu, L., Warira, A. & English, M. 2009. Documenting the experiences of health workers expected to implement guidelines during an intervention study in Kenya district hospitals. *Implementation Science*, 4(44):1-9.
- O'Brien, P. & Gostin, L.O. 2008. Health worker shortages and inequalities: The reform of United States policy. *Global Health Governance*, 11(2):1-28.
- O'Driscoll, M.P., Pierce, J.L. & Coghlan, A.M., 2006. The psychology of ownership: Work and environment structure, organisational structure, and organisational citizenship behaviors. *Group and Organisation Management*, 31(3):388-416.
- O'Neill, J.W. & Davies, K. 2011. Work stress and well-being in the hotel industry. *International Journal of Hospitality Management*, 30(2):385-390.
- Oakes, C.G. 2009. *Safety versus security in fire protection planning: The case of fire access roadways*. [Online]. Available: <https://www.scribd.com/document/194374685/The-American-Institute-of-Architects-Safety-Versus-Security-in-Fire-Protection-Planning-Knowledge-Communities> [Accessed 20 July 2015].
- Obasan, K. 2012. Organisational culture and its corporate image: A model Juxtaposition. *Business and Management Research*, 1(1):121-132.
- Occupational Health and Safety Agency for Healthcare in BC. 2004. *Trends in workplace injuries, illnesses, and policies in healthcare across Canada*. [Online]. http://www.hc-sc.gc.ca/hcs-sss/alt_formats/hpb-dgps/pdf/pubs/2004-hwi-ipsmt/2004-hwi-ipsmt-eng.pdf [Accessed 20 July 2015].

Occupational Health. 2008. *Occupational health*. [Online] Available: http://www.who.int/occupational_health/en/. [Accessed 30 October 2015].

Ogba, I.E. 2008. The impact of income and age on employee commitment in Nigerian banking sector. *Management Research News*, 31(11):867-878.

Ogunsola, L.A. 2005. Information and communication and communication technologies and the effects of globalization: Twenty-first century digital slavery for developing countries-myth or reality? *Electronic Journal of Academic and Special Leadership*, 6(1-2):1-2.

Olds, D.M. & Clarke, S.P. 2010. The effect of work hours on adverse events and errors in health care. *Journal of Safety Research*, 41(2):153-162.

Oliver, E. 2010. *Evaluation of employee commitment as an imperative for business success*. [Online]. Available: http://dspace.nwu.ac.za/bitstream/handle/10394/46-22/Olivier_E.pdf?sequence=2 [Accessed 20 July 2016].

Ongori, H. 2007. A review of the literature on employee turnover. *African Journal of Business Management*, 1(3):49-54.

Onyemah, V. 2008. Role ambiguity, role conflict, and performance: Empirical evidence of an inverted-U relationship. *Journal of Personal Selling & Sales Management*, Vol. 28(3):299-313.

Ooi, K., Safa, M.S. & Arumugam, V. 2006. TQM practices and affective commitment: A case of Malaysian semiconductor packaging organisations. *International Journal of Management and Entrepreneurship*, 2(1):37-55.

Oosthuizen, M.J. 2005. *An analysis of the factors contributing to the emigration of South African nurses*. Unpublished D Litt et Phil thesis. Department of Health Studies. University of South Africa.

OSHA. 2012. *Occupational safety and health administration*. [Online] Available: <https://www.osha.gov/dsg/hazcom/ghs-final-rule.html>. [Accessed 18 May 2016]

Pallant, J. 2003. *SPSS survival manual: A step to step guide to data analysis using SPSS for windows (Version 10 and 11)*. United Kingdom, UK: Open University Press.

Parand, A., Dopson, S., Renz, A. & Vincent, C. 2014. The role of hospital managers in quality and patient safety: A systematic review. *BMJ Open*, 4(9):1-16.

Parboteeah, K.P. & Kapp, E.A. 2008. Ethical climates and workplace safety behaviours: An empirical investigation springer link. *Journal of Business Ethics*. 80(3):515-529.

Parent-Thirion, A., Vermeulen, G., Van Houten, G., Lyly-Yrjananinen, M., Biletta, I. & Cabrita, J. 2012. *Fifth European working conditions survey*. [Online]. Available: http://www.eurofound.europa.eu/sites/default/files/ef_publication/field_ef_document/ef1182en.pdf [Accessed 20 June 2015].

Parkins. 2011. Push and pull factors of migration. *American Review of Political Economy*, 8(2):6-24.

Peltier, J. & Dahl, A. 2009. *The relationship between employee satisfaction and hospital patient experiences*. [Online]. Available: <http://www.infonow.com/typo-3conf/ext/p2wlib/pi1/press2web/html/userimg/FORUM/Hospital%20Study%20Relationship%20Btwn%20Emp.%20Satisfaction%20and%20Pt.%20Experiences.pdf> [Accessed 23 September 2016].

Pencavel, J. 2014. *The productivity of working hours*. Stanford University and IZA Discussion Paper No. 8129.

Pera, S.A. & Van Tonder, S. 2005. *Ethics in health care*. Cape Town, South Africa: Juta.

Perez, L.M. & Martinez, J. 2009. Community health workers: Social justice and policy advocates for community health and well-being. *American Journal of Public Health*, 98(1):11-14.

Perlick, D.A., Miklowitz, D.J., Link, B.G., Struening, E., Kaczynski, R. Gonzalez, J. & Rosenheck, R.A. 2007. Perceived stigma and depression among caregivers of patients with bipolar disorder. *British Journal of Psychiatry*, 190(6):535-536.

Perrine, J. 2010. *CAP-OM, MBTI Certified. Defining what your administrative support really means*. [Online]. Available: <http://allthingsadmin.com/administrative->

professionals/providing-value-added-administrative-support/[Accessed 13 November 2016].

Persefori, L., Anastasios, M., Nicos, M. & Evidiki, P. 2016. Nurses perceptions of their professional practice environment in relation to job satisfaction: A review of quantitative studies. *Health Science Journal*, 8(3):298-317.

Phillips, A. 2016. Vulnerable adults with diabetes: Improving access to care. *Practice Nursing*, 27(6):2-5.

Phillips, J.J & Edwards, L. 2009. *Excerpted from managing talent retention*. New Jersey, NJ: Wiley & sons.

Pinho, J.C., Rodrigues, A.P. & Dibb, S. 2014. The role of cooperate culture, market orientation and organisational commitment in organisational performance. *Journal of Management Development*, 33(4):374-398.

Pinto, V.N. 2008. E-waste hazard: The impending challenge. *Indian Journal of Occupational and Environmental Medicine*, 12(2):65-70.

Polit, D.F. & Beck, C.T. 2006. The content validity index: Are you sure you know what's being reported? Critique and recommendations. *Research in Nursing & Health*, 29:489-497.

Powell-Cope, G., Nelson, A.L. & Patterson, E.S. 2008. *Patient care technology safety*. Agency for healthcare research and quality (US). Public safety and standards Republic South Africa, 2012. [Online]. Available: <https://law.resource.org/pub/za/manifest.za.html> [Accessed 13 May 2015].

Profuno, A., Spini, G., Cucca, L. & Pesanto, M. 2003. Determination of inorganic nickel compounds in the particulate matter of emissions and workplace air by selective sequential dissolutions. *Elsevier. Occupational and Environmental Hygiene*, 61(44):465-472.

Pryor, M., Taneja, S., Humphreys, J., Anderson, D. & Singleton, L. 2008. Challenges facing change management theories and research. *Delhi Business Review*, 9(1):1-20.

Punch, K.F. 2006. *Developing effective research proposals*. 2nd Edition. London: SAGE Publications Ltd.

- Purcell, P. 2005. Employee retention. *Journal of Deferred Compensation*, 8(3):30-53.
- Rajasekar, S., Philominathan, P. & Chinnathambi, V. 2013. *The manuscript intended for students and research scholars*. [Online]. Available: <https://arxiv.org/pdf/physics/0601009.pdf>. [Accessed 27 October 2016].
- Rajgopal, T. 2010. Mental well-being at the workplace. *Indian Journal of Occupational Environment Medicine*, 14(3):63-65.
- Ramanathan, T.R. 2014. Law as a tool to promote healthcare safety. *Clinical Governance: An International Journal*, 19(2):172-80.
- Randall, C. & Buys, N. 2013. Managing occupational stress injury in police services: A literature review. *International Public Health Journal*, 5(4):1-15.
- Ratner, B.J. 2009. The correlation coefficient: Its values range between +1/-1, or do they? *Journal of Targeting Measurement and Analysis for Marketing*, 17(2):139-142.
- Ravasi, D. & Schultz, M. 2006. Responding to organisational identity threats: Exploring the role of organisational culture. *Academic Management Journal*, 49(3):433-458.
- Ray, M.M. 2007. The dark side of the job: Violence in the emergency department. *Journal of Emergency Nursing*. 33(3):257-61.
- Raya, R.P. & Panneerselvam, S. 2013. The healthy organisation construct: A review and research agenda. *Indian Journal of Occupational and Environmental Medicine*, 17(3):89-93.
- Raziq, A. & Maulabakhsh, R. 2015. Impact of working environment on job satisfaction. *Procedia Economics and Finance*, 23:717-725.
- Reader, T.W., Gillespie, A. & Roberts, J. 2014. Patient complaints in healthcare systems: A systematic review and coding taxonomy. *BMJ Quality and Safety*, 0:1-12.
- Reiling, J., Hughes, R.G. & Murphy, M.R. 2008. The impact of facility design on patient safety. *Patient Safety and Quality: An Evidence-Based Handbook for Nurses*, 2:167-189.

- Reiman, T. & Rollenhagen, C. 2011. Human and organisational biases affecting the management of safety reliability. *Engineering and System Safety*, 96(10):1263-1274.
- Reynolds, C.R., Livingston, R.B. & Wilson, V. 2009. *Measurement and assessment in education*. Boston, Massachusetts: Allyn Bacon/Pearson.
- Rhoades, L., Eisenberger, R. & Armeli, S. 2001. Affective commitment to the organisation: The contribution of perceived organisational support. *Journal of Applied Psychology*, 86:825-836.
- Rico, E.D., Dios, C.H. & Ruch, W. 2012. Content validity evidences in test development: An applied perspective. *International Journal in Clinical Health Psychology*, 12(3):449-460.
- Riddell, A., Kennedy, I. & Tong, C.Y. 2015. Management of sharp injuries in the healthcare setting. *BMJ*, 351:3733.
- Riddick, F.A. 2003. The code of medical ethics of the American medical association. *The Ochsner Journal*, 5(2):6-10.
- Riketta, M. & Van Dick, R. 2005. Foci of attachment in organisations: A meta-analytic comparison of the strength and correlates of workgroup versus organisational identification and commitment. *Journal of Vocational Behavior*, 67(3):490-510.
- Rim, K. & Lim, C. 2014. Biological hazardous agents at work and efforts to protect workers' health: A review of recent reports. *Occupational Safety and Health Research Institute*, 5(2):43-52.
- Robbins, S.P. & Coutler, M. 2003. *Management*. Upper Saddle River, New Jersey: Prentice Hall.
- Robinson, D. 2003. *Defining and creating employee commitment: A review of current research*. [Online]. Available: <http://www.employment-studies.co.uk/system/files/resources/files/mp21.pdf> [Accessed 21 February 2015].
- Robinson, D., Perryman, S. & Hayday, S. 2003. *The drivers of employee engagement*. [Online]. Available: <http://www.employment-studies.co.uk/system/files/resources/files/408.pdf> [Accessed 10 February 2015].

- Rocheffort, C.M. & Clarke, S.P. 2010. Nurses' work environments, care rationing, job outcomes and quality of care on neonatal units. *Journal Advocacy for Nurses*, 66(10):2213-2224.
- Rodgers, A.E., Hwang, W., Scott, L.D., Aiken, L.H. & Dinges, D.F. 2004. The working hours of hospital staff nurses and patient safety. *Health Affairs*, 23(4):202-212.
- Rodwell, J. & Cemir, D. 2012. Oppression and exposure as differentiating predictors of types of workplace violence for nurses. *Journal of Clinical Nursing*, 21(15):2296-2305.
- Rosen, C.C., Chang, C.H., Djurdevic, E. & Eatough, E. 2010. Occupational and job performance: An updated review and recommendations.
- Rothman, S. 2007. Occupational stress of hospital pharmacists in South Africa. *International Journal of Pharmacy Practice*, 15:1-8.
- Rothmann, S. & Malan, M. 2011. Work-related well-being of South African hospital pharmacist. *SA Journal of Industrial Psychology/SA Tydskrif vir Bedryfsielkunde*, 37(1):1-11.
- Roughton, J. & Crutchfield, N. 2013. Safety culture: An innovative leadership approach. Stroud, GLOUS, UK: Butterworth-Heinemann.
- Rubin, A. & Babbie, E. 2009. *Essential research methods for social work*. Belmont, CA: Brooks/Cole.
- Russel, B. 2012. *Workplace health and safety handbook*. [Online]. Available: http://www.apststrategy.com.au/safe%20work%20australia%20-%20manage%20work%20h&s%20risks%20-hsr_handbook.pdf [Accessed 20 July 2015].
- Rutten, M. 2009. The economic impact of medical migration: An overview of the literature. *The World Economy*, 32(2):291-325.
- Ruud, K.W., Srinivas, S.C. & Toverud, E.L. 2009. Antiretroviral therapy in a South African public health care setting - Facilitating and constraining factors. *Southern Med Review*, 2(2):29-34.
- Sahebi, L. & Gholamzadeh, N.R. 2011. Workplace violence against clinical workers in Tabriz educational. *Iran Journal of Nursing*, 24(73):27-35.

Saldaria, M.A.M., Herrero, S.G., Rodriguez, J.G. & Ritzel, D. 2012. The impact of occupational hazard information on employee health and safety: An analysis by professional sector in Spain. *International Electronic Journal of Health Education*, 15:83-98.

Salkin, I.F. 2004. *Review of health impacts from microbiological hazards in health-care wastes*. [Online]. Available: http://www.who.int/water_sanitation_health/medicalwaste/en/microbhazards0306.pdf [Accessed 20 July 2015].

Salleh, M.R. 2008. Life event, stress and illness. *Malaysian Medical Sciences*, 15(4): 9-18.

Samson, D. & Daft, R.L. 2005. *Management*. Sydney, Australia: Thompson.

Sanner-Stiehr, E. & Ward-Smith, P. 2014. Lateral violence and the exit strategy. *Nursing Management*, 45(3):11-15.

Schneider, B., Salvaggio, A.V. & Sobirals, M. 2002. Climate strength: A new direction for climate research. *Journal of Applied Psychology*, 87:220-229.

Schmidt, F.R. & Gebhart, G.F. 2013. *Occupational behaviour: Encyclopaedia of pain*. Berlin, Germany: Springer Berlin Heidelberg.

Schmitz-Felten, E.S. 2013. *Prevention of sharp injuries*. [Online]. Available: https://oshwiki.eu/index.php?title=Prevention_of_sharp_injuries&oldid=237736. [Accessed 12 July 2015].

Schneider, B., Ehrhart, M.G. & Macey, W.H. 2013. Organisational climate and culture. *The Annual Review of Psychology*, 64:361-388.

Schreurs, B., De Cuyper, N., Van Emmerick, I.J.H., Notelaers, G. & De Witt, H. 2011. Job demands and resources and their associations with early retirement intentions through recovery need and work enjoyment. *SA Journal of Industrial Psychology/SA Tydskrif vir Bedryfsielkunde*, 37(2):859-869.

Schuler, D.A. & Cording, M. 2006. A corporate social performance - corporate financial performance behavioural model for consumers. *Academy of Management Review*, 31(3):540-558.

- Schult, R.K. 2006. *Investigating the social world the process and practice and of research*. Thousand Oaks, California: Sage.
- Schultz, H., Bagraim, J., Potgieter, T., Viedge, C. & Werner, A. 2003. *Organisational behaviour: A contemporary South African perspective*. Pretoria, South Africa: Van Schaik Publishers.
- Seke, K., Petrovic, N., Jeremic, V., Vukmirovic, J., Kilibarda, B. & Martic, M. 2013. Sustainable development and public health: Rating European countries. *BMC Public Health*, 13:77-84.
- Seleka, N.P. 2011. *Assessment of compliance of employees and management to occupational health & safety act in the department of public safety in the North West Province*. [Online]. Available: https://dspace.nwu.ac.za/bitstream/handle/1039-4/14794/Seleka_NP.pdf?sequence=1&isAllowed=y [Accessed 11 May 2015].
- Shahrokh, M. & Dougherty, E. 2014. Effect of separate sampling on classification accuracy. *Bioinformatics*, 30(2):242-250.
- Shahzad, F. & Luqman, R.A. 2012. Impact of organisational culture on organisational performance: An overview. *Institute of Interdisciplinary Business Research*, 3(9):975-985.
- Shamoo, A.E. & Resnik, D.B. 2009. *Responsible conduct of research*. New York, NY: Oxford University Press.
- Siddiqui, A.S. 2011. *Comprehensive accountancy*. New Delhi, India: Laxmi Publications.
- Sieberhagen, C., Pienaar, J. & Els, C. 2011. Management of employee wellness in South Africa: Employer, service provider and union perspectives. *SA Journal of Human Resource Management*, 9(1):1-14.
- Simon, T. & Hurvitz, K. 2014. Healthy people 2020 objectives for violence prevention and the role of nursing. *The Online Journal of Issues in Nursing*, 19(1):1-11.
- Simpson, G.L. 2010. *Building employee commitment: An imperative for business success*. [Online]. Available: <http://www.managerwise.com/article.phtml?id=159> [Accessed 20 September 2016].

Singh, A.S. & Masuku, M.B. 2014. Sampling techniques and determination of sample size in applied statistics research: An overview. *International Journal of Economics, Commerce and Management*, II (XI):1-22.

Sinha, C. & Sinha, R. 2012. Factors affecting employee retention: A comparative analysis of two organizations from heavy engineering industry. *European Journal of Business Management*, 4(3):147-161.

Skinner, N. & Chapman, J. 2013. Work-life balance and family friendly policies. *Evidence Base*, 4:1-25.

Slattery, J.P., Selvarajan, T. & Anderson, J.E. 2008. The influences of new employee development practices upon role stressors and work-related attitudes of temporary employees. *The International Journal of Human Resource Management*, 19(12):2268-2293.

Smalley, P.J. 2011. Laser safety: Risks, hazards and control measures. *Journal for Laser Surgery, Phototherapy and photobioactivation*, 20(2):95-106.

Smit, P.A. 2010. *Disciplinary enquiries in terms of schedule 8 of the Labour Relations Act 66 of 1985*. [Online]. Available: <http://repository.up.ac.za/dspace/bitstream/handle/2263/28184/Complete.pdf?sequence=7&isAllowed=y> [Accessed 22 October 2015].

Somekh, B. & Lewin, C. 2007. *Theory and methods in social research*. London, UK: Sage.

South African Nursing Council (SANC). 2005. *Rules setting out the Acts or Omissions in respect of which the council may take disciplinary steps*. [Online]. Available: <http://www.sanc.co.za/regulat/Reg-act.htm> [Accessed 20 August 2015].

South African Nursing Council (SANC). 2013. *Code of conduct*. [Online] Available: http://www.sanc.co.za/professional_practice.htm. [Accessed 29 December 2015]

South African Nursing Council (SANC). 2016a. *Distinguishing Devices*. [Online]. Available: http://www.sanc.co.za/serv_dds.htm [Accessed 20 August 2015].

South African Nursing Council (SANC). 2016b. *Nurses*. [Online]. Available: <http://www.gostudy.mobi/careers/View.aspx?oid=181> [Accessed 20 August 2015].

- Spangaro, J., Adogu, C., Ranmuthugala, G., Powell Davies, G., Steinacker, L. & Zwi, A. 2013. What evidence exists for initiatives to reduce risk and incidence of sexual violence in armed conflict and other humanitarian crises? A Systematic Review. *PLoS ONE*, 8(5):1-13.
- Spielberger, C.D., Vagg, P.R. & Wasala, W.F. 2003. Occupational stress: Job pressures and lack of support In Quick J.C. & Tetrick L.E. *Handbook of occupational health psychology*. Washington, DC: American Psychological Association. *Springer Science Employee Response Right Journal*, 19:173-192.
- Srikanth, P.B. & Jomon, M.G. 2013. Role ambiguity and role performance effectiveness: Moderating the effect of feedback seeking behavior. *Asian Academy of Management Journal*, 18(2):105-127.
- Stimpfel, A.W., Sloane, D.M. & Aiken, L.H. 2012. The longer the shifts for hospital nurses, the higher the levels of burnout and patient dissatisfaction. *Health Affairs*, 31(11):2501-2509.
- Stinglhamber, F., Marique, G., Caesens, G., Desmette, D., Hansez, I., Hanin, D. & Bertrand, F. 2015. Employees' organisational identification and affective organisational commitment: An Integrative Approach. *Plos One*, 10(4):1-23.
- Stoica, M. & Buicu, F. 2010. Occupational stress management. *Human Resource Management*, 14(2):7-9.
- Stone, P., Hughes, R. & Dailey, M. 2008. *Creating a safe and high-quality health care environment* In Hughes R.G. *Patient safety and quality: An evidence-based handbook for nurses*. Rockville, Maryland: AHRQ.
- Struwig, F.W. & Stead, G.B. 2013. *Research: Planning, designing and reporting*. Cape Town, South Africa: Pearson.
- Su, S., Baird, K. & Blair, B. 2009. Employee organisational commitment: The influence of cultural and organisational factors in the Australian manufacturing industry. *The International Journal of Human Resource Management*, 20(12):2494-2516.
- Sullivan, S. 2011. Making the business case for health and productivity management. *Journal for Occupational Environment Medicine*, 46:56-61.

- Sun, L., Aryee, S. & Law, K.E. 2007. High performance human resource practices, citizenship behavior, and organisational performance: A relational perspective. *Academy of Management Journal*, 50(3):558-577.
- Sun, S. 2008. Organizational culture and its themes. *International Journal of Business and Management*, 3(12):137-141.
- Suter, E. Oelke, N.D., Adair, C.E. & Armitage, G.D. 2009. Ten key principles for successful health systems integration. *Health Q*, 13:16-23.
- Swanberg, J., Walton, L.A., Clouser, J.M., Hilliard, L. & Loeffler, D. 2011. *Creating healthy organisations: Promising practices in Kentucky*. [Online]. Available: http://www.uky.edu/Centers/iwin/workplace_research/HealthyOrgReport.pdf [Accessed 20 July 2015].
- Tadesse, S. & Israel, D. 2016. Occupational injuries among building construction workers in Addis Ababa, Ethiopia. *Journal of Occupational Medicine and Toxicology*, 11:16-29.
- Tadesse, T. & Admassu, M. 2006. *Occupational health and safety*. [Online]. Available: https://www.cartercenter.org/resources/pdfs/health/ephti/library/lecture_notes/env_occupational_health_students/ln_occ_health_safety_final.pdf [Accessed 20 July 2015].
- Taiwo, A.S. 2010. The influence of work environment on workers' productivity: A case of selected oil and gas industry in Lagos, Nigeria. *African Journal of Business Management*, 4(3):299-307.
- Takala, J., Hamalainen, P., Saarela, K.L., Yun, L.Y., Manickam, K., Jin, T.W., Heng, P., Tjong, C., Kheng, L.G., Lim, S. & Lin, G.S. 2012. Global estimates of the burden of injury and illness at work. *Journal of Occupational Environmental Hygiene*, 11:326-337.
- Tan, G.A. & Fitzgerald M.C.B. 2002. Chemical-Biological-Radiological (CBR) response: A temple for hospital emergency departments. *Medical Journal of Australia*, 177:196-199.

- Tang, Y. & Chang, C. 2010. Impact of role ambiguity and role conflict on employee creativity. *African Journal of Business Management*, 4(1):869-881.
- Tang, Y. & Chang, C. In Zakari, N.M.A. 2011. The impact of nurse role ambiguity and role conflict on nursing faculty commitment in Saudi Arabia. *Life Science Journal*, 8(3):179-186.
- Tashakkori, A. & Teddie, C. 2010. *Handbook of mixed methods in social and behavioural research*. Thousand Oaks, California: Sage.
- Tavakol, M. & Dennick, R. 2011. Making sense of Cronbach's alpha. *International Journal of Medical Education*, 2:53-54.
- Tavakoli, H. 2012. *A dictionary of research methodology and statistics in applied linguistics*. Tehran, Iran: Rahmana Press.
- Taylor, J.A. 2012. Do nurses and patient injuries share a common antecedent? An analysis of associations with safety climate and working conditions. *BMJ Quality Safety*, 21(2):101-111.
- Teddie, C. & Yu, F. 2007. Mixed methods sampling: A typology with examples. *Journal of Mixed Methods Research*, 1(1):77-100.
- Terre Blanche, M., Durrheim, K. & Painter, D. 2006. *Research in practice: Applied method for the social science*. Cape Town, South Africa: UCT Press.
- Tharanou, P., Saks, A.M. & Moore, C. 2007. A review and critique of research on training and organizational level outcomes. *Human Resource Management Review*, 17:251-273.
- Thomas, B., Deshmukh, U.M. & Kumar, P.K. 2008. *High performing organisations: Issues and challenges*. New Delhi, India: Tata McGraw-Hill.
- Thyer, B.A. 2010. *The handbook of social work research methods*. Thousand Oaks, California: Sage.
- Tinubu, B.M., Mbada, C.E., Oyeyemi, A.L. & Fabunmi, A.A. 2010. Work-related musculoskeletal disorders among nurses in Ibadan, South-west Nigeria: A cross-sectional survey. *BMC Musculoskeletal Disorders*, 11(12):1-8.

Torres-Reyna, O. 2007. *Panel Data Analysis Fixed and Random Effects using Stata* (v.4.2). [Online]. <https://www.princeton.edu/~otorres/Panel101.pdf> [Accessed 15 November 2016].

Townley, G. 2000. Long hours culture causing economy to suffer. *Management Accounting*, 78(6):3-5.

Trinkoff, A. M., Geiger-Brown, J.M, Caruso, C.C., Lipscomb, J.A., Johantgen, M., Nelson, A.L., Sattler, B.A. & Selby, V.L. 2008. Personal safety for nurses. *Patient Safety and Quality: An Evidence-Based Handbook for Nurses*, 2:473-508. Add one author intext

Trochim, W.M.K. 2006. *Variables*. Web centre for social research methods. [Online]. Available: <http://www.socialresearchmethods.net/kb/variable.php>. [Accessed 20 April 2016].

Truxillo, D.M., Bauer, T.N. & Erdogan, B. 2015. *Psychology and work: Perspectives on industrial and organizational psychology*. :Routledge.

Tshabalala, A.M. 2015. *Financing public hospitals in South Africa: The case of the Industrial Development Corporation (IDC) and the development bank of Southern Africa (DBSA)*. [Online]. Available: <http://scholar.sun.ac.za/handle/10019.1/97444> [Accessed 15 November 2016].

Tucker, B. & Thorne, H. 2010. *Performance on the right hand side: Organizational performance as an independent variable*. [Online]. Available: http://apira2-010.econ.usy-d.edu.au/conference_proceedings/APIRA-2010097TuckerOrganizational-performance-as-an-independent-variable.pdf [Accessed 15 November 2016].

Uddin, M.J., Luva, R.H. & Hossian, S. 2013. Impact of organisational culture on employee performance and productivity. *International Journal of Business and Management*, 8(2):63-77.

Ushie, E.M., Agba, A., Ogaboh, M. & Okorie, C. 2015. Work environment and employee's commitment in agro-based industries in Cross River State, Nigeria. *Global Journal of Human Social Science*, 15(6):9-15.

- Uyanik, G.K. & Guler, N. 2013. A study on multiple linear regression analysis. *Social and Behavioral Sciences*, 106:234-240.
- Uygur, A. & Kilic, G. 2009. A study into organisational commitment and job involvement: An application towards the personnel in the central organisation for ministry of health in Turkey. *Ozean Journal of Applied Sciences*, 2(1):113-125.
- Van Rensburg, H.C.J. 2014. South Africa's protracted struggle for equal distribution and equitable access-still not there. *Human Resources for Health*, 12(26):1-16.
- Vance, R.J. 2006. *Employee engagement and commitment: A guide to understanding, measuring and increasing engagement in your organisation*. [Online]. Available: <https://www.shrm.org/about/foundation/research/Documents/1006EmployeeEngagementOnlineReport.pdf> [Accessed 24 May 2015].
- Vandenbergher, C., Benton, K., Michon, R., Chebat, J.C., Tremblay N. & Fils J.F. 2007. An examination of the role of perceived support and employee commitment on employee-customer encounters. *Journal of Applied Psychology*, 92(4):1177-1187.
- Vermeeren, B., Steijn, B., Tummers, L., Lankhaar, M., Poertstamper, R. & van Beek S. 2014. HRM and its effect on employee, organizational and financial outcomes in health care organizations. *Human Resources for Health*, 12:35-43.
- Vianen, A.E.M., Shen, C. & Chuang, A. 2010. Person-organisation and person-supervisors fits: Employee commitments in a Chinese context. *Journal of Organisational Behavior*, 32(6):906-926.
- Virtanen, M., Kivimaki, M., Joensuu, M., Virtanen, M., Elovainio, M. & Vahteral, J. 2005. Temporary employment and health: A review. *International Journal of Epidemiology*, 34(3):610-622.
- Vlassoff, C. 2007. Gender differences in determinants and consequences of health. *Journal of Health, Population and Nutrition*, 25(1):47-61.
- Waleed 2011. *The relationship between human resource practices and employee retention in public organisation*. [Online]. Available: <http://ro.ecu.edu.au/cgi/view-content.cgi?article=1424&context=theses> [Accessed 10 July 2015].

Weaver, S.G. & Yancy, G.B. 2010. The impact of dark leadership on organisational commitment and turnover. *Leadership Review*, 10:104-124.

Weinberg, S.L. & Abramowitz, S.K. 2008. *Statistics using SPSS: An integrative approach*. New York, NY: Cambridge University Press.

Werner, A.K., Vink, S., Watt, K. & Jagals, P. 2015. Environmental health impacts of unconventional natural gas development: A review of the current strength of evidence. *Science of Total Environment*, 505:1127-1141.

Willis-Shattuck, M., Bidwell, P., Thomas, S., Wyness, L., Blaauw, D. & Ditlopo, P. 2008. Motivation and retention of health workers in developing countries: A systematic review. *BMC Health Services Research*, 8:247-255.

Wilson, J. 2010. *Essentials of business research: A Guide to doing your research project*. London, UK: Sage.

Wilson, K. & Keelan, J. 2009. Coping with public health 2.0. *Canadian Medical Association Journal*, 180(10):1080.

Wong, A. & Sohal, A. 2002. An examination of the relationship between trust, commitment and relationship quality. *International Journal of Retail and Distribution Management*, 30(1):34-50.

World Health Organisation (WHO). 2006. *Working together for health: The world health report 2006*. [Online]. Available: http://www.who.int/whr/2006/whr06_en.pdf [Accessed 12 August 2015].

World Health Organisation (WHO). 2013. *Health and environment: Communicating risks*. [Online] Available: http://www.euro.who.int/__data/assets/pdf_file/0011/233759/e96930.pdf. [Accessed 21 May 2015].

World Health Organisation (WHO). 2016. *Stress at the workplace*. [Online]. Available: http://www.who.int/occupational_health/topics/stressatwp/en/ [Accessed 20 August 2015].

World Health Organisation. (WHO). 2009. *Global health risks: Mortality and burden of disease attributable to selected major risks*. [Online]. Available:

http://www.who.int/healthinfo/global_burden_disease/GlobalHealthRisks_report_full.pdf [Accessed 20 August 2015].

Xaba, J. & Phillips, G. 2001. *Understanding nurse emigration: Final report*. Pretoria: Trade Union Research Project (TURP), Denosa, Pretoria.

Yaghmale, F. 2009. Content validity and its estimation. *Journal of Medical Education*, 3(1):25-37.

Yassi, A., Zungu, M., Spiegel, J.M., Darwin, L., Van Rensburg, A.J., Engelbrecht, M.C., Bryce, E., Lockhart, K., Kistnasamy, B., & O'Hara, L.M. 2016. Protecting healthcare workers from infectious disease transmission: An exploration of a Canadian-South African partnership of partnerships. *Globalization and Health*, 12(1): 25.

Yee, C.S. 2012. *A study on employee retention in a construction company*. [Online]. Available: http://etd.uum.edu.my/3069/4/CHEW_SIEW_YEE.pdf [Accessed 20 August 2015].

Yin, R.K. 2015. *Qualitative research from start to finish*. New York, NY: Guilford.

Yoganandan, G. & Sivasamy, G. 2015. Health and safety measures in Chettinad cement corporation limited, Karur. *Bonfring International Journal of Data Mining*, 5(1):6-9.

Yongtang, Z., Weixi, Z., Yalin, H., Yipeng, X. & Liu, T. 2014. The relationship among role conflict, role ambiguity, role overload and job stress of Chinese middle-level cadres. *Chinese Studies*, 3(1):8-11.

You, C., Huang, C., Wang, H., Liu, K., Lin, C. & Tseng, J. 2013. The relationship between corporate social responsibility, job satisfaction and organisational commitment. *International Journal of Organisational Innovation*, 5(4):65-77.

Yu, K.K. & Bang S.C. 2013. *What is the impact of improved health to organisational performance?* [Online]. [Available]: <http://digitalcommons.ilr.cornell.edu/cgi/view-content.cgi?article=1046&context=student>[Accessed 26 October 2016].

Zakari, N.M.A. 2011. *The impact of nurse role ambiguity and role conflict on nursing faculty commitment in Saudi Arabia*. *Life Science Journal*, 8(3):179-186.

Zeanah, C.H. 2012. *Handbook of infant mental health*. New York, NY: Guilford Press.

Zeng, J., An, F., Xiang, Y., Qi, Y., Ungvari, G.S. & Newhouse, R. Yu, D.S.F., Lai, K.Y.C., Yu, L., Ding, Y., Tang, W., Wu, P., Hou, Z. & Chiu, H.F.K. 2013. Frequency and risk factors of workplace violence on psychiatric nurses and its impact on their quality of life in China. *Psychiatry Research*, 210(2):510-514.

Zikmund, W.G. 2003. *Business research methods*. 7th ed. Mason, Ohio: South-Western Cengage Learning.

Zikmund, W.G., Babin, B., Carr, J. & Griffin, M. 2012. *Business research methods*. Belmont, California: Cengage Learning.

Zikmund, W.G., Babin, B.J., Carr, J.C. & Griffin, M. 2013. *Business research methods*. Indianapolis, IN: Que Publishing.

Zin, S.M. & Ismail, F. 2012. Employers' behavioural safety compliance factors toward occupational, safety and health improvement in the construction industry. *Procedia-Social and Behavioural Sciences*, 36:742-751.

Zinhumwe, C. 2012. *Travelling shoppers' perceptions on the comprehensive servicescape within the South African retail environment*. Published doctoral thesis, Nelson Mandela Metropolitan University.

Zohrabi, M. 2013. Mixed method research: Instruments, validity, reliability and reporting findings. *Theory and Practice in Language Studies*, 3(3):254-262.

Zoladz, P. 2013. Current status on behavioural and biological markers of PTSD: A research for clarity in a conflicting literature. *Neuroscience and Biobehavioral Reviews*, 37(5):860-895.

Zumitza, V. & Michie, J. 2015. *Personal knowledge management leadership styles and organisational performance: A case study of the healthcare industry in Thailand*. New York, NY: Springer.

Zungu, M. & Malotle, M. 2011. Do we know enough to prevent occupationally acquired tuberculosis in healthcare workers? *Occupational Health Southern Africa*, 9(10):17-21.

Zwetsloot, G.I.J.M. 2003. From management System to Pub corporate social responsibility. *Journal of Business Ethics*, 44(2/3):201-207.

**Annexure A:
Cover Letter**



Faculty of Business and Economic Sciences
Tel: +27 (0)41 504-2031/Fax: +27 (0)41-504-1830
E-mail: noxolo.mazibuko@nmmu.ac.za
Date 9 March 2016

Dear Respondent

You are being asked to participate in a research study. We will provide you with the necessary information to assist you to understand the study and explain what would be expected of you (participant). These guidelines would include the benefits and your rights as a study subject. Please feel free to ask the researcher to clarify anything that is not clear to you. The purpose of this study is to establish how you, as a health care employee (nurse), view employee commitment regarding implementation of safety measures in the health sector institutions. We also assure you that all information will be dealt with in the strictest confidence. To participate, you will be required to complete a questionnaire. You may withdraw your questionnaire at any time should you not want to further participate as the completion of the questionnaire is voluntary. No personal details will be required. If you do partake, you have the right to withdraw at any given time, during the study without penalty or loss of benefits. Although your identity will at all times remain confidential, the results of the research study may be presented at conferences or in specialist publications. Telephone numbers of the researchers are provided. Please feel free to call these numbers.

Furthermore, it is important that you are aware of the fact that the ethical integrity of the study has been approved by the Research Ethics Committee (Human) of the university. The REC-H consists of a group of independent experts that has the responsibility to ensure that the rights and welfare of participants in research are protected and that studies are conducted in an ethical manner. Studies cannot be conducted without REC-H's approval. Queries with regard to your rights as a research subject can be directed to the Research Ethics Committee (Human), Department of Research Capacity Development, PO Box 77000, Nelson Mandela Metropolitan University, Port Elizabeth, 6031. If no one could assist you, you may write to: The Chairperson of the Research, Technology and Innovation Committee, PO Box 77000, Nelson Mandela Metropolitan University, Port Elizabeth, 6031. This informed consent statement has been prepared in compliance with current statutory guidelines.

Please feel free to contact us should you have any questions.

Yours sincerely

Ms Nomatshawe Mbengo

Prof NE Mazibuko

Prof S James

**Annexure B:
Questionnaire**

QUESTIONNAIRE

EMPLOYEE COMMITMENT TOWARDS SAFETY MEASURES IMPLEMENTATION IN THE PUBLIC HEALTH INSTITUTIONS

Please indicate the extent to which you agree with the following statements, by means of a cross (X), in the boxes provided.

The following scales are used: 1=Strongly Disagree, 2=Disagree, 3=Somewhat Disagree, 4=Neutral, 5=Somewhat Agree, 6=Agree, 7=Strongly Agree.

**SECTION A
PERCEPTIONS REGARDING FACTORS THAT INFLUENCE SAFETY AND HEALTH IMPLEMENTATION MEASURES**

IN MY ORGANISATION...		Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
1	There are inadequate medical supplies and equipment.	1	2	3	4	5	6	7
2	There is risk of occupational exposure (e.g. to TB, HIV).	1	2	3	4	5	6	7
3	There is a lack of opportunities for career advancement.	1	2	3	4	5	6	7
4	I am able to work in a better managed health environment.	1	2	3	4	5	6	7
5	I am able to earn a better or more realistic remuneration.	1	2	3	4	5	6	7
6	There is quality and variety of special training offered.	1	2	3	4	5	6	7
7	I will be exposed to fewer occupational risks abroad.	1	2	3	4	5	6	7
8	I often have to break a rule or policy in order to carry out a clinical procedure/prescription.	1	2	3	4	5	6	7
9	I often receive conflicting requests from two or more supervisors.	1	2	3	4	5	6	7
10	I often receive an instruction without adequate resources to execute it.	1	2	3	4	5	6	7
11	I often have to work with other colleagues who are quite incompetent.	1	2	3	4	5	6	7
12	I am always under pressure to perform duties that are beyond my scope of practice.	1	2	3	4	5	6	7
13	I often work without a clear understanding of the necessary prioritization of the task at hand.	1	2	3	4	5	6	7
14	I often have to work under vague clinical orders.	1	2	3	4	5	6	7
15	I am not sure what my clinical responsibilities entail.	1	2	3	4	5	6	7

16	I am uncertain about how my job is linked to other clinical responsibilities	1	2	3	4	5	6	7
17	Clear, planned goals and objectives for my daily job-related activities do not exist.	1	2	3	4	5	6	7

	IN MY ORGANISATION...	Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
18	I am always willing to work extra hours in my job.	1	2	3	4	5	6	7
19	I am always willing to be on standby/on call in my job.	1	2	3	4	5	6	7
20	I am always provided with sufficient colleagues to assist me in my job.	1	2	3	4	5	6	7
21	I am always provided with competent colleagues to assist me.	1	2	3	4	5	6	7
22	There are always sufficient doctors per patient.	1	2	3	4	5	6	7
23	I always are work under sufficient lighting when doing my job (e.g. examine and perform surgical procedures).	1	2	3	4	5	6	7
24	My colleagues are always friendly.	1	2	3	4	5	6	7
25	I feel confident, owing to the relevant assistance received from my colleagues	1	2	3	4	5	6	7
26	I work with colleagues who are professional.	1	2	3	4	5	6	7
27	I am satisfied with the cleanliness and the conditions of the buildings and landscaping at our hospitals and clinics.	1	2	3	4	5	6	7
28	My workplace conducts a training and competency needs assessment.	1	2	3	4	5	6	7
29	My workplace develops opportunities for safety and health professionals to ensure the continued enhancement of expertise.	1	2	3	4	5	6	7
30	My workplace develops specialized training programs based on outputs from formal safety and health risk assessments.	1	2	3	4	5	6	7
31	My workplace evaluates relevant safety and health impacts in all formal risk assessments.	1	2	3	4	5	6	7
32	My workplace advises patients on self-health maintenance and preventive medication.	1	2	3	4	5	6	7
33	My workplace maintains a safe and clean working environment in compliance with healthcare procedures and regulations.	1	2	3	4	5	6	7
34	My workplace adheres to infection-control protocols.	1	2	3	4	5	6	7
35	There are attempts to open vacancies for healthcare professionals.	1	2	3	4	5	6	7
36	It is easy to attract special professionals.	1	2	3	4	5	6	7
37	Very strict competency requirements, based on health and safety regulations, are set for certain positions.	1	2	3	4	5	6	7
38	There are adequate funds available to hire health specialists with scarce skills.	1	2	3	4	5	6	7

	IN MY ORGANISATION...	Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
39	Advanced technology is available for conducting healthcare procedures (e.g. x-rays, surgical operations).	1	2	3	4	5	6	7
40	There is user-friendly and accessible infrastructure to conduct healthcare procedures.	1	2	3	4	5	6	7
41	Employees are offered study leave/funds to improve their qualifications.	1	2	3	4	5	6	7
42	I am placed in a position that matches my capabilities in the job.	1	2	3	4	5	6	7
43	The recruitment procedure is transparent.	1	2	3	4	5	6	7
44	There are specific policies covering disciplinary/grievance procedures.	1	2	3	4	5	6	7
45	I am entitled to engage in written agreements (e.g. trade unions, employee representatives).	1	2	3	4	5	6	7
46	I occupy a job position based on my qualifications.	1	2	3	4	5	6	7
47	I am offered over and above the minimum statutory requirements regarding leave (e.g. maternity, paternity, family responsibility).	1	2	3	4	5	6	7
48	I am always compensated when I work more than the normal required hours.	1	2	3	4	5	6	7
49	I am always allowed to work flexible hours in my job.	1	2	3	4	5	6	7
50	My benefits are comparable to those offered by other healthcare institutions.	1	2	3	4	5	6	7
51	I am provided the opportunity of a sufficient pension package on retirement.	1	2	3	4	5	6	7
52	I am offered an opportunity, by my supervisors, to attend in-service training.	1	2	3	4	5	6	7
53	I am satisfied with the induction program that is offered to me by my supervisors.	1	2	3	4	5	6	7
54	I am satisfied with the work orientation offered to me by my immediate supervisor.	1	2	3	4	5	6	7
55	I always have access to computers and the internet.	1	2	3	4	5	6	7
56	I am satisfied with the procurement process/procedures (e.g. time lapse to receive an order or ordered item).	1	2	3	4	5	6	7

SECTION B
PERCEPTIONS REGARDING COMMITMENT TO SAFETY AND HEALTH MEASURES

	IN MY ORGANISATION, I...	Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
1	Personally comply with all safety and health standards.	1	2	3	4	5	6	7
2	Accept responsibility for my own safety and health.	1	2	3	4	5	6	7
3	Safeguard and watch out for co-employees e.g. by identifying and eliminating hazards.	1	2	3	4	5	6	7
4	Speak up if something is not right, and communicate any unsafe conditions to my supervisor.	1	2	3	4	5	6	7
5	Refuse work for which I have not been properly trained.	1	2	3	4	5	6	7
6	Ensure that every task/job I perform is done safely and with no adverse health consequences.	1	2	3	4	5	6	7
7	Ask for help if my skills, physical capabilities and/or are not adequate to the task.	1	2	3	4	5	6	7
8	Ensure that a copy of the health care safety manual is available.	1	2	3	4	5	6	7
9	Ensure that sharp containers are readily accessible in my work area.	1	2	3	4	5	6	7
10	Ensure that disposable gloves are readily available in my work area.	1	2	3	4	5	6	7
11	Know that employees are taught to be aware of and to recognize potential health hazards at work.	1	2	3	4	5	6	7
12	Know that the protection of employees from occupational exposure to HIV is a high priority with management.	1	2	3	4	5	6	7
13	Know that all reasonable steps are taken to minimise hazardous job tasks and procedures.	1	2	3	4	5	6	7
14	Know that employees are encouraged to become involved in safety and health matters.	1	2	3	4	5	6	7
15	Know that managers do their part to ensure employees' protection from occupational HIV/AIDS.	1	2	3	4	5	6	7
16	Am aware that unsafe work practices are corrected by supervisors.	1	2	3	4	5	6	7
17	Have had the opportunity to be properly trained to use personal protective equipment devices so that I can protect myself from exposure to hazards and infectious diseases.	1	2	3	4	5	6	7
18	Keep my work area.	1	2	3	4	5	6	7
19	Ensure that my work area is neither cluttered nor crowded.	1	2	3	4	5	6	7
20	Am aware that there is open communication between supervisors and staff.	1	2	3	4	5	6	7

SECTION C
PERCEPTIONS REGARDING OUTCOMES

	IN MY ORGANISATION...	Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
1	Improves sustainable productivity.	1	2	3	4	5	6	7
2	Ensures that resources are optimally utilised.	1	2	3	4	5	6	7
3	Obtains increased recognition among national public health institutions.	1	2	3	4	5	6	7
4	Focuses on employee empowerment (training) to improve institutional efficiency.	1	2	3	4	5	6	7
5	Captures a favorable public image within society.	1	2	3	4	5	6	7
6	Renders its service in a socially responsible manner (e.g. outreach programmes).	1	2	3	4	5	6	7
7	Is involved in ethical practices that promotes quality health care services.	1	2	3	4	5	6	7
8	Ensures the effective application of good governance related to health and clinical practices.	1	2	3	4	5	6	7
9	Ensures that nurses remain because it provides the assurance of a safe clinical environment.	1	2	3	4	5	6	7
10	Utilises proficient professionals to respond to the healthcare needs of employees.	1	2	3	4	5	6	7
11	Creates an enabling environment for nurses to respond effectively to health related concerns.	1	2	3	4	5	6	7
12	Ensures that nurses are offered a variety of incentives, informal and formal in-service training, and employment related promotions.	1	2	3	4	5	6	7
13	Ensures that nurses are provided with user-friendly equipment and technology to access useful healthcare facilities.	1	2	3	4	5	6	7

**SECTION D
BIOGRAPHICAL INFORMATION**

Please mark with an X where applicable.

1. **Age**

Years	≤ 20	21 – 30	31 – 40	41 – 50	51 – 60	60+
Response	1	2	3	4	5	6

2. **Gender**

Female	1	Male	2
--------	---	------	---

3. **Highest qualification**

Grade 11 and lower	Grade 12	Diploma or National certificate	Bachelor's degree	Postgraduate degree/ diploma (e.g. Honours/ Masters)	Other (Please specify)
1	2	3	4	5	6

4. **Level of nursing training**

Nursing Assistants	Enrolled Nurses	Professional Nurses	Nursing Managers	Medical & Health Services Managers
1	2	3	4	5

5. **Length of current (tenure) employment**

1 – 5 years	6 – 10 years	11 – 15 years	16 – 20 years	21 years +
1	2	3	4	5

6. **Level of monthly income**

< R5000	R5001 – R10 000	R10 001 – R15 000	R15 001 – R20 000	R20 001 +
1	2	3	4	5

THANK YOU FOR COMPLETING THIS QUESTIONNAIRE

**Annexure C:
National Department of Health letter**



Director Epidemiology Research and Surveillance
National Department of Health
Pretoria

REQUEST FOR PERMISSION TO CONDUCT RESEARCH IN PUBLIC HEALTH INSTITUTIONS

Dear Director

My name is Nomatshawe Mbengo, and I am a Business Management student at the Nelson Mandela Metropolitan University in Nelson Mandela Bay. The research I wish to conduct for my Doctoral thesis involves employees' commitment towards safety measures implementation in the public health sector institutions. This project will be conducted under the supervision of Prof NE Mazibuko (Business and Economic Sciences) and Prof S. James (Health Sciences faculty (NMMU, South Africa). I am hereby seeking your consent to approach a number of hospitals in selected provinces in South Africa.

I have provided you with a copy of my approved thesis research proposal which includes copies of the measure and consent and assent forms to be used in the research process, as well as a copy of the approval letter which I received from the NMMU Research Ethics Committee (Human). Upon completion of the study, I undertake to provide the Department of Health with a bound copy of the full research report. If you require any further information, please do not hesitate to contact me on **0838915977** or the study promoters on 0415042031 / 0415042253. Thank you for your time and consideration in this matter.

Yours sincerely

Ms Nomatshawe Mbengo

**Annexure D:
RTI Ethics Approval Letter**



**Nelson Mandela
Metropolitan
University**

for tomorrow

Ref: H-16-BES-BMa-002 [Approved]

Chairperson: Faculty RTI Committee
Faculty of Business and Economics Sciences
Tel. +27 (0)41 504 2906

14 March 2016

Prof NE Mazibuko
NMMU
Department of Business Management
South Campus

Dear Prof Mazibuko

PROJECT PROPOSAL: EMPLOYEE COMMITMENT TOWARDS SAFETY MEASURES IMPLEMENTED IN THE PUBLIC HEALTH SECTOR(DOCTORAL DEGREE: BUSINESS MANAGEMENT)

PRP: Prof NE Mazibuko
PI: Ms F Mbengo

Your above-entitled application for ethics approval served at Fac RTI.

We take pleasure in informing you that the application was approved by the Committee. However, please note that the approval is on condition that permission to conduct the study is also obtained from the other relevant individuals, parties, organisations and/or role players to which the study pertains.

The ethics clearance reference number is **H-16-BES-BMa-002**, and is valid for three years. Please inform the Faculty RTI Committee, via the faculty representative, if any changes (particularly in the methodology) occur during this time.

Please inform your co-investigators of the outcome.

Yours sincerely

A handwritten signature in black ink, appearing to read 'C Rootman', with a long horizontal line extending to the right.

Prof C Rootman
Faculty of Business and Economic Sciences

**Annexure E:
Eastern Cape Health Department Approval Letter**



Eastern Cape Department of Health

Enquiries: Madoda Xokwe

TelNo: 040 608 0830

Date: 22 March 2016

Fax No: 043 642 1409

e-mail address: zonwabele.merile@echealth.gov.za

Dear Ms. Mbengo

Re: Employee commitment towards safety measures implementation in the public health sector institutions (EC_2016RP0_575)

The Department of Health would like to inform you that your application for conducting a research on the abovementioned topic has been approved based on the following conditions:

1. During your study, you will follow the submitted protocol with ethical approval and can only deviate from it after having a written approval from the Department of Health in writing.
2. You are advised to ensure, observe and respect the rights and culture of your research participants and maintain confidentiality of their identities and shall remove or not collect any information which can be used to link the participants.
- 3, The Department of Health expects you to provide a progress on your study every 3 months (from date you received this letter) in writing.
4. At the end of your study, you will be expected to send a full written report with your findings and implementable recommendations to the Epidemiological Research & Surveillance Management. You may be invited to the department to come and present your research findings with your implementable recommendations.
5. Your results on the Eastern Cape will not be presented anywhere unless you have shared them with the Department of Health as indicated above.

Your compliance in this regard will be highly appreciated.

SECRETARIAT: EASTERN CAPE HEALTH RESEARCH COMMITTEE



Ikamva eliqaqambileyo!

**Annexure F:
Kwa-Zulu Natal Department Approval Letter**



health

Department:
Health
PROVINCE OF KWAZULU-NATAL

330 Langalibalele street,
Private Bag X9051 PMB, 3200
Tel: 033 395 2805/3189/3123 Fax: 033 394 3782
Email: hrkm@kznhealth.gov.za
www.kznhealth.gov.za

DIRECTORATE:

Health Research & Knowledge
Management (HKRM)

Reference: HRKM112/16
KZ_2016RP57_268

19 April 2016

Dear N. J. Mbengo

(Nelson Mandela Metropolitan University)

Subject: Approval of a Research Proposal

1. The research proposal titled 'EMPLOYEES COMMITMENT TOWARDS SAFETY MEASURES IMPLEMENTATION IN THE PUBLIC HEALTH SECTOR INSTITUTIONS' was reviewed by the KwaZulu-Natal Department of Health (KZN-DoH).

The proposal is hereby **approved** for research to be undertaken at the selected KZN-DoH districts/facilities.

2. You are requested to take note of the following:
 - a. Obtain support letters from the relevant district managers and make the necessary arrangement with the identified facility before commencing with your research project.
 - b. Provide an interim progress report and final report (electronic and hard copies) when your research is complete.
3. Your final report must be posted to **HEALTH RESEARCH AND KNOWLEDGE MANAGEMENT, 10-102, PRIVATE BAG X9051, PIETERMARITZBURG, 3200** and e-mail an electronic copy to hrkm@kznhealth.gov.za

For any additional information please contact Ms G Khumalo on 033-395 3189.

Yours Sincerely

Dr E Lutge

Chairperson, Health Research Committee

Date: 20/04/16.

**Annexure G:
Language Editing Letter**

30th January 2017

To Whom it May Concern

I herewith conform that I have proofread the following thesis:

Title of Study: ***EMPLOYEE COMMITMENT TOWARDS SAFETY
MEASURES IMPLEMENTATION IN THE PUBLIC
HEALTH INSTITUTIONS***

Student Name: **Nomatshawe Josette Mbengo**

Student Number: **194175390**

Institution: **Nelson Mandela Metropolitan University (NMMU)**

Qualification: **PhD Business Management**

I suggested relevant changes, where I saw fit, using the “Track Changes” function in MSWord; the student could thus either accept or reject the suggested changes at her own discretion.

I trust that this is in order.

Kind regards,



Nancy Morkel

MA English (NMMU), PGDHET (UFH), BA Hons English (UPE), BA MCC (UPE)
Editing Methodology (SU), Editing Practice (SU)

Nancy.morkel@nmmu.ac.za

