

**PERCEPTIONS OF THE NURSES' CONTINUING PROFESSIONAL
DEVELOPMENT AND ITS CONTRIBUTION TO QUALITY PATIENT CARE**

By

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PERCEPTIONS OF THE NURSES' CONTINUING PROFESSIONAL DEVELOPMENT AND ITS CONTRIBUTION TO QUALITY PATIENT CARE

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ABSTRACT

Aim: The aim of the study is to explore the perceptions of the nurses' CPD and its contribution to quality patient care in the Gauteng province of the Republic of South Africa.

Significance of the study: The significance of the study is to highlight the importance of CPD as one of the contributing factors to the quality of patient care through on-going competence. The researcher hopes the recommendations from the study may serve as a motivation to health institutions that are not actively involved in continuing professional development.

Method and data analysis: Quantitative descriptive explorative design was used to achieve the objectives of the study.

The study involved registered professional nurses (n =105) and enrolled nurses (n=56) employed in a state health institution. Data was collected by means of a structured questionnaire. A total of 200 questionnaire were distributed and 162 completed questionnaires were returned, giving a response rate of $162/200=81\%$. Statistical analysis was conducted using the SAS software version 9.3. The internal and external validity was enhanced by selecting a large homogenous sample.

Ethical issues: An information leaflet indicating the key elements of the study such as the research title, the purpose of the study, voluntary participation and when to withdraw from the study was distributed to all the participants.

Results: The study found that nurses participate in CPD activities to maintain their professional competence, thereby contributing to quality patient care. The findings are consistent with the findings from other studies.

KEY CONCEPTS: Continuing professional development, Continuing education, Quality of patient care, Learning needs, Systems theory, Adult learning

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I declare that the **PERCEPTIONS OF THE NURSES' CONTINUING PROFESSIONAL DEVELOPMENT AND ITS CONTRIBUTION TO QUALITY PATIENT CARE** is my own work and that the sources that I have used have been indicated and acknowledged by means of reference and that this work has not been submitted before at any other institutions.



SIGNATURE

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DATE 15/6/2013

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DEDICATION

*To my beloved late mother Daisy Nobesuthu
Ndletyana, who inspired, encouraged and made me
believe that where there is a will the is a way.*

TABLE OF CONTENTS

| | |
|--|-----------|
| CHAPTER 1 ORIENTATION TO THE STUDY | 1 |
| 1.1 INTRODUCTION | 1 |
| 1.2 BACKGROUND TO THE RESEARCH PROBLEM | 3 |
| 1.3 PROBLEM STATEMENT | 5 |
| 1.4 AIM AND OBJECTIVES..... | 5 |
| 1.5 SIGNIFICANCE OF THE STUDY..... | 6 |
| 1.6 CONTINUING PROFESSIONAL DEVELOPMENT | 6 |
| 1.6.1 Resources for CPD | 7 |
| 1.6.2 Quality care..... | 8 |
| 1.7 THE SETTING OF THE STUDY..... | 10 |
| 1.7.1 Categories of hospitals | 11 |
| 1.7.2 The research setting | 12 |
| 1.8 THEORETICAL UNDERPINNING | 13 |
| 1.8.1 Components of the Systems Theory..... | 13 |
| 1.9 DEFINITION OF KEY TERMS | 14 |
| 1.10 RESEARCH METHODOLOGY | 17 |
| 1.10.1 Research design..... | 18 |
| 1.10.2 Research Methods..... | 19 |
| 1.11 VALIDITY AND RELIABILITY | 21 |
| 1.11.1 Validity | 21 |
| 1.11.2 Reliability | 22 |
| 1.12 LIMITATIONS OF THE STUDY | 22 |
| 1.13 ETHICAL CONSIDERATIONS..... | 23 |

| | | |
|------------------|--|-----------|
| 1.14 | LAYOUT OF THE REPORT | 25 |
| 1.15 | CONCLUSION | 25 |
| | | |
| CHAPTER 2 | LITERATURE REVIEW | 26 |
| 2.1 | INTRODUCTION | 26 |
| 2.2 | AN OVERVIEW OF THE LITERATURE REVIEW | 26 |
| 2.2.1 | Overview and definitions of a literature review..... | 26 |
| 2.2.2 | Sources of literature..... | 27 |
| 2.2.3 | Types of literature sources..... | 28 |
| 2.2.4 | The process of the literature review for this study..... | 28 |
| 2.3 | THEORETICAL FRAMEWORK..... | 34 |
| 2.3.1 | Background of the systems theory..... | 35 |
| 2.3.2 | Principles of education as a social system..... | 35 |
| 2.3.3 | Components of the Systems Theory..... | 37 |
| 2.3.4 | Application of the components of the Systems Theory to nursing education and CPD..... | 37 |
| 2.4 | BACKGROUND OF CONTINUING EDUCATION | 62 |
| 2.4.1 | CPD and related terminology..... | 62 |
| 2.4.2 | Advantages of CPD | 65 |
| 2.4.3 | The link between CPD and evidence-based practice..... | 68 |
| 2.4.4 | Mandatory CPD in other countries..... | 68 |
| 2.4.5 | Promotion of CPD..... | 69 |
| 2.4.6 | Motivational factors and usefulness of CPD | 69 |
| 2.4.7 | Constraints experienced | 70 |
| 2.5 | CONCLUSION | 71 |

| | |
|--|------------|
| CHAPTER 3 RESEARCH DESIGN AND METHOD | 72 |
| 3.1 INTRODUCTION | 72 |
| 3.2 RESEARCH SETTING | 72 |
| 3.3 RESEARCH DESIGN | 73 |
| 3.3.1 Definitions of research design..... | 73 |
| 3.3.2 Rationale for the choice of the design..... | 74 |
| 3.3.3 Description of the related concepts of the research design | 74 |
| 3.4 RESEARCH METHOD | 78 |
| 3.4.1 Phases of this research project..... | 78 |
| 3.4.2 Population..... | 83 |
| 3.4.3 Sample, sampling, and sampling procedure | 84 |
| 3.5 DATA COLLECTION | 90 |
| 3.5.1 The questionnaire as a data collecting instrument..... | 90 |
| 3.6 VALIDITY AND RELIABILITY | 92 |
| 3.6.1 Validity of the research instrument..... | 93 |
| 3.6.2 Characteristics of the data collection instrument..... | 94 |
| 3.7 DATA ANALYSIS | 95 |
| 3.8 ETHICAL CONSIDERATIONS | 97 |
| 3.9 CONCLUSION | 100 |
| | |
| CHAPTER 4 FINDINGS AND INTERPRETATION OF THE DATA | 101 |
| 4.1 INTRODUCTION | 101 |
| 4.2 DATA COLLECTION | 101 |
| 4.3 SECTION A: DEMOGRAPHIC DATA | 102 |
| 4.3.1 Respondents' age | 102 |
| 4.3.2 Gender distribution..... | 103 |

| | | |
|------------|---|------------|
| 4.3.3 | Nursing status and participating in CPD | 104 |
| 4.3.4 | Nursing speciality and participation in CPD | 105 |
| 4.3.5 | Nursing experience and participation in CPD | 106 |
| 4.4 | SECTION B: INPUT FACTORS..... | 106 |
| 4.4.1 | The need for CPD | 107 |
| 4.4.2 | Benefits of participating in CPD | 111 |
| 4.4.3 | Willingness to attend CPD activities..... | 112 |
| 4.4.4 | CPD Format..... | 113 |
| 4.4.5 | Learning needs and CPD participation | 115 |
| 4.4.6 | Motivational reasons for participating in CPD | 116 |
| 4.4.7 | CPD constraints experienced..... | 120 |
| 4.4.8 | Funding available for CPD | 124 |
| 4.4.9 | Respondents' participation in CPD activities..... | 126 |
| 4.4.10 | The number of CPD courses attended..... | 126 |
| 4.4.11 | Perceptions of mandated CPD..... | 127 |
| 4.4.12 | Responsibility of nurses' CPD activities | 130 |
| 4.5 | SECTION C: THROUGHPUT FACTORS | 131 |
| 4.5.1 | CPD courses available to the respondents | 131 |
| 4.5.2 | Available time for CPD activities | 135 |
| 4.5.3 | Importance of CPD activities..... | 136 |
| 4.5.4 | Teaching and learning environment..... | 137 |
| 4.5.5 | Clinical Instructor | 138 |
| 4.6 | SECTION D: OUTPUT FACTORS..... | 140 |
| 4.6.1 | Cognitive skills | 140 |
| 4.6.2 | Professional development..... | 142 |
| 4.6.3 | Psychomotor skills | 144 |

| | | |
|--|---|------------|
| 4.6.4 | Affective skills | 145 |
| 4.6.5 | Communication skills | 146 |
| 4.7 | CONCLUSION | 147 |
| CHAPTER 5 FINDINGS, LIMITATIONS AND RECOMMENDATIONS | | 148 |
| 5.1 | INTRODUCTION | 148 |
| 5.2 | RESPONDENTS CHARACTERISTICS | 148 |
| 5.3 | SUMMARY OF THE FINDINGS..... | 149 |
| 5.3.1 | Health care professionals need CPD for up-to-date professional development, better career prospects, and compliance with requirements of professional organisations | 149 |
| 5.3.2 | Willingness to attend CPD activities..... | 149 |
| 5.3.3 | CPD Format..... | 149 |
| 5.3.4 | Learning needs / personal needs and participation in CPD | 150 |
| 5.3.5 | Motivational reasons to participate in CPD | 150 |
| 5.3.6 | CPD constraints..... | 150 |
| 5.3.7 | Funding for continuing professional development..... | 151 |
| 5.3.8 | Compensation for CPD | 152 |
| 5.3.9 | Participation in continuing professional development activities during the past two years..... | 152 |
| 5.3.10 | Number of courses attended..... | 152 |
| 5.3.11 | Mandatory or optional CPD..... | 152 |
| 5.3.12 | Responsibility for nurses' CPD activities..... | 153 |
| 5.3.13 | Continuing professional development courses available to respondents | 153 |
| 5.3.14 | Time provided by the hospital to participate in CPD | 153 |
| 5.3.15 | Teaching and learning environment is conducive to learning | 154 |

| | | |
|---|---|----------------|
| 5.3.16 | Satisfaction with clinical facilitators | 154 |
| 5.3.17 | Cognitive skills | 154 |
| 5.3.18 | Professional development..... | 155 |
| 5.3.19 | Psychomotor skills | 155 |
| 5.3.20 | Affective and communication skills | 156 |
| 5.4 | LIMITATIONS..... | 156 |
| 5.5 | RECOMMENDATIONS | 157 |
| 5.5.1 | Continuing professional development..... | 157 |
| 5.5.2 | Further research topics | 158 |
| 5.6 | CONCLUSION | 158 |
| BIBLIOGRAPHY..... | | 159 |
| ANNEXURE A: ETHICAL CLEARANCE CERTIFICATE..... | | 173 |
| ANNEXURE B: RESEARCH PERMISSION REQUEST TO THE HOSPITAL | | 174 |
| ANNEXURE C: GAUTENG DEPARTMENT OF HEALTH PERMISSION LETTER 175 | | |
| ANNEXURE D: A LETTER TO THE RESPONDENTS | | 176 |
| ANNEXURE E: CONSENT TO PARTICIPATE IN THIS RESEARCH STUDY | | 178 |
| ANNEXURE F: QUESTIONNAIRE..... | | 179 |
| LIST OF FIGURES | | |
| Figure 1.1: | CPD resources..... | 7 |
| Figure 1.2: | Self-directed CPD activities | 8 |
| Figure 1.3: | The Republic of South Africa (RSA)..... | 10 |
| Figure 1.4: | Gauteng Province of the RSA..... | 12 |
| Figure 2.1: | Systems view of education | 36 |

| | | |
|--------------|--|-----|
| Figure 2.2: | Input factors | 42 |
| Figure 2.3: | CPD Process | 48 |
| Figure 2.4: | Throughput factors..... | 50 |
| Figure 2.5: | CPD resources..... | 54 |
| Figure 2.6: | Self-directed CPD activities | 55 |
| Figure 4.1: | Respondents' age distribution (N = 162)..... | 103 |
| Figure 4.2: | Years of nursing experience (N = 162) | 106 |
| Figure 4.3: | Benefits of participating in CPD (N = 162) | 112 |
| Figure 4.4: | CPD format available to respondents (N = 162) | 113 |
| Figure 4.5: | Learning needs and CPD participation (N = 162) | 116 |
| Figure 4.6: | Motivational reasons for participating in CPD (N = 162) | 117 |
| Figure 4.7: | Respondents' feedback about motivational reasons and age groups (N = 162) | 119 |
| Figure 4.8: | Motivational reasons of male and female nurses (N = 162) | 119 |
| Figure 4.9: | Constraints experienced (N = 162) | 121 |
| Figure 4.10: | Funding available for CPD (N = 162) | 124 |
| Figure 4.11: | Respondents' participation in CPD (N = 162) | 127 |
| Figure 4.12: | Mandated CPD (N = 162) | 129 |
| Figure 4.13: | Respondents' professional status and mandated CPD (N = 162)..... | 129 |
| Figure 4.14 | Respondents' points of view about who should be responsible for CPD (N = 162)..... | 130 |
| Figure 4.15: | Respondents' analysed data about available CPD activities (N = 162)..... | 132 |
| Figure 4.16 | Respondents' analysed data of the teaching and learning environment (N = 162) | 138 |
| Figure 4.17: | Respondents' results about the clinical educator (N = 162) | 139 |
| Figure 4.18: | Respondents' differing opinion about teaching aids (N = 162)..... | 140 |
| Figure 4.19: | Respondents' cognitive skills mean score (N = 162)..... | 142 |
| Figure 4.20: | Respondents' opinions about cognitive skills (N = 162)..... | 142 |
| Figure 4.21: | Respondents' mean score in relation to professional development (N = 162) | 143 |
| Figure 4.22: | Respondents' opinions about professional development (N = 162)..... | 144 |

| | | |
|--------------|--|-----|
| Figure 4.23: | Respondents' mean score with regard to psychomotor skills (N = 162)..... | 144 |
| Figure 4.24: | Respondents' score on effect of CPD on nursing practice (N = 162)..... | 145 |
| Figure 4.25: | Respondents' score in relation to affective skills (N = 162)..... | 146 |
| Figure 4.26: | Communication skills (N = 162) | 147 |

LIST OF TABLES

| | | |
|-------------|---|-----|
| Table 1.1: | CPD activities presented, booked, and attended during 2012 | 4 |
| Table 1.2: | The number of health institutions in South Africa..... | 11 |
| Table 2.1: | Summary of key concepts and search sources..... | 27 |
| Table 2.2: | The process of a literature review as it applies to this study | 29 |
| Table 3.1: | Characteristics of quantitative research | 75 |
| Table 3.2: | Steps and phases of a research process..... | 79 |
| Table 3.3: | Population of nurses at the hospital under study | 84 |
| Table 3.4: | Step-by-step process of a sampling procedure..... | 86 |
| Table 3.5: | Summary of the principles of the Nuremberg Code | 99 |
| Table 4.1: | Respondents' age distribution (N = 162)..... | 103 |
| Table 4.2: | Respondents' gender, status, and qualifications (N = 162)..... | 104 |
| Table 4.3: | Respondents' fields of speciality and participating in CPD (N = 162)..... | 105 |
| Table 4.4: | Input factors | 108 |
| Table 4.5: | Respondents' answers about CPD Format (N = 162)..... | 114 |
| Table 4.6: | CPD format (N = 162) | 114 |
| Table 4.7: | Work experience and choice of CPD format (N = 162) | 115 |
| Table 4.8: | Respondents' results in relation to CPD constraints and age (N = 162)..... | 121 |
| Table 4.9: | Respondents' information about CPD constraints, age, gender, and status (N = 162) | 123 |
| Table 4.10: | Funding of CPD (N = 162) | 125 |
| Table 4.11: | Respondents' information about funding of CPD (N = 162) | 125 |
| Table 4.12: | Respondents' information about funding CPD (n = 162)..... | 126 |

| | | |
|-------------|--|-----|
| Table 4.13: | Respondents' participation in CPD during the past two years (N = 162)..... | 126 |
| Table 4.14: | Respondents' analysed data about mandated CPD (N = 162) | 128 |
| Table 4.15: | Respondents' analysed data about optional CPD (N = 162)..... | 128 |
| Table 4.16: | Respondents' responses about who should be responsible for CPD (N = 162) | 130 |
| Table 4.17: | Available CPD activities (N = 162) | 133 |
| Table 4.18: | Available CPD activities (N = 162) | 134 |
| Table 4.19: | Respondents' analysed data about the time available for participating in CPD (N = 162) | 135 |
| Table 4.20 | Respondents' data analysis about the time available for participating in CPD (N = 162) | 136 |
| Table 4.21: | Respondents' information about the importance of CPD activities (N = 162) | 137 |
| Table 4.22: | Respondents' data analysis about cognitive skills (N = 162) | 141 |

CHAPTER 1

ORIENTATION TO THE STUDY

1.1 INTRODUCTION

Rapid changes and improvement in the health care setting require that nurses keep their knowledge recent and updated by means of continuing professional development. Jenkin, Lawson, Miles and Vallish (2011:197) state that health care institutions are suffering from unprecedented shortage of qualified nurses, as well as an increasing demand and complexity of technological innovations, changing expectations, and demands of patients and the general public seeking health care. Henwood, Wyatt, Hart and Smith (2003:589) are of the opinion that patients are better informed about their medical conditions and treatment options and, therefore, they view themselves as partners in health care rather than being receivers or consumers only. Shin, Jung, and Kim (2006:233) state that there is nearly a daily improvement and advances in medical technology and that failure to keep updated with the health information technology requires critical thinking skills and development in educational methods.

Fineout-Overholt, Melnyk and Schultz (2005:336) agree with these statements and highlight that the health care system is witnessing a variety of rapidly changing scenarios which are driven by forces motivating education of nurses and also emphasise the change in the health care system. At the moment, the health care focus is concerned with the way in which nurses can be encouraged and empowered to work with new resources, technology, procedures and new ways of thinking and doing, as well as promoting the quality of patient care and retaining staff.

Marquis and Hudson (2009:166) indicate that the implementation of such reform is concerned with the implementing support strategies that are needed to overcome resistance to change, methods of consultation, prolonged support, identification of the roles of management and the influence of the organisational climate, and the structures that are operational to facilitate and manage change. Such changes can only be brought about when nurses are informed and well-educated in the changing arena of health care.

Health care professionals, such as nurses, are affected by the pace of technological change, the need for constant updating in relevant health sciences, and the acquisition of new technical skills. Failure to keep up to date may not only result in poor patient outcomes, it may impact occupational health and may result in injury (Lee, Tiwari, Choi, Yuen, & Wong 2005:205).

Rosswurm and Larrabee (2007:318) indicate that evidence based practice changes decision making in health care. The authors further state that in the past some surgical interventions and diagnostic investigations have required the patient to be hospitalised while nowadays many procedures are conducted in the outpatient setting. It results in patient no longer experiencing lengthy hospitalisation due the impact of technology and managed care. The development placed more responsibility on nurses to have and acquire appropriate knowledge to care for the patients in situations where most often no doctors are available. Nurses need to be partners in health care, but also need knowledge and skills to keep abreast of the constant flow of innovative strategies. However, disease profiles have changed and emphasis of care has shifted. Most challenges are presented by chronic illnesses and the knowledge of patients has been untapped for long (Pool, Peoll & Ten Cate 2013: 35).

Chu and Hsu (2011:112) argue that there are various kinds of knowledge and that there is a considerable multiplicity of what knowledge entails. Park and Jones (2010:142) state that “.....we cannot understand knowledge in terms of narrow definitions of rationality that recognise only the technical”. Due to the costly health care system, many patients who cannot afford health care insurance delay seeking care and it often results in more seriously ill patients being admitted to hospitals with life altering consequences that demand optimal care from highly qualified nurses and other health care personnel. Patient safety and medication errors are related to costly health care and affect the way nurses function in the health environment and the way they care for their patients. These are preventable interventions which can be altered and improved by, amongst others, educating nurses about good nursing practices to improve their clinical skills (Szdowski & Smith 2009: Online).

A retrospective study about patient safety in the Middle East and Africa by Wilson, Michael, Olsen, Gibberd, Vincent, El Assady, Rasslan, Qsous, Macharia, Sahel,

Whittaker, Abdo and Letaief (2012:2) had reviewed 15 548 records and found that 8.2% of these records indicated at least one adverse event with a range of 2.5% to 18.4% per country. Of these adverse events 83% were judged to be preventable, while 30% were associated with death of a patient, about 34% occurred due to therapeutic errors that resulted from relatively non-complex clinical situations. The authors further highlighted that inadequate training and clinical supervision of employees or failure to follow policies and protocols contributed to most adverse events.

According to Mseleku (2007:3), complaints of avoidable errors, poor health care delivery and poor communication are some of the problems that have been identified in health care delivery settings in South African. The author further states that one of the challenges facing the health profession is the rate of change and innovation in the health care sector and that continuing professional development (CPD) is necessary for closing the gap between standards and actual practice.

From the introduction above, the researcher has concluded that CPD is the key to ensuring that practising nurses have the knowledge, skills and attitude to provide patient-centred care that is evidence-based. CPD should be based upon identified needs of the nurses. It is important that nurses set personal learning goals for which they use on-going CPD opportunities to meet their identified goals (Whitehead & Lacey-Haun 2008:498). Based on these facts, the researcher has decided to explore the perceptions of the nurses with regard to CPD and its impact on quality care. The research includes the nurses' CPD needs, motivators and barriers to CPD and practice.

1.2 BACKGROUND TO THE RESEARCH PROBLEM

As a nurse, the researcher has worked in the staff development department of a level 2 hospital in the Gauteng Province, South Africa. One of her duties has been to establish the needs in relation to CPD courses, and to support and advise nurses about building their clinical skills in specialising areas of critical care. She has noticed that educational support empowers nurses with knowledge; and contributes to clinical competence, self-confidence and a morale boost in the clinical area. During her appointment in this post, the researcher has also noticed, that despite the

fact that successful CPD is provided, a certain amount of these efforts did not lead to any change or improvement in clinical practice.

In the hospital under study, the CPD programmes presented during the year 2012 are tabulated in Table1.1.

Table 1.1: CPD activities presented, booked, and attended during 2012

| Date | Title of CPD | Intended audience | Number of nurses booked | Number of attendees |
|-----------------------|--|--------------------------|--------------------------------|----------------------------|
| January/February 2012 | Managing and recording intake & Output of patients | 18 | 18 | 16 |
| 12.2.12 | Pressure ulcers management | 15 – 20 | 20 | 4 |
| 24.2.12 | Waterloo score assessment | 15 – 20 | 20 | 16 |
| 26.4.12 | Patient property management | 15 – 20 | 20 | 10 |
| 03.05.12 | Decision making and problem solving | 15 – 20 | 20 | 9 |
| 24.05.12 | Urinalysis for patients | 15 – 20 | 20 | 13 |

Source: Hospital records (2012)

Reports from doctors, other health professionals, and nurses that some clinical nurses do not have the knowledge to fully participate in emergency procedures, such as cardiopulmonary resuscitation, and the high incidents of health care associated infection are a cause for concern. As reflected in Table1.1, it can be deduced that the majority of nurses fail to attend CPD activities.

It is against this background that the researcher has decided to explore the perceptions of the nurses about CPD and its relationship to quality care. It is hoped that the study will highlight the importance of CPD and will enhance knowledge, skills, and the attitudes that are necessary for quality patient care.

1.3 PROBLEM STATEMENT

Inadequate knowledge of nursing practice has many causes, including a failure to study applicable material at nursing school or a failure to update oneself about the hospitals policies, protocols, and procedures; resulting in adverse events with subsequent poor patient outcomes.

A number of studies demonstrate that continuing education makes a positive impact on nursing practice (Chitty & Black 2007:105; College and Association of Registered Nurses of Alberta 2005:4; Gallagher 2005:39). Gallagher (2007:471) highlights that continuing professional education enhances the delivery of better patient care, provides an ability to gain up-to-date knowledge, and to question and change practice.

In spite of these findings, serious adverse events still occur at health care institutions in South Africa which raise concerns about the status and the perceptions of CPD. Furthermore, the researcher has found a limited amount of scientific literature about nurses' perceptions of CPD and its relationship with quality patient care in South Africa.

1.4 AIM AND OBJECTIVES

The general aim of this study is to explore and describe the perceptions and the views of the nurses about CPD and its contribution to quality patient care at a selected Level 2 hospital in the Gauteng Province of the Republic of South Africa (RSA).

The objectives of the study are to:

- Explore the perceptions and views of the nurses' CPD and its relationship to quality care;
- Assess the educational needs of nurses at a hospital in the Gauteng Province

of the RSA;

- Discuss the perceived barriers, motivating factors and measures to enhance CPD acceptance; and
- Explore the nurses' views about the implementation of mandatory CPD activities.

1.5 SIGNIFICANCE OF THE STUDY

The significance of the study is to highlight the importance and the benefit of CPD to the health institution, the patient, and the nurse. The recommendations of the study may serve as a motivation to the health institution under study, and to those that are not actively involved in CPD.

Benefit to the nurse: The study focuses on CPD that aims at professional development of the nurses. Professional development allows nurses to increase skills levels and to advance from one levels of competence to the other as described by Benner (1984). The commitment of a nurse to professional development is essential for the delivery of safe and effective health care (Cooper 2009:501).

Benefit to the patient and the health institution: Patients expect quality health care services from the nurses, and CPD enables the nurses to acquire the necessary skills to provide quality patient care. Through CPD, the nurses can keep up with the technological and scientific changes that are occurring in health care settings (Cooper 2009:501). The author further emphasises that professional development is listed as one of the essential forces in structural empowerment, and health institutions that are involved in CPD demonstrate better patient outcomes, safer patient care, and greater nursing satisfaction.

1.6 CONTINUING PROFESSIONAL DEVELOPMENT

Continuing professional development is a systematic process of assessment, planning, development, and evaluation that enhances the performance of health care providers and their continuing competence (Claflin 2005:263; Cross 1997:375; DeSilets 2006:100; Lee et al. 2005:205; Quinn & Hughes 2008:540). CPD is based on the facility's policies, procedures, equipment and resources (DeSilets 2006:100).

Camano-Puig and Pigue-Angordans (2008:517) define CPD as a process that enables health professionals to keep updated with the purpose of meeting the needs of patients, the health service, and their own professional development.

According to Dickerson (2010:100), nursing professional development is a lifelong process of active participation by nurses in learning activities that assist with developing and maintaining their continuing competence, that enhance their professional practice, and that support achievement of their career goals.

1.6.1 Resources for CPD

There are many ways in which CPD can be accomplished. Figure 1.1 highlights the way in which CPD can be achieved; Figure 1.2 supplies examples of self-directed CPD. Both Figure 1 and 2 are discussed in detail in chapter 2 (2.3.4.3).



Figure 1.1: CPD resources

Source: Quinn and Hughes 2007:482

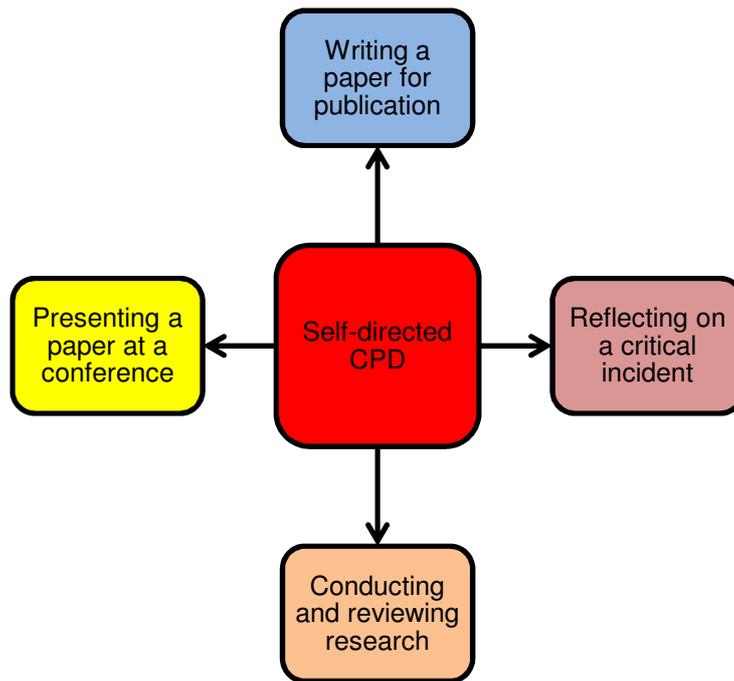


Figure 1.2: Self-directed CPD activities

Source: Quinn and Hughes 2007:482)

1.6.2 Quality care

Cheesman (2009:340) states that health care quality is the degree to which services for individuals and populations increase the likelihood of desired health outcomes that are clinically effective, efficient and affordable. While the Institute of Medicine in the United Kingdom (UK) defines quality care as the care that is safe, timely, effective, efficient, equitable, and patient centred (Curtis, Cook, Richard, Derek, Bion & Kacnerek 2006:211). Gallagher (2005:40) defines quality as meeting the expectations of the public in the delivery of clinically effective, efficient, and affordable health care services (i.e. doing the proper thing well). The author further writes that the public perceives adverse occurrences as poor quality nursing care. According to the Oxford Paperback Dictionary & Thesaurus (2009:750), quality is the standard of something as measured against other similar things.

Improving quality care

Performance measurement is an antecedent to quality improvement. Farquhar, Kurtzman and Thomas (2010:248) state that performance measurement is a central

component of quality improvement because it provides information about the current and past performances that can guide future improvement efforts. The authors further emphasise that the results distinguish between excellent and substandard performance. Mseleku (2007:2) provides measures to improve quality care in South Africa. These measures include reducing health care adverse events, increasing patients' participation and the dignity offered to them, and expanding research about evidence of effectiveness. In the UK, quality health care is the duty of the National Health Service Trust (NHS). With the view of assisting the health care institutions to consistently achieve quality care, the Department of Health in the UK has introduced the concept of clinical governance. It refers to a framework that holds the national health organisations accountable for continually improving the quality of their services and safeguarding high standards of care by creating an environment in which clinical excellence will flourish. The framework comprises a number of activities; such as employee education, training and development, clinical risk management, clinical effectiveness, clinical audits, service user and public involvement, use of information, and staff management (Mc Sheary & Pearce 2007:45). The coordinated application of these activities ensures that patients receive quality health care (Royal College of Nursing 2012: online).

Farquhar et al. (2010:248) argues that quality improvement cannot be realised without performance measurement that is coherent, robust, and integrated into a system that is purposeful, efficient, and transparent.

1.7 THE SETTING OF THE STUDY

This study has taken place at a selected health institution in the Gauteng Province of South Africa. For the benefit of the reader, a short discussion of the RSA, the Gauteng Province, and the hospital under study is provided. Figure 1.3 shows a map of the RSA that indicates the various provinces of South Africa.



Figure 1.3: The Republic of South Africa (RSA)

Source: Google maps (2012)

The RSA is a country that is located at the southern tip of Africa. It is divided into nine provinces; namely Gauteng, Limpopo, Mpumalanga, North West, KwaZulu-Natal, Eastern Cape, Western Cape, Northern Cape, and the Free State. Each province has its own capital city. In 2011, Statistics South Africa has estimated the mid-year population as 50.59 million (Lehohla 2011: online).

1.7.1 Categories of hospitals

There are three categories of hospitals in the RSA. They are referred to as the district, regional and tertiary hospitals. These names are currently being replaced by the names level 1, 2, and 3 hospitals. As these new names suggest, the hospitals offer different levels of service (Cullinan 2006:10). Table 1.2 provides the number of public hospitals in South Africa.

Table 1.2: The number of health institutions in South Africa

| Province | District hospitals (Level 1) | Regional hospitals (Level 2) | Provincial hospitals (Level 3) | National central hospitals | Specialised hospitals | Total Hospitals |
|---------------|---------------------------------|------------------------------------|--------------------------------------|-------------------------------|--------------------------|-----------------|
| Western Cape | 28 | 9 | | 3 | 21 | 61 |
| Eastern Cape | 47 | 9 | | | 16 | 72 |
| Northern Cape | 22 | 1 | | | 3 | 27 |
| Free State | 24 | 5 | 2 | | 3 | 34 |
| KwaZulu-Natal | 37 | 14 | 1 | 1 | 9 | 62 |
| North West | 24 | 4 | | | 2 | 30 |
| Gauteng | 8 | 11 | | 4 | 6 | 29 |
| Mpumalanga | 20 | 5 | 1 | | 1 | 27 |
| Limpopo | 37 | 5 | 2 | | 3 | 47 |
| Total | 247 | 63 | 6 | 8 | 64 | 388 |

Source: Cullinan (2006:11)

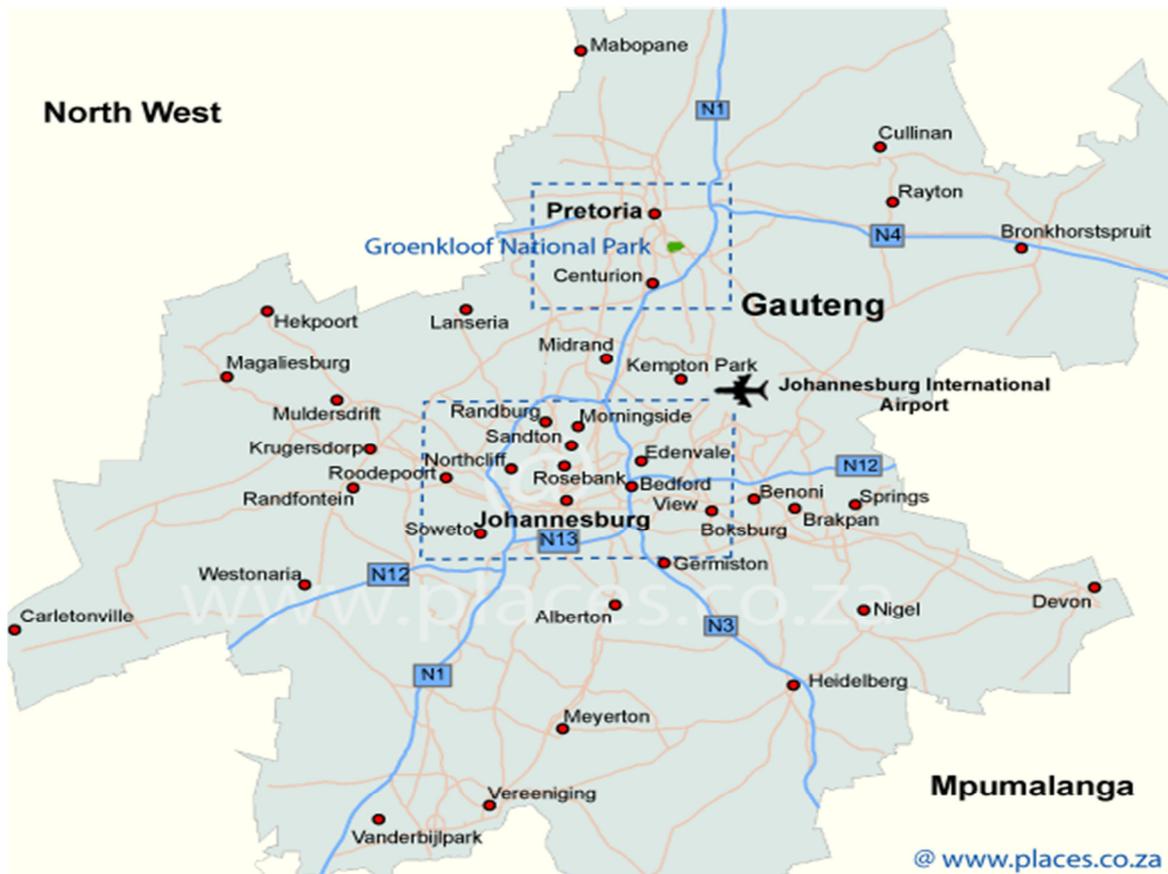


Figure 1.4: Gauteng Province of the RSA

The Gauteng (meaning “gold”) Province has been built on the wealth of gold deep underground, and it represents 40% of the gold reserves in the world. Pretoria is the legislative capital city, while Johannesburg in the Gauteng Province is by far the biggest city in the RSA and on the African continent. Gauteng comprises the largest South African population. Approximately 11.3 million people live in this province (Lehohla 2011:2). The hospital under study is located in Johannesburg. It is a level two hospital. According to Cullinan (2006:12), regional hospitals are level two facilities that provide care that requires the intervention of specialists and general practitioners. The author further indicates that hospitals that are providing a single specialist service are also classified as a level 2 hospitals.

1.7.2 The research setting

This study has been conducted at a public hospital in Johannesburg, Gauteng Province. The hospital is fully funded by the South African Government and it is administered by the Department of Health. It is one of eleven level 2 institutions in

the Gauteng Province. This facility serves as a training institution for nurses, doctors, and allied workers. It receives acute patients; such as trauma patients, and patients who are referred from other health centres and district hospitals. The selected hospital has approximately 800 beds, 263 registered professional nurses, 305 enrolled nurses, and 265 enrolled nursing assistants.

1.8 THEORETICAL UNDERPINNING

While conducting the study, the researcher has been guided by the positivist paradigm. The underpinning concept of the positivist thinking is deductive reasoning. It describes a logical thought process that derives a research hypothesis by interrogating theory and reasoning, while moving from general concepts to the particular elements (Burns & Grove 2009:174; Polit & Beck 2010:13).

This study is based on the Systems Theory which argues that education is a system because it is an integrated assembly of interacting elements that are designed to cooperatively carry out a predetermined function (Finlay 2012:online). Abenga (2009:372) argues that education qualifies to be called a system. The author claims that education is an entity that is manmade and established to solve particular problems and to meet special needs of a society. Education, in general, consists of parts or components, for example curriculum development, teaching material and equipment, teaching personnel, the learners, and monitoring and evaluation components. All these components are interrelated, since one affects the others (Abenga 2009:372).

1.8.1 Components of the Systems Theory

The Systems Theory comprises the environment, input factors, throughput factors and output factors. Below is a brief summary of the factors and sub- factors as applied to this study.

Environment

- Socio-economic factors
- Political demands
- Needs of patients, groups, and individuals

Input factors

- Education Department and the need for CPD
- The South African Nursing Council (SANC)
- Responsibility for CPD
- The learners educational needs and their willingness to learn
- CPD motivational factors and constraints

Throughput factors

- The nurse educators
- Curriculum
- Instructional methods

Output factors

- Knowledge, skills and attitude
- Quality care, professional development, and achievement

The application of the components of the systems theory to nursing education and CPD is discussed extensively in Chapter 2, Section 2.3.4.

1.9 DEFINITION OF KEY TERMS

For the purpose of this study, the following concepts are used and clarified:

- Continuing professional development
- Nursing education
- Nurse / Nursing
- Learning needs
- Adult learner
- Systems theory
- Knowledge
- Professional nurse
- Enrolled nurse
- Perception
- Professional nurse

- Quality patient care

Continuing professional development: The Oxford Paperback Dictionary & Thesaurus (2009:192) defines continuing as to keep doing something. The MacMillan English Dictionary (2006:301) defines continuing as something that persists happening for a period of time without interruption.

A profession is an occupation that requires special training and formal qualifications (Oxford Paperback Dictionary & Thesaurus 2009:730).

The MacMillan English Dictionary (2006:1125) defines profession as an occupation that needs special skills and qualifications to do.

Development is defined as growth or improvement over a period of time (MacMillan English Dictionary 2006:379).

Dickerson (2010:100) refers to nursing professional development as the lifelong process of active participation by nurses in learning activities that assist with developing and maintaining their continuing competence, enhancing their professional practice, and supporting achievement of their career goals.

In this study, CPD refers to learning activities that nurses in South Africa engage in after achieving post registration qualifications. These activities can take the form of in-service training, workshops, seminars, and formal courses; such as a critical care and trauma course or a Bachelor's and Master's degrees in Nursing. These additional qualifications maintain, improve, and extend knowledge and skills, while developing professional and personal qualities that are necessary for quality patient care.

Nursing education: A nurse is a person who is trained to care for sick or injured people. Nursing means looking after a sick person (Oxford Paperback Dictionary & Thesaurus 2009:628).

Education: Education is the process of teaching and learning (Oxford Paperback Dictionary & Thesaurus 2009:294).

Learning: Learning is referred to by the MacMillan English Dictionary (2006:810) as

a process of gaining knowledge and experience, for example by studying.

According to Armstrong and Parsa-Parsi (2005:681), learning is a process during which knowledge is created by the transformation of experience.

Need: The Oxford Concise Medical Dictionary (2007:480) defines a need as a requirement or necessity, it is the capacity to benefit from an intervention as opposed to the mere lack of something.

In this study, identification of the learning needs forms the basis of an effective CPD design, and one that is based on the learners' personal needs.

Adult learner: According to the MacMillan English Dictionary (2006:19), an adult is someone who is no longer a child and who is legally responsible for their own actions.

Learner: It is someone who is learning something (MacMillan English Dictionary 2006:810).

In this study, professional nurses are considered adult learners. Part of being an effective clinical educator involves understanding how adults learn best. Compared to teenagers and children, adults have specific needs and requirements as learners. Literature reviewed argues that CPD can only be effective in an environment that is conducive to learning and where principles of adult learning are understood and respected.

Systems theory: Abenga (2009:372) defines a system as an entity that is composed of a number of parts, the relationship of these parts and the attributes of both the parts and the relationship.

The MacMillan English Dictionary (2006:1458) defines a system as a set of connected things that work together for a particular purpose.

Theory: The MacMillan English Dictionary (2006:1488) defines a theory as one or more ideas that explain how or why something happens.

A systems theory is used as a frame of reference in this study because continuing professional development as a system has various sub-systems (for example the

administrative department, curriculum, instructional material, teaching and learning strategies, the teacher, and the learner) that are interrelated and work together to achieve the goals of the CPD programme.

Knowledge: The Oxford Paperback Dictionary & Thesaurus (2009:516) defines knowledge as information and awareness that are gained by experience or education.

Enrolled nurse: An enrolled nurse is an individual who has completed a two-year training programme in nursing science. This person is competent to provide patient care as specified by the licensing authority (SANC 2012: online).

Registered professional nurse: A registered professional nurse is an individual who has completed a four-year programme at university or nursing college. This person is educated and competent to practise comprehensive nursing and midwifery (SANC 2012: online).

For this study, the sample was selected from the enrolled and registered professional nurses population.

Perceptions: The Oxford Paperback Dictionary & Thesaurus (2009:676) defines perception as the ability to see, hear, or become aware of something.

In this study, perceptions refer to the awareness of the nurses in relation to CPD and its contribution to quality care.

Quality patient care: Gallagher (2005: 40) defines quality as meeting the expectations of the public in the delivery of clinically effective, efficient and affordable health care services (e.g. doing the right thing well).

1.10 RESEARCH METHODOLOGY

The selection of a research methodology according to Parahoo (2006:183) is the core of a research design and must include the research design, the population, research variables, strategies for data collection, and procedures.

1.10.1 Research design

A research design is a comprehensive plan for obtaining answers to the research question, including a specification for enhancing the integrity of the study (Polit & Beck 2006:509). Research methods are techniques that researchers use to structure a study and to gather and analyse information that is relevant to the research question (Polit & Beck 2010:16). In this study, a quantitative explorative descriptive and cross sectional design has been used to explore and describe the perceptions and views of the nurses' CPD and its contribution to quality patient care.

1.10.1.1 Quantitative research design

Polit and Beck (2006:15) define quantitative research as a set of orderly and disciplined procedures with the purpose of gaining knowledge. It is a traditional, positivistic, and scientific method that is used to conduct research. Quantitative designs express the assumptions of a positivist paradigm that assumes that behaviour can be explained by means of objective facts (Burns & Grove 2005:23), and provides statistical evidence in support of the findings. In quantitative studies, researchers collect quantifiable data that can be numerically expressed in measurement (Polit & Beck 2006:36, 323).

In this study, the researcher has used a questionnaire for the purpose of gathering evidence. Questionnaires are economical but not appropriate for surveying certain populations, such as the elderly (Polit & Beck 2006:241). Objectivity is maintained by using closed questions. The questionnaire (Annexure F) is divided into four sections:

Section A: Biographic information;

Section B: Input factors;

Section C: Throughput / processes; and

Section D: Output factors.

1.10.1.2 Explorative research design

This study is explorative because it seeks to explore the perceptions and the views of the nurses' CPD and its contribution to quality patient care. According to Polit and Beck (2008:20), an explorative design explores the nature of the phenomenon, the manner in which it is manifesting and its underlying processes.

1.10.1.3 Descriptive research design

The focus of a descriptive design is to describe a phenomenon. The researcher does not attempt to manipulate any variable, and makes no effort to determine the relationship between variables. The researcher merely searches for accurate information about the characteristics of a subject, group, institutions, or situation (Brink, Van der Walt & Van Rensburg 2006:104). This study explores, describes and researches the perceptions and views of the nurses' CPD and its contribution to quality patient care.

1.10.1.4 Cross sectional design

According to Burns and Grove (2005:236) cross sectional designs are used to examine groups of subjects at various stages of development simultaneously with the intent of describing changes in the phenomenon from one stage to another. The authors further argue that the stages are part of a process that will progress as time goes by. Seers and Critelton (2001:490) argue that cross sectional designs are mostly descriptive.

1.10.2 Research Methods

Research methods involve data collection, analysis, and interpretation that researchers use as a guide to conduct their studies (Creswell 2009:15). A quantitative research method is used in this study (Chapter 3, Section 3.4).

1.10.2.1 Population

A population in a research project is the entire group of persons or objects that are of interest to the researcher, in other words, who meet the criteria which the researcher is interested in studying (Brink et al. 2006:123; Burns & Grove 2005:40; Polit & Beck

2008:67). The target population for this study have been registered professional and enrolled nurses in the Gauteng Province of the RSA.

1.10.2.2 Sample

A sample is a subset of the population that is selected for a particular study, and the members of a sample are the subjects (Burns & Grove 2005:40; Polit & Beck 2008:768). According to Brink et al. (2006:124), a sample is a part or fraction of a whole, or a subset of a larger set that is selected by the researcher to participate in a study. The sample of this study consists of 200 registered professional and enrolled nurses who have met the eligibility criteria.

Burns and Grove (2005:342) define eligibility criteria as a list of characteristics that are essential for membership of or eligibility for the target population.

The eligibility criteria for inclusion in the study are discussed extensively in Chapter 3, Section 3.4.3.7.

In this study, the inclusive criteria are:

- Age: > 20 years and older;
- Gender: Men and Women;
- Qualification: Registered professional and enrolled nurses; and
- Years of service / experience: > 18 months and longer; and
- Willingness to participate in the study; and
- Must have attended CPD during the past two years.

Exclusive criteria:

- Those professional and enrolled nurses who have not complied with the inclusive criteria; and
- The ones who have neither been willing to participate, nor sign a written consent form.

1.10.2.3 Sampling and sampling procedure

Sampling involves selecting a group of people, events, behaviour, or other elements

that are associated with a study (Burns & Grove 2005:341). Brink et al. (2006:124) define sampling as a process of selecting the sample from a population in order to obtain information about a phenomenon in a way that represents the population of interest. Non-probability sampling has been applied in this study. The self-designed questionnaire has been distributed to all registered professional and enrolled nurses who have met the eligibility criteria (Chapter 3, Section 3.4.3.7).

1.10.2.4 Data collection

Data collection is the gathering of information that is needed for addressing a research problem (Polit & Beck 2004:716). According to Burns and Grove (2005:430), data collection is the process of gathering data from the subjects. The researcher has collected data according to a pre-established plan. Data have been collected by means of questionnaires that consist of closed-ended questions, which have been distributed to the registered professional and enrolled nurses who have met the eligibility criteria as described in Chapter 3, Section 3.5.

1.10.2.5 Data analysis

Data analysis encompasses categorising, ordering, manipulating, summarising the data, and describing the information in meaningful terms (Brink et al. 2006:170). In this study, data are analysed with the assistance of a statistician who is using the SAS software program, version 9.3. The analysis included descriptive statistics, cross tabulations, and logic regression (Chapter 3).

1.11 VALIDITY AND RELIABILITY

1.11.1 Validity

Validity is a measure of the truth or the accuracy of a claim (Burns & Grove 2005:214). Validity consists of internal and external validity. Internal validity is the extent to which the effects that are detected in a study is a true reflection of reality, while external validity is concerned with the extent to which the study findings can be generalised beyond the sample that is used in the study (Burns & Grove 2005:214 - 219). Brink (2006:159) states that instrument validity seeks to establish whether an instrument accurately measures what it is supposed to measure. Validity is further

described and applied in chapter 3.

1.11.2 Reliability

Reliability of a study instrument refers to the consistency of such a measuring instrument (Burns & Grove 2005:374). According to Brink et al. (2006:163), reliability refers to the degree to which an instrument can be depended upon to produce consistent results if repeatedly used. In this study, pre-testing of the research instrument has been conducted with three enrolled nurses and three registered professional nurses with the aim of eliminating any ambiguities and inconsistencies in the questions. Reliability is further described in chapter 3.

1.12 LIMITATIONS OF THE STUDY

Several limitations have been identified in the study.

The study has been conducted in one of the urban hospitals in the Gauteng Province of the Republic of South Africa. The institution has a well-developed continuing professional development department. Clinical facilitators at the institution conduct weekly CPD activities for both registered and enrolled nurses. The data of this study reflect the opinion of nurses from one government funded hospital only and may not be generalised to other settings; since policies, development, accessibility, and availability of CPD may be different.

Also, the sample has not been chosen randomly. The researcher has used non-probability purposive sampling because it is convenient for the researcher and the institution. To reduce the sampling bias, the researcher has increased the representativeness of the convenience sample. A total of 162 completed questionnaires have been obtained and implies a very good response rate of $162 / 200 = 0.81$ (81%).

The questionnaire was entirely developed by the researcher. Although it was reviewed by other experts, the vagueness of some of the questions was overlooked. These questions might not have been clear to the respondents. Data collection was limited to a closed-ended questionnaire.

While it might have been obvious to most respondents that multiple answers could

be selected, some respondents might have limited their answers to one selection which could have biased the results.

1.13 ETHICAL CONSIDERATIONS

Ethics is referred to as a system of values to which a researcher should adhere while dealing with research participants (Polit & Beck 2010:553). According to the World Health Organization (WHO) (2010: online), all research that involves human subjects needs to be carried out in accordance with the fundamental principles of respect, beneficence and justice.

The National Research Act of 1974 has created the National Commission for the Protection of Human Subjects of Biomedical and Behavioural Research (NCPHS). The commission was formed in 1978 to further protect human subjects in research (Burns & Grove 2005:179). According to Burns and Grove (2005:179) the commission has developed *The Belmont Report* which further stipulates values and responsibilities that researchers have to observe when they are interacting with research participants. Subsequently, these values and responsibilities are described.

Beneficence

Beneficence imposes a duty on the researcher to minimise harm and to maximise benefit (Polit & Beck 2006:87). This study was non-invasive and non-experimental, therefore, participants were not exposed to harm. The questionnaire was structured in a manner that is not hurtful to the participants. Also, the participants were reassured that the information they provide would not be used against them (Annexure D & E).

Self-determination

Self-determination implies that the participants have the right to voluntarily participate or to withdraw from the study (Polit & Beck 2006:89). A subject's right to self-determination can be violated by covert data collection and deception (Burns & Grove 2009:190). The right to self-determination was adhered to by ensuring that participants voluntarily participate in the study (Annexure D).

By law, universities are required to have Human and Animal Ethics Committees

which oversee that all research is conducted under the auspices of the respective universities.

The main responsibility of these committees is to check for issues in a study that might interfere with a participant's right to not participate, or in a study with possible harm, deception, or embarrassment to participants (Polit & Beck 2006: 90).

The proposal for this study was submitted to the Higher Degrees Committee at the University of South Africa (UNISA). Approval to interview the nurses was obtained from the deputy director of nursing services of the selected health care institution (Annexure C). Participation was voluntary and no participants were coerced into participating (Annexure D & E).

Justice

Justice refers to the respondents' right to fair treatment. To comply with this principle, the researcher honoured all agreements that were stated in an information leaflet, and had no prejudice against the respondents who withdrew from the study (Polit & Beck 2006:91). The researcher also ensured fairness in the selection of subjects. In this study, a convenience subject selection technique was used to ensure that all registered professional nurses and enrolled nurses who were available at work from 1st September 2012 to 30th September 2012 had an equal opportunity for selection.

Anonymity and confidentiality

Burns and Grove (2009:196) state that the research subject has a right to anonymity and the right to assume that the data collected will be kept confidential. Anonymity exists if the subject's identity cannot be linked with her or his individual responses. The authors further state that confidentiality refers to the way in which researchers manage private information that is shared by the subject in order to ensure that this information is not shared with other people without proper authorisation.

In this study, the researcher had stated in the participants' letter that the data collected might be published in nursing journals, and that neither the participants, nor the institutions' name would be disclosed. Burns and Grove (2009:196) state that people who accept information in confidence have an obligation to maintain

confidentiality.

Obtaining informed consent

Burns and Grove (2009:200) state that obtaining informed consent from human subjects is essential for conducting ethical research. Informed refers to the communication of ideas and content by the investigator to the prospective subject. Consent is the prospective subject's agreement to participate in a study.

Each participant in this study was issued with a consent form and an information leaflet that indicated the key elements of the study; such as the research title, the purpose of the study, voluntary participation, when to withdraw, and the benefits of the study (Annexure D & E).

1.14 LAYOUT OF THE REPORT

The layout of this study is:

Chapter 1 Orientation to the study;

Chapter 2 Literature review;

Chapter 3 Research design and method;

Chapter 4 Data analysis and interpretation; and

Chapter 5 Findings, limitations, and recommendations.

1.15 CONCLUSION

This chapter provides a background to the research problem on the basis of a literature review. Studies that have been reviewed confirm the connection between CPD and quality patient care. The chapter also discusses the background to the problem, research question, significance of the study, and the research objectives. Research methodology and ethical considerations are also outlined.

The following chapter reviews the literature about CPD and the inputs, throughputs, outputs, and the environmental factors that influence CPD.

CHAPTER 2

LITERATURE REVIEW

2.1 INTRODUCTION

Chapter 1 provides an overview of the study in which the background, research problem and the introduction to the research design and methods are described. In this chapter, the literature review and its relevance to this study is described.

2.2 AN OVERVIEW OF THE LITERATURE REVIEW

In this section, a short introduction of the literature review is given, the steps that have been followed while conducting the literature review, the advantages and disadvantages of conducting a literature review, and its application to this study.

2.2.1 Overview and definitions of a literature review

A literature review is a description of the literature that is relevant to a particular field or topic. The purpose of a literature review is to convey to the reader what is currently known about the topic of interest (Burns & Grove 2005:93). Marelli (2005:40) defines a literature review as the identification, reading, summarisation, and evaluation of previously published articles. Sometimes, the review may also encompass unpublished documents; such as dissertations, manuals; personal correspondence, books, and reports about a particular topic. A literature review should be designed with the view of addressing these issues:

- What is known about the topic?
- What is the chronology of the development of knowledge about the topic?
- What evidence is lacking, inconclusive, contradictory or limited?
- What directions are indicated by the work of other researchers?
- What views need to be tested?
- What contribution can the present study be expected to make?

The literature review has various uses. Amongst others and as applied to this study, it gets used to:

- Assist the researcher with conducting a critical, analytical appraisal of what is

already known about the research topic at hand in order to identify the existing gaps and weaknesses;

- Help study the conceptual and operational definitions that are used in previous research; and
- Analyse the advantages and the disadvantages of the research methods used with the purpose of either adopting or improving a particular method (Brink et al. 2006:67; Polit & Beck 2008:757).

Marrelli (2005:42) outlines some of the disadvantages of conducting a literature search:

- An effective literature review requires a high level of skill in identifying resources, analysing the sources to identify relevant information, and writing a meaningful summary; and
- A literature review is limited to collecting information about what has happened in the past, and usually within organisations, other than the researchers own work place. It does not provide data about current and actual behaviour.

2.2.2 Sources of literature

For the purposes of this study, the researcher has consulted the sources that are indicated in Table 2.1.

Table 2.1: Summary of key concepts and search sources

| Key concepts | Database |
|--|---|
| <ul style="list-style-type: none"> • Continuing professional development • Nurse education • Nurse • Adult learner • Learning needs | <ul style="list-style-type: none"> • CINAHL (Cumulative Index to Nursing and Allied Health) • EbscoHost, South African Nursing Council • Google CINAHL, Google and South African Nursing Council • Medline (Ovid) • PubMed |

| Key concepts | Database |
|---|--|
| <ul style="list-style-type: none"> • Systems model | <ul style="list-style-type: none"> • Google |

The researcher also has made use of the subject librarian at the University of South Africa and the librarian at the University of Oxford, England to obtain the information for this study.

2.2.3 Types of literature sources

There are two types of literature sources, namely primary and secondary sources. Primary sources are direct research studies, for example academic journals that report research studies that are written by the scientist or the team that has conducted the research project. Secondary sources, on the other hand, are documents that are written by an author who has not directly observed or participated in the events that are described, or who is not the originator of the particular concept (Marrelli 2005:42).

The review of literature in quantitative research is conducted to direct the development and implementation of a study. The major review is conducted at the beginning of the research process, and a limited review is conducted during the generalisation of the research report with the aim of identifying new studies (Burns & Grove 2005:95).

2.2.4 The process of the literature review for this study

Machi and McEvoy (2009:5) describe the process of a literature review in six steps as depicted in Table 2.2.

Table 2.2: The process of a literature review as it applies to this study

| Step | Description from Machi and McEvoy (2009:4-6) | Process as applied to this study |
|---|---|--|
| <p>Step 1: Select a topic.</p> | <p>A successful research topic is usually the result of the interest of the researcher. The interest moves away from everyday language and ideas into scientific reasoning and the formulation of a researchable topic.</p> | <p>Due to the post the researcher occupies (Chapter 1, Section 1.2), the researcher has noticed that despite large amounts of money and many hours of inputs from the educational department in designing continuing educational programmes for nursing personnel, patient safety and development outcomes are not achieved optimally (subjective awareness). The researcher wants to improve the situation and started to look at internet sources, consulting colleagues, and asking nurses in an informal manner what they are thinking of the programmes that are provided. It has been the initial step which first does not have any planning but is casually addressed. The researcher then has discovered that it is a researchable topic and she wants to find out what kind of problems other hospitals are experiencing in the same area. The researcher develops an interest in the topic and begins developing a title for formal research.</p> |
| <p>Step 2:</p> | <p>The search for literature</p> | <p>The researcher has realised that if</p> |

| Step | Description from Machi and McEvoy (2009:4-6) | Process as applied to this study |
|--------------------------------------|---|--|
| Interrogate the existing literature. | determines what information will be used in the review. It is done by windowing the information to data that only provide the strongest evidence to support the study. In this regard, the authors refer to the skills of skimming, scanning and mapping the data. At this point, the data are catalogued and documented. | she wants to move away from any subjective feelings and assumptions that might be biased, she has to conduct a formal scientifically based study and finds sound answers which are research based, objective and sound. She then enrolls for the Master's degree at the University of South Africa to learn about the research process and to approach the problem from an objective and knowledge point of view. An initial literature study has subsequently been conducted to present the research proposal. However, while the researcher is starting to consult sources, she realises that many sources, especially on the internet are not scientifically written and often also biased. During the second step, the researcher has started dividing and classifying the literature in the concepts that are related to the Systems Theory. She uses the Systems Theory as the theoretical framework of this study. The literature is divided into four parts: The concepts that relate to the input factors, throughput, and output factors and the environment in which learning |

| Step | Description from Machi and McEvoy (2009:4-6) | Process as applied to this study |
|------|--|---|
| | | <p>takes place.</p> <ul style="list-style-type: none"> • The following steps are being followed: • Firstly, windowing, which means reading only the information that is relevant to the topic under investigation and it includes health education, continuing education, and the Systems Theory. It is a broad search. • Secondly, skimming the literature for relevancy to this particular study which is continuing education in nursing. • Thirdly, scanning the literature from step two for relevancy to the conceptual framework namely the Systems Theory's main concepts (Chapter 2, Sections 2.3.2 and 2.3.3). • Fourthly, mapping the data by deciding which data will be used during the literature search and what can be used in reporting the findings of the study and which learning takes place. |

| Step | Description from Machi and McEvoy (2009:4-6) | Process as applied to this study |
|--|---|---|
| <p>Step 3: Develop an argument.</p> | <p>During this step, the data that are obtained from the literature get arranged in such a way that the researcher can put her claims in a logical argument. It represents the body of evidence of what is known about the topic.</p> | <p>In this step, the researcher starts with further mapping of literature to decide which information can be used in the environment, input, throughput, and the output sections of the discussion. Once this step has been completed, she further divides the literature according to the sub-sections. Each of the four sections and the subsequent sub-sections are then coded according to the relevant discussion in Section 2.3.3. It represents the process that is followed to write Chapter 2 in preparation of Chapter 4.</p> |
| <p>Step 4: Survey the literature.</p> | <p>During this step, the researcher assembles, synthesises and analyses the data to form the argument about current knowledge about the topic. The evidence creates a logical and defensible set of conclusions or claims. These conclusions provide the basis for addressing the research questions.</p> | <p>This step follows after an analysis of the data and the formulation of results of the study. The researcher reports all the findings with the support of a statistician and the study leader and then starts looking for logical, sound research that has been conducted and can be used in support of the results. Not all the literature is in agreement with the results of this study but the researcher takes into account that each study is unique and may be different in many ways.</p> |

| Step | Description from Machi and McEvoy (2009:4-6) | Process as applied to this study |
|--|---|--|
| <p>Step 5: Critique of the literature.</p> | <p>Critiquing the literature means to interpret the current understanding of the topic, and analysing how previous knowledge answers the research question.</p> | <p>The researcher, at this stage, looks reflectively to the objectives of the study and asks herself whether she is finding the logical arguments for answering the objectives of the study. During this stage, the researcher reviews the research question because she has gained a much deeper understanding of the topic under study. While she is also finding some unanswered questions, it is important to focus and not to be distracted from the topic under study.</p> |
| <p>Step 6: Write the literature review.</p> | <p>The literature review assembles, synthesises and analyses the data to formulate the argument about the current knowledge about the topic. The evidence creates a logical and defensible set of conclusions or claims. The conclusions provide the basis for addressing the research questions.</p> | <p>The researcher systematically analyses the data that are obtained from the various sources, then enters the sources in the bibliography, and starts to read each source intensively. The researcher derives conclusions from the literature and looks at the arguments the literature provide and reports about these arguments. The researcher keeps the research question in mind throughout the recording of the literature.</p> |

| Step | Description from Machi and McEvoy (2009:4-6) | Process as applied to this study |
|---|--|---|
| Step 7: Literature review gets related to the findings. | It is the step that the researcher regards as important for the writing of the data report in Chapter 4. | During this stage, the researcher is searching the literature that relates to the findings. In this step, the researcher mainly uses research articles to support the findings. |

2.3 THEORETICAL FRAMEWORK

A theory is an integrated set of defined concepts, statements, and relational statements that present a view of a phenomenon and can be used to describe, explain, predict or control the phenomenon (Burns & Grove 2005:133). Polit and Beck (2008:140) define a theory as an abstract generalisation that offers a systematic explanation about how a phenomenon is interrelated. A framework is the abstract, logical structure of meaning that guides the development of the study, and enables the researcher to link the findings to the body of knowledge of nursing (Burns & Grove 2005:121). Therefore, a theoretical framework can be described as an explanation that is based on theory and helps the researcher to understand how and why concepts in the study are related to each other.

Polit and Beck (2008:144) argue that a theoretical framework serves the following purposes:

- It enables the researcher to make the findings meaningful and generalizable; and
- It is an efficient way of synthesising facts that are gathered from separate and isolated investigations with the purpose of making the accumulated evidence accessible and useful.

This study is based on the Systems Theory which argues that education is a system because it is an integrated assembly of interacting elements that are designed to carry out a predetermined function co-operatively (Finlay 2012: online). Begley

(1999: online) argues that the function of any system is to convert or process energy, information, or material into a product or outcome for use within the system, or outside the system (environment).

2.3.1 Background of the systems theory

Ludwig von Bertalanffy in 1928 founded the “Theory of Systems”. He defined a system as a set of interacting, interrelated, or interdependent elements that worked together in a particular environment to perform the functions that were required to achieve the aim of the system (Pearson et al. 2005:58). According to Ansari (2004: 1), a systems theory focuses on the associations between the parts. Rather than reducing an entity, such as the human body, into its parts or elements (organs), the author indicates that a systems theory focuses on the arrangement of and relationship between the parts and how they work holistically in conjunction with one another. The way in which the parts are organised and how they interact with one another determine the properties of that system.

Hjorland and Nicolaisen (2005: online) define the Systems Theory as a set of social, biological, technical, or material partners that are co-operating with the focus on a common purpose. The authors further state that the Systems Theory is connected to both ontological and epistemological views. The ontological view implies that the world consists of integrative levels while the epistemological view implies a holistic perspective that emphasises the interaction between the systems and their elements in determining their respective functions.

2.3.2 Principles of education as a social system

It is necessary to understand the meaning of the word system before the meaning of the term social system gets analysed. According to Finlay (2012: online), a system is an inter-relation of parts. Banathy (1995:55) believes that education is a social system and possesses the following principles:

- Education is an open system and there is interaction between the system and its environment;
- The system is separated from its environment by its boundaries; input enters the system through breaks in the boundaries;

- The inputs of the system are transformed into output; and
- The output of the system is dispatched into the environment.

Figure 2.1 portrays Banathy's (1995:55) systems view of education.

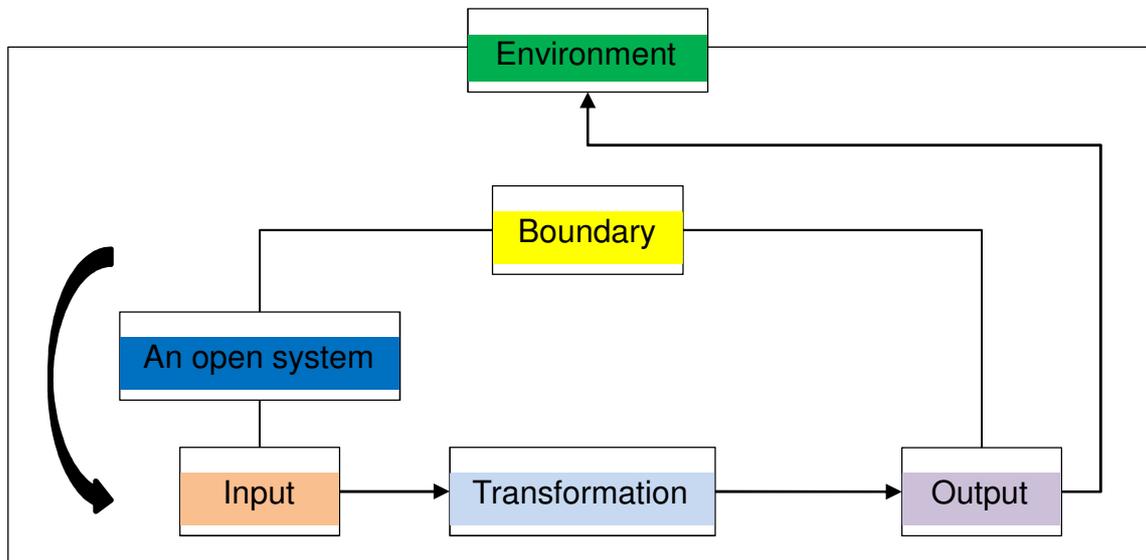


Figure 2.1: Systems view of education

Source: Banathy 1995:55

According to Banathy (1995:55), a systems view is a way of looking at a person, the environment in which such a person lives, at the system that surrounds the person, and at other people who are part of the environment. The author states that it is a “holistic way of viewing the world”.

Ansari (2004:6) defines a system as a constant process of taking inputs and transforming them into outputs. The inputs are acquired from the environment and the output goes back to the environment during a constant exchange.

Abenga (2009:372) argues that the education curriculum influences the training, as well as the evaluation of learning. The interrelation between the various factors in the system determines the type of teaching material and equipment that are needed. The inputs (nursing education, SANC, health care institutions, and learners), and outputs (knowledge, skills, attitudes, quality of care, professional development, and achievement) are used to improve the practice in the system.

2.3.3 Components of the Systems Theory

Environment (the community, hospitals, and nursing schools)

- Socio- economic factors;
- Political demands; and
- Needs of patients groups and individuals.

Input factors

- Education department and the need for CPD;
- South African Nursing Council;
- Responsibility for CPD; and
- Learners and their willingness to learn; and
- CPD motivating factors and constraints.

Throughput factors

- The nurse educators
- The curriculum; and
- Instructional methods.

Output factors

- Knowledge, skills, and attitudes; as well as
- Quality care, professional development, and achievement.

2.3.4 Application of the components of the Systems Theory to nursing education and CPD

2.3.4.1 Environment

The MacMillan English Dictionary (2006:463) defines an environment as a place in which people live and work, including all the physical conditions that affect them. According to the Oxford Paperback Dictionary and Thesaurus (2009:311), an environment is the surroundings in which a person, animal, or a plant lives or operates.

According to a systems theory, output identification is critically important to the system thought processes. To achieve organisational goals, the nursing educational system has to work collaboratively with its environment.

Finlay (2012: online) argues that an educational system is interrelated and interdependent with its environment. The nursing education curriculum should be functionally relevant to the environment it serves, for example the curriculum should be based on prevalent diseases in the area, as well the technological advances in the health care system. The author further argues that the educational institutions are judged by their service to the larger environment. Therefore, it is valuable for an educational system to contribute to its environment, and in turn the environment will reward and enhance the education department. Nursing education as an open system is adaptive, that is adjusting to changes in the environment.

Hospitals and nursing schools as learning environments

Hospitals and nursing schools are environment where nursing education and CPD activities take place. According to Heylighen, Joslin, and Turchin (2000: online) in order to speak about the inside and outside of a system, researchers need to be able to distinguish between the system and its environment. The authors further indicate that a system and an environment are separated by a boundary. Educational systems exist in an open environment which means that these systems have to exchange material with the environment in order to survive (Finlay 2012: online).

The hospitals and the nursing schools are environments where learning takes place. These institutions work collaboratively with the community, since forces in the community have the power to affect them. Hand (2006:61) indicates that one of the factors affecting learning is the environment in which it takes place. Skees (2010:104) argues that the CPD environment should be healthy in order to facilitate learning.

According to Hand (2006:61), several studies identify the following aspects of a good learning environment:

- A humanistic approach where all members of staff relate to learners with kindness and demonstrate genuine interest in them as people. Members of

- staff need to be approachable and promote self-esteem and confidence;
- A good team spirit aims at all members of staff working collaboratively towards joint goals, and creating an atmosphere of trust and respect with the purpose of enabling students and new personnel to feel they belong to a team. While it reduces anxiety, it also promotes learning at the same time;
 - A high standard of care is provided by using efficient but flexible approaches. Patients are cared for as individuals without obvious routine tasks-centred activities. Teaching and learning of students and new personnel are key features and an integral part of any organisation of care; and
 - It requires members of staff who are keen to learn and an environment where CPD is actively promoted. Information is shared and learning opportunities are created (Hand 2006:61).

Hand (2006:62) argues that not all environments reflect these qualities. However, all clinical learning environments usually have to be audited. The author encourages mentors to conduct strengths, weaknesses, and threats (SWOT) analysis to evaluate their learning environment. The framework is based on practical experience, practical resources, student support and an educational approach that could be adapted to any environment.

According to Tremayne (2007:32), a clinical learning environment should reflect these features:

- Excellent mentors with a good skills mix of recently qualified and experience staff are available;
- A good range of procedures are carried out and many other learning opportunities exist;
- Members of staff should always be made aware of anything that may be of interest to them; and
- Good teamwork and supportive staff should be given the freedom to learn and to question practice.

Health care institutions are pressured to verify competency of nurses who are entering the clinical environment, as well as continuing education and competency in response to changes in practice and technology. The use of human physiological

simulators creates a risk free and reproducible environment which may be instrumental in providing continuing education for health care professionals and the multi-disciplinary team. Simulated situations can be created to meet individual learning needs without fear of harm to patients. Establishing a hospital-based simulation skills laboratory can be instrumental in orientating personnel by providing continuing education and measuring competency-based outcomes (Notarianni, Curry-Lourenco, Barham & Palmer 2009:264).

Socio-political factors affecting nursing education

Gulliver (2012: online) argues that socio-political factors refer to the interaction of political and societal issues, factors, or changes. The author further emphasises that these factors have a strong influence on our daily lives and shape the world around us, whether we are aware of them or not. Socio-political factors influence the way nursing education is delivered and the subjects that are taught.

Cultural competency

According to Gulliver (2012: online) the American Association of Colleges of Nursing defines cultural competency as “the attitude, knowledge, and skills necessary for providing quality care to diverse populations”. The author further indicates that cultural competency recognises that people’s diversity affect their health, access to health care and attitude about when to seek help from a medical professional. Cultural competency skills enable the nurses to take into account how their own beliefs about race and ethnicity, and the vision about diversity of the health care institution affect the care they provide to the patients. Knowledge of cultural differences help the nurses to understand how cultural issues affect patients (Gulliver 2012: online).

Nursing education funding

Finance is the nerve centre of all systems. No component of any system can be functional without finance. All the components of the educational system need financial support (Abenga 2009:374). Economic and social issues have been identified as some of the hindrances to continuing education.

Gallagher (2007:470) states that many nurses have to pay for their continuing education activities and some are often unable to attend due to the difficulties of being released from duty.

The South African Government recommends CPD as one of the initiatives necessary for improving patient care by means of re-training, development, and research. The government and the International Philanthropies Organisation are the greatest contributors to nursing education funding in South Africa. According to the South African Institute for Advancement (2008: online), R 70-million has been donated to nursing education in South Africa. A portion of this amount has been allocated to nursing education universities for use in clinical training (South African Institute for Advancement 2008: online).

Input from patient groups and individuals

Achieving the goal of quality health care requires a national commitment to measure, improve, and maintain high quality health care for everybody. Understanding the patients' perceptions and concerns is the most important requirement for improving quality care (Mseleku 2007:7). The author further indicates that there is a growing emphasis in health care partnership between the patient and health care providers. Improved communication between the health professionals and the patient, by providing patients with understandable information about their condition and treatment options, has a positive effect on health outcomes (Mseleku 2007:7).

According to Mseleku (2007:6), enabling patients to care for themselves by empowering them with the skills and the tools to care for themselves is fundamentally important, for example chronic illness and disabled patients.

The public needs to be assured that they will not only receive the best quality care but will also be active partners who are directly involved in their own care. When it is required, special groups or individuals should be involved in service evaluation and development. Patients should be actively encouraged to participate in and be regarded as equal partners in health service development, planning, implementation, delivery, and evaluation of services (Mc Sherry & Pearce:2007:7).

2.3.4.2 INPUT FACTORS

Input refers to the factors that enter the system from outside. For example, in the case of a nursing education system input factors are the learners, teachers, and curriculum. Figure 2.2 highlights the input factors.

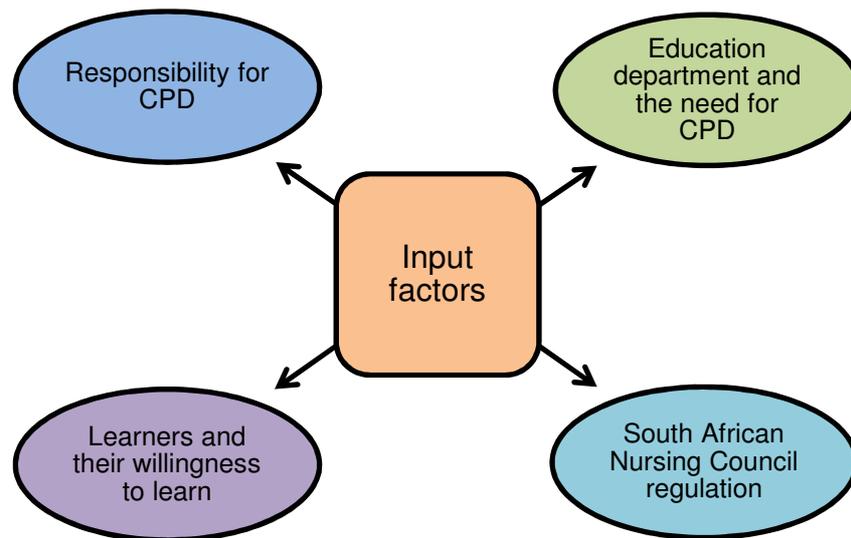


Figure 2.2: Input factors

Education department and the need for CPD

Nursing education and training in South Africa is the responsibility of the National and Provincial Departments of Health, the Department of Education, the South African Nursing Council (SANC), and the Nursing Education Institutions (NEI). The SANC in particular has been delegated the authority to administer regulatory and licensing responsibilities by the South African Nursing Act (Act No 33 of 2005). Nursing education and training play an important role in ensuring development of well-trained nurses who are capable of providing quality patient care. It can be achieved by:

- Improving the quality of nurse educators; and
- Promoting post registration CPD and lifelong learning (Mseleku 2007:15).

The South African Qualification Authority (SAQA) Act (RSA Act No 58 of 1995) has accredited the South African Nursing Council (SANC) as an Education and Training

Quality Assurance body. Therefore, the council is obliged to implement and maintain the quality assurance of nursing education and training providers (SANC 2004: online). The SANC is protecting the rights of:

- The public to receive care from a nurse and a midwife who have received a high quality education that is intended to equip him / her for providing competent, compassionate, and ethically based quality care; and
- The learner to receive education and training that meet all the requirements for accreditation in accordance with the National Qualification Framework (NQF) (SANC 2004: online).

SAQA is a statutory body that is regulated in terms of the National Qualification Framework Act (RSA No 67 of 2008). By legislation, it is mandated to oversee the development and implementation of the National Qualification Framework (NQF). The NQF sets boundaries, principles, and guidelines that provide a vision, philosophical base, and an organisational structure for the establishment of a qualification system. Nursing education in South Africa fits in this framework (SAQA 2008:1).

The primary objective of the SAQA is promoting a high quality education and training system that embraces the concept of lifelong learning for everybody. The function of SAQA is to:

- Oversee the development of the NQF by formulating and publishing policies and criteria for registration of bodies that are responsible for establishing education and training standards or qualifications and for accreditation of bodies that are responsible for monitoring and auditing achievements in terms of such standards and qualifications.

The Sector Education and Training Authority (SETA) was developed in accordance with the Skills and Development Act of 1998 (RSA 1998) to facilitate learning and development at the workplace. The Health and Welfare Sector Education Authority is one of the 23 statutory bodies that have been established in the legislative framework of the Skills Development Act. Nursing CPD gets controlled by the Health and Welfare Sector Education and Training Authority (HWSETA). This authority has been developed to:

- Identify and approve a workplace that is suitable for an appropriate workplace experience;
- Allocate financial grants to such workplaces and to bursaries for qualifying learners; and
- Assist with the development of learning material (SETA 2012: online; Fouché 2007:53).

South African Nursing Council regulation

One of the functions of the SANC is to approve Nursing Education Institutions (NEIs) and the training programmes that are presented by those institutions. The SANC is empowered by two separate pieces of legislation:

The Nursing Act (RSA Act No 42 of 2005) makes it illegal for any institution in the RSA to provide education and training, and to qualify a person for practising as a nurse or midwife unless both the institution and the educational programme are accredited by the SANC. According to Skees (2010:104), learning begins after students graduate from their basic nursing education. Therefore, CPD activities as part of nursing education should be designed to augment the knowledge, skills, and attitudes of nurses and with the purpose of enriching the nurses' contribution to quality care as indicated by two pieces of legislation, namely the Nursing Act (RSA Act No 42 of 2005) and the SAQA Act (No 58 of 1995) (SETA 2012: online).

Accreditation of CPD activities

Accreditation is the certification of the provider or institution that has the capacity to provide training for specific qualifications and fulfilling the quality assurance system as described by the SAQA Act (No 58 of 1995).

The accreditation process gives the CPD providers the opportunity to adapt their institutions and methodologies to deliver learning programmes that lead to national qualifications (Health and Welfare Sector for Education and Training Authority (HWSETA) (RSA 2012: online).The author further indicates that CPD providers in the RSA are accredited by the HWSETA.

According to DeSilets and Dickerson (2009:246), in America the American Nurses Credentialing Centre is committed to the quality of continuing nursing education programmes. It regularly reviews and revises the criteria and its most important elements with regard to CPD. The authors further emphasise that the periodic updates allow the programmes to adapt to professional and educational standards, as well as to changes in the environment in which the CPD operates. The credentialing arm of the American Nurses Association, the American Nurses Credentialing Centre, provides review and accreditation of providers and approves continuing nursing education while the centre is internationally certified by the International Standards for a Sustainable World (Whitehead & Lacey-Haun 2008:493).

Input from learners

This section discusses input from the learners. For the purposes of this research project, learners are professional nurses and enrolled nurses who are regarded as adult learners. The section discusses the concept of adult learning and the characteristics of an adult learner, different learning styles and their application to learning, willingness to learn and to attend CPD activities, and the CPD process.

Adult learning

Learning is a relatively permanent change, usually brought about intentionally. It may be a change in knowledge, understanding, or ability to do something new. Armstrong and Parsa-Parsi (2005:681) define learning as a process during which knowledge is created by the transformation of experience. Unlike children, adults have specific needs and requirements as learners. Jones and Jenkins (2006:4) define learning as a naturally occurring phenomenon and that the ability to learn is a proactive skill which allows us to influence and shape our learning environment. According to Sweeny (2008: online), adults prefer learning that:

- Allows choice and self-direction. Educators should involve participants in the learning process and approach the learning experience as facilitators rather than as teachers. Professional nurses should have an input in learning and teaching programmes. An educational facilitator needs to seek the professional nurses' perspectives about the topics to be included in the educational

programme;

- Benefits from their learning experience, and does not ignore what they already know;
- Listens and collects data about their needs during and after the event and choose activities that complement their experience and knowledge;
- Integrates new ideas with existing knowledge, helps the learners to recall what they already know from prior experience that relates to the topic, and adjusts learning activity times to fit their needs;
- Is relevancy-orientated. An adult learner must see a reason for learning something. Learning has to be work related. This need can be fulfilled by choosing projects or activities that reflect their own interests;
- Is practical. Therefore, educational facilitators must inform learners how the activity will be useful to them at work;
- Shows respect for individual learners. Therefore, educational facilitators need to provide a well-organised activity that uses time effectively and efficiently (Sweeny 2008:online);
- Provides for their physical needs by means of breaks, snacks, coffee, and comfort; and
- Asks for feedback about the facilitator's work or ideas, and provides input opportunities.

Application of Kolb's learning styles in CPD

According to Armstrong and Parsa-Parsi (2005:680), designers of continuing education should have knowledge of individual learners' preferred learning styles, and their previous education. Motivation for CPD is influenced by personal factors, for example career development and promotion; and external factors, such as the fulfilment of statutory requirements. However, Jones and Jenkins (2006:10) explain that primary motivation is the innate desire to learn and develop with the view of enhancing professional performance.

An effective educational encounter begins with the learner. Establishing the learner's learning needs and goals should determine the baseline for an educational activity. The course instructors should assist the learners to list their objectives for engaging

in an activity. By reflecting on what they already know and value, the learners prepare themselves to listen to new information that the course provides (Armstrong & Parsa-Parsi 2005:680). The authors indicate that the acquisition of new knowledge and concepts expand the learners existing knowledge with the purpose of addressing the learners needs or meeting the individual goals. The learner then moves from reflection on concrete experiences to thinking and analysing new information.

According to Armstrong and Parsa-Parsi (2005:680), Kolb emphasises two dimensions that are necessary in order for learning to occur. The first dimension is described as grasping or perceiving, and the second one as transformation or processing. The authors further indicate that learning results from the way in which people perceive and process the information in order to integrate it with their existing knowledge. Once implemented, the new ideas become prior knowledge and, therefore, it forms the baseline on which the learner will reflect when new learning commences.

Learning styles

Armstrong and Parsa-Parsi (2005:681) argue that differences in the way people learn encompass the way they are perceiving and processing the experience. Post (2008: online) emphasises the three important learning styles that are used in the clinical setting:

Visual learners: Visual learners are the ones who think in pictures. They often prefer to see things written down in hand-outs, texts, and PowerPoint slides. They experience maps, graphs, charts, and visual learning tools to be extremely effective. They remember learning material best by seeing it.

Auditory learners: Auditory learners are those learners who generally learn best by listening. They typically like to learn during lectures, discussions, and reading aloud, and they remember best by hearing or saying things aloud.

Kinaesthetic learners: Kinaesthetic learners, also called tactile learners, are the ones who learn best by touching, feeling, and experimenting with the learning material that they are trying to learn. They remember best by writing or physically

manipulating the information (Post 2008: online).

The learner's willingness to learn: The CPD cycle for learners

The professional nurses as adult learners could contribute to CPD activities by sharing their learning and development needs with the CPD department. The nurses could undertake a self-evaluation process, for example:

- Where are you currently in terms of learning and developmental needs?
- Where would you like to see yourself in two, five years' time?
- How will you get there?
- What experience, training, development, and education will you need?
- Who or what can help you with acquiring your learning objectives?
- What measures can you take to ensure that you know when you have achieved what you set out to achieve? (UCL Human Resources 2012:6).

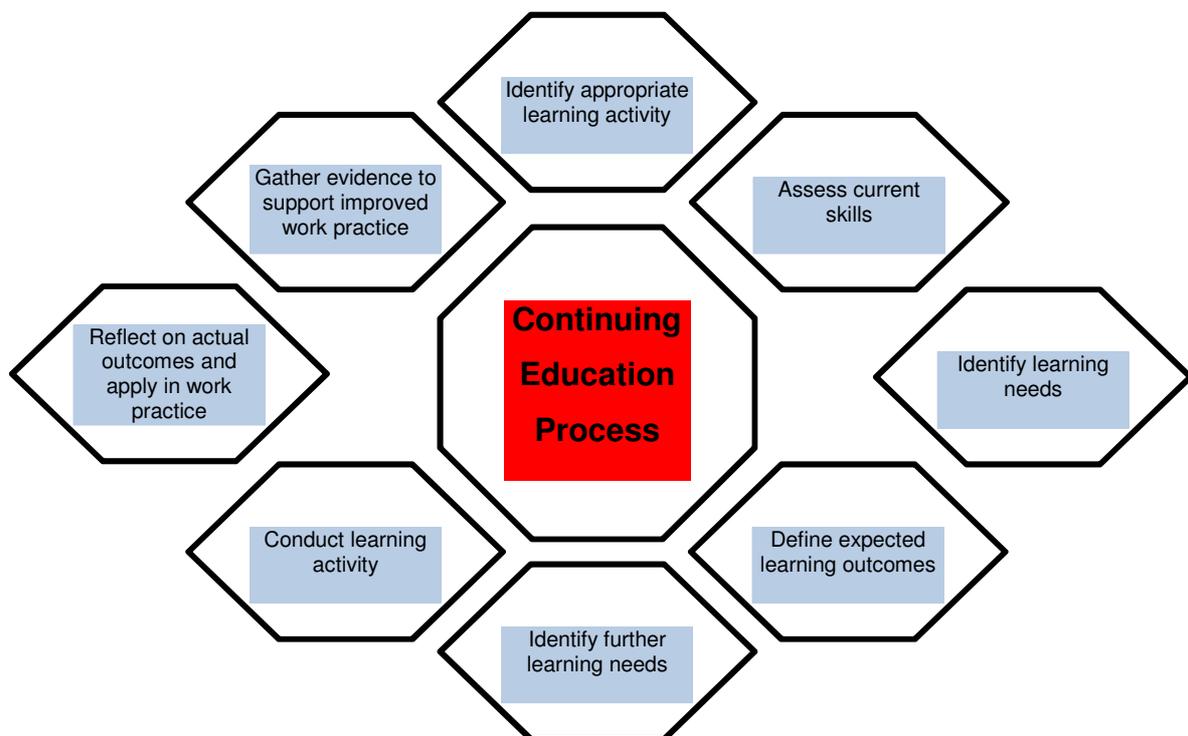


Figure 2.3: CPD Process

Source: UCL Human resources (2012:online)

The comprehensive plan of the individuals should assist with identifying specific learning needs that are based on their work responsibilities, appraisal objectives, performance, and career aspirations. The next step is to identify learning needs of these individuals. A recommended approach is to:

- Assess their current skills;
- Identify learning needs;
- Define expected learning outcomes with attainment dates;
- Identify appropriate learning activity (clarify resources required);
- Conduct learning activity (UCL Human Resources 2012:6);
- Reflect on actual outcomes and apply at workplace;
- Gather evidence to support improved work practice; and
- Identify further needs (UCL Human resources 2012:6).

Responsibility of continuing education

Current debate argues that the patient engages with the organisation that is expected to provide a certain standard of quality care. For that reason, it proposes that the emphasis on providing an appropriate level of CPD in terms of time and finance should be the responsibility of the employing organisation. More importantly, though, it can be achieved when the government policy, and professional organisations; such as the SANC, educators, and employing organisations; understand the importance of the availability of and accessibility to CPD.

Professional organisations have a duty to protect the public. Therefore, these organisations have to demonstrate that their members are accountable, efficient, and effective by conducting CPD. The SANC too is responsible for approving nursing education institutions and the training programmes that are presented by those institutions. Figure 2.4 illustrates the throughput factors.

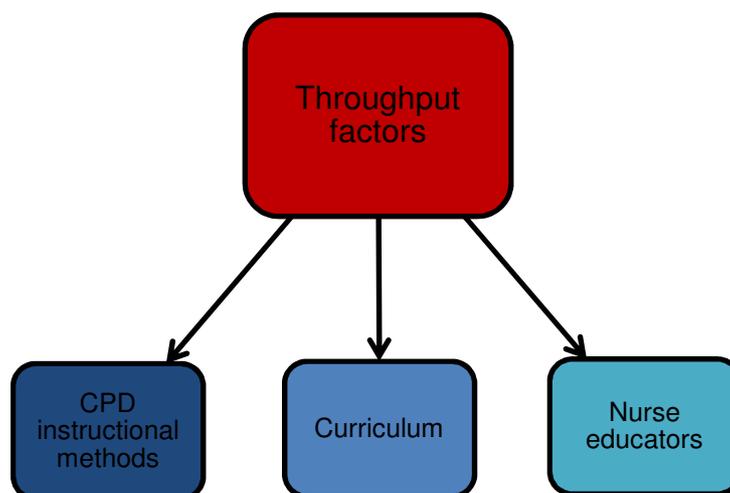


Figure 2.4: Throughput factors

2.3.4.3 THROUGHPUT FACTORS

Throughput refers to processes that are employed by the system to convert the raw material or energy from the environment into a product that is usable by either the system itself or by the environment (Begley 1999: online). For the purpose of this study, the researcher discusses these items:

- The nurse educator
- CPD curriculum; and
- CPD instructional methods.

The nurse educator, knowledge, skills, and expertise

As a result of the SAQA and SANC legislation, the Department of Health is responsible for ensuring that all nurse educators are appropriately qualified and skilled. The current requirement for a nurse educator is a Diploma in Nurse Education or Bachelor's Degree in Nursing Education (SANC 2004: online). These qualifications are obtainable at accredited universities.

Each registered nurse has a unique educational and experience level. Benner (1984) cited in Cooper (2009:504), identifies five levels of clinical nursing practice that are

important when evaluating educational needs and abilities. These levels are novice, advance beginner, competent, proficient, and expert. Understanding these levels are important for clinical educators, since nurses are often frustrated with available professional development offerings and support because these interventions do not match their ability and experience level (Cooper 2009:504). The author further argues that clinical educators should understand the principles of adult learning (Chapter 2, Section 2.3.4.2).

Educators should create an environment that is conducive to learning, developing ways of mutual planning, evaluating learners' needs and interests, and enabling learners and educators to work collaboratively with the purpose of creating learning objectives that are based on learners' needs and interests.

Health care continues to face a significant shortage of registered nurses. This problem is not new, and it is a constant threat to the nursing profession. Increasing nurse retention and satisfaction by creating a culture of professional development in health care institutions is one method to combat the nursing shortage (Cooper 2009:501).

CPD Curriculum

According to Marsh (2009: online), a curriculum is the subject that is taught at school. It can be viewed at three levels; namely the planned curriculum, the enacted curriculum, and the experienced curriculum. The planned curriculum determines the most important knowledge, goals, and objectives. The enacted curriculum deals with the professional judgement, and the type of the curriculum that needs to be implemented and evaluated. Teachers have to judge the pedagogical knowledge to be used in teaching and learning. The experienced curriculum refers to what actually happens in the classroom. Marsh (2009: online) argues that lived experiences are individual, continual, and unpredictable. The author further argues that the experienced curriculum is no longer confined to the classroom due to technology, e.g. the Internet and tablet devices.

O'Neil (2010: online) states that curriculum development encompasses how a curriculum is planned, implemented, and evaluated; and the people, processes, and procedures that are involved. The author further indicates that curriculum models

help designers to systematically and transparently map out the rationale for the use of particular teaching, learning, and assessment approaches.

Elements of the curriculum

The literature review has established that there are quite a number of curriculum development models. This study will discuss the instructional strategy model of curriculum development. Lunenburg (2011:3) indicates that the learning experiences selected are organised in accordance with the teaching strategies, a variety of methods and technology, as well as evaluative procedures and measures. The teaching and learning units provide the basis for the curriculum design. The model includes an organisation of, and relationships among, five mutually interactive elements:

- Purpose (goal and objectives);
- Content and subject matter;
- Teaching strategies;
- Learning experiences; and
- Evaluative measures (Lunenburg 2011:3).

The systems model emphasises that inputs employ processes that enable better outputs. The nurses' knowledge, skills, attitudes, and behaviour are outputs and outcomes that impact the performance (Ilgen, Hullenbeck, Johnson & Jundt 2005:519).

The CPD courses support a diverse range of practitioners in both nursing and allied professions with the purpose of advancing their clinical practice. Health institutions develop teaching and learning programmes in response to their employees' educational and learning needs. The curriculum is designed to develop the practitioners' knowledge, skills, and attitudes with the view of enabling them to practice effectively and efficiently in the context of a rapidly changing health care environment. At various universities, the Department of Higher Education provides flexible and relevant CPD curriculum in the form of degrees, courses, and modules; for example a Bachelor's degree in Nursing, Honours, Master's and doctoral programmes in health studies. Various governmental and privately owned nursing

colleges provide post-registration courses, such as:

- Emergency nursing courses;
- Critical care nursing courses;
- Mother and child care courses;
- Leadership and organisational development;
- Public health care;
- Primary health care; and
- Mental health care.

CPD Instructional methods

According to the Hong Kong Institute of Accredited Accounting Technicians (2012: online), CPD is divided into structured and unstructured activities. Structured CPD can be achieved by interacting with other individuals, for example:

- Distance education;
- Conducting a research project and a research review;
- Writing a paper for publication;
- Attending and participating at a conference; and
- Clinical supervision.

Unstructured CPD is normally achieved by private reading and studying, for example:

- Reading a professional journal; and
- Presenting a paper at a conference.

Figure 2.5 emphasises different strategies that aims at achieving the objects of CPD. Figure 2.6 depicts self-directed learning strategies.

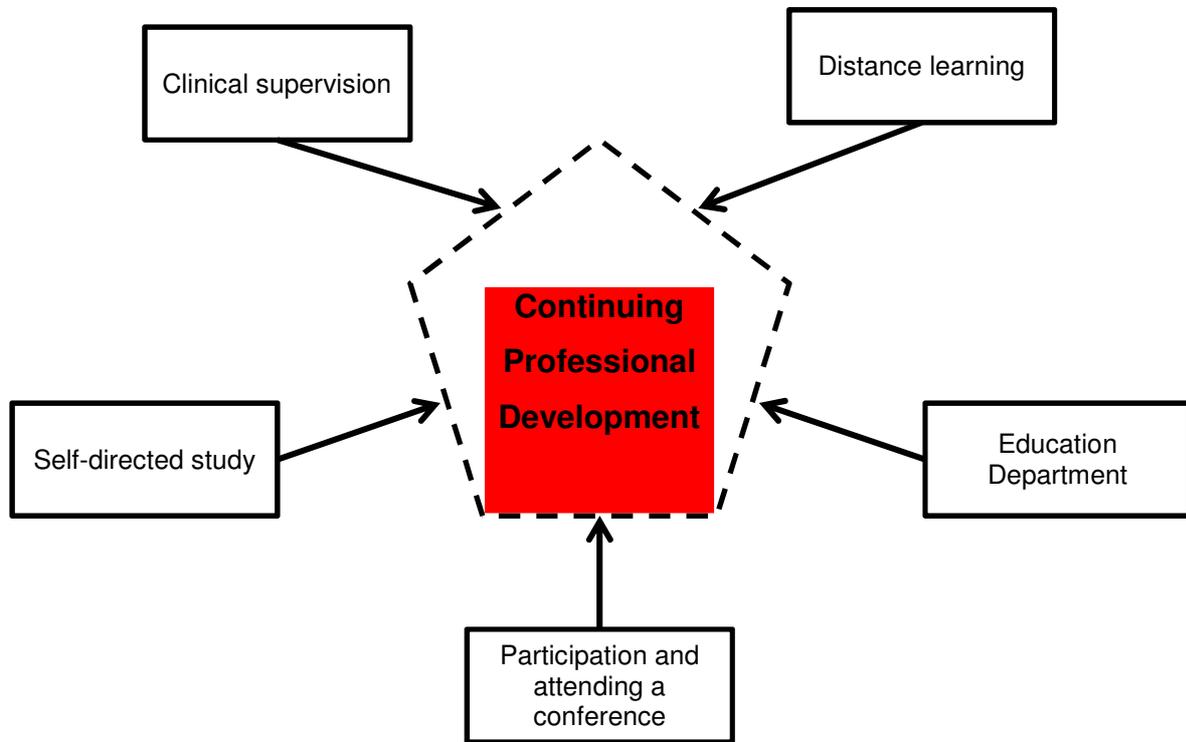


Figure 2.5: CPD resources

Source: Quinn and Hughes (2007:482)

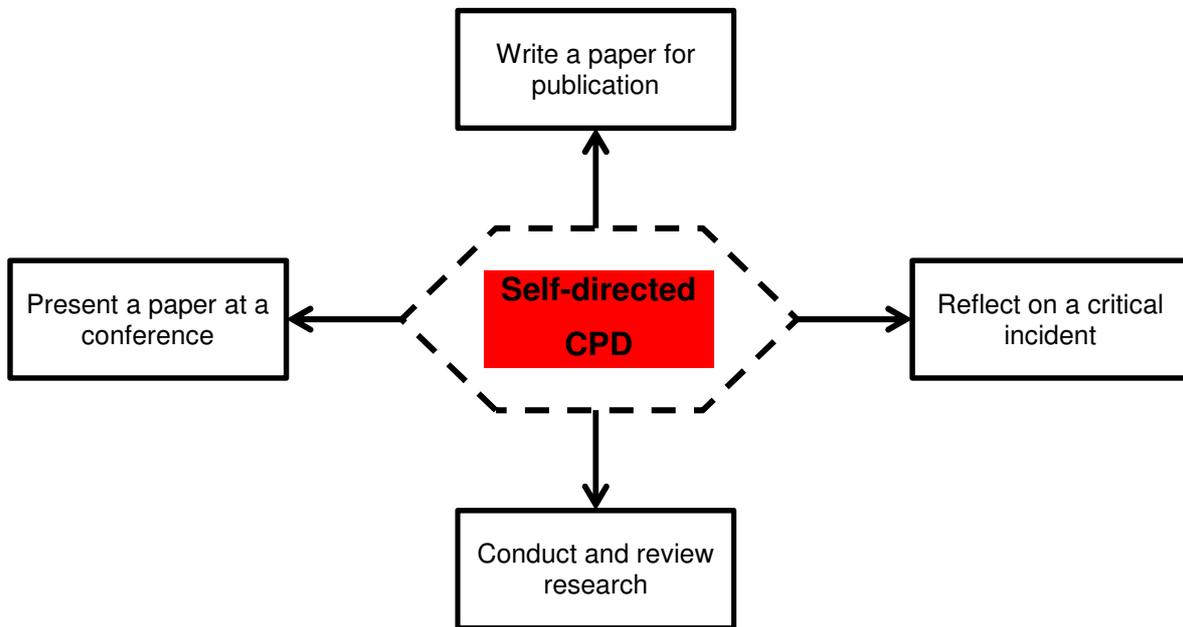


Figure 2.6: Self-directed CPD activities

Source: Quinn & Hughes (2007:482)

Distance Learning

The California Distance Learning Centre (2011: online) defines distance learning as an instructional delivery system that connects learners with educational resources. Distance learning provides educational access to learners who are not enrolled at educational institutions and can augment the learning opportunities of current students. The California Distance Learning Centre (2011) further indicates that there are two types of distance education delivery systems, namely synchronous or asynchronous instruction. Synchronous instructions require the simultaneous participation of all students and instructors. The advantage of synchronous instruction is that it is real and immediate. Examples include interactive tele-courses, teleconferencing and Internet chats. Asynchronous instructions do not require the simultaneous participation of all students and instructors. Students do not need to be gathered in the same location at the same time. Rather, students may choose their own instructional time frame and interact with the learning material and instructor

according to their schedule. Examples include digitally recorded courses, emails and audio clips (California Distance Learning Centre 2011: online).

Distance education evaluation

The California Distance Education Centre (2011: online) argues that evaluation is applied to determine the degree to which the programme objectives are met during the procedure that is used by the programme. The evaluation determines whether or not the anticipated outcomes of the programme have occurred and whether their occurrence is owing to the programme.

Evaluation stages

Evaluation of distance learning activities is conducted at two stages:

Formative: The formative evaluation is conducted during the programme implementation. The purpose is to determine the level and the efficiency of the programme and to identify problems that need to be addressed. The formative evaluation informs the programme administrators of successes and problems in the project with the purpose of improving the programme for future use. Methods include data collection, documentation, interviews, focus groups, students and nurse educators' observation (California Distance Learning Centre 2011: online).

Summative: The summative evaluation is performed at the end of the programme and refers to the impact of the programme on students, and staff members. The purpose is to assess the all-encompassing success and impact of the project, to measure learner achievement, and the extent to which the programme objectives have been met (California Distance Learning Centre 2011: online).

Writing a paper for publication

Researchers often communicate their findings to the general public for the following reasons:

- To develop writing and communication skills;
- To contribute to the body of knowledge; and
- Personal achievement (University of the West England: 2007: online).

Attending or participating at a conference

The Royal College of Nursing (RCN) (2007: online) argues that conferences and seminars support the development of knowledge and skills that are necessary for professional and personal development. The RCN (2007: online) indicates that it ensures that each conference or event covers the subject most important to the nurses, and that it is of the highest quality. All RCN events are accredited, since accreditation assures the public that the event is updated, as well as of best practice and high quality. The events include a model for a structured reflection, for presenters to reflect on their experience, and they keep these documents in their CPD portfolios.

Self-directed learning (SDL)

Huang (2008:online) defines self-directed learning as a learning process that involves a series of inter-related activities; such as identifying learning needs, deciding about learning goals, pursuing learning strategies, and evaluating learning outcomes. The author further indicates that self-directed learners are often described as being autonomous and positive towards learning. In addition, they are described as being able to plan, manage, and evaluate their own learning. Self-directed learning abilities are considered to encourage individuals to continue using their personal competencies and outside resources with the aim of educating themselves.

Self-directed learning simply means that one has taken the initiative during one's own time to interrogate a nursing topic with the purpose of gaining a greater understanding of the topic (Huang 2008:online).

Clinical supervision

According to the RCN (2003:online), clinical supervision is a formal process of professional support and learning which enables individual practitioners to develop knowledge and competencies, to assume responsibility for their own practice, and to enhance consumer protection and safety.

It is a structured CPD that assists nurses to acquire their continuing education requirements. Clinical supervision makes it possible for the nurses to reflect on their

nursing practice and to identify room for improvement. It also provides the opportunity to develop the expertise for finding new ways of learning and to gain professional support (RCN 2003: online).

The need for clinical supervision

Clinical supervision is important as a tool to support nurses with elements of clinical governance in the following ways:

- Quality improvement;
- Risk management, and performance management; and
- Accountability and responsibility (RCN 2003: online).

Reflecting on a critical incident

Critical incidents are a snapshot of something that happens to a patient, their family or a nurse. It may either be something positive or it may be a situation where someone has suffered in some way (Alphonso 2007:89). Reflection and analysis of a critical incident are widely regarded as a valuable learning tool for nurses. The practice requires one to explore one's actions and feelings and to examine evidence-based literature, therefore, bridging the gap between theory and practice (Alphonso 2007:89). It also affords one the opportunity of changing one's way of thinking or practice. In reflecting on a critical incident we learn what has or has not worked. In this way, we develop self-awareness, critical thinking, and problem solving skills (Alphonso 2007:90).

Research project and research review as CPD activities

The MacMillan English Dictionary (2006:1203) defines research as the detailed study of something in order to discover new facts.

The Oxford Paperback Dictionary and Thesaurus (2009:787) defines research as a study of materials and sources in order to establish facts and to reach new conclusions. Engagement with research findings encourages practitioners to question, explore, and develop their practice. Consequently, these practitioners are making a significant contribution to improve teaching and learning. According to Handscomb and Macbeath (2008: online), research encourages the learners to

question, explore, and develop their practice. It has become an integral part of CPD, and enhances the quality of learning and teaching.

A research review is a form of self-directed learning during which one or more writers summarise the current state of research on a particular topic. Ideally, the writer searches for everything that is relevant to the topic, and sort it out into a coherent view. One learns the following from reviewing an article:

- The main people who are working in the field;
- Recent major advances and discoveries that are related to the topic;
- Significant gaps in the research;
- Current debates; and
- Ideas of where research might lead to (University of Texas Libraries 2010: online).

Reading a professional journal

Reading a professional journal is an unstructured CPD activity. The RCN, one of the largest international organisations for nurses in the UK, publishes nursing journals, such as the Nursing Standard which provides updates to nurses about issues that affect the nurse practice, latest research articles, and peer reviewed clinical articles (RCN 2012:online).

2.3.4.4 OUTPUT FACTORS

Knowledge, skills and attitude

The MacMillan English Dictionary (2006:791) defines knowledge as what someone knows about a particular subject. According to the Oxford Paperback Dictionary and Thesaurus (2009:517), knowledge is information and an awareness that are gained by means of experience or education.

Hand (2006:56) defines learning as the acquisition of knowledge, skills or attitudes by studying, experiencing, or teaching. The author further indicates that learning can be the result of teaching, study, or the assimilation of information, and skills as a result of experience. Learning in all three domains is important for all health care professionals. Hand (2006:56) argues that having a skill without the underpinning

rationale makes the practitioner precarious. Similarly, having the knowledge but not the skill may lead to incompetence. The author also indicates that having knowledge and the skills lead to informed practice, while the practitioner is required to display the correct attitude and professional manner.

Learning theories

Learning theories explain how learning occurs (Hand 2006:60).

Behavioural psychologists believe that the environment is fundamental to learning; if the environment is conducive to learning, learning occurs effectively. The behavioural psychologists argue that:

- Learning could be maximised by positive reinforcement; for example, smiles, nods, and verbal encouragement. Reinforcement should be provided immediately after an event.
- Role modelling is one of the best teaching strategies in nursing. Therefore, mentors and nurse managers should maintain high professional standards in the clinical area at all times (Hand 2006:61).

Cognitive learning

Hand (2006:59) argues that cognitive theorists consider learning as an internal process that involves higher order mental activities; such as memory, perception, thinking, and problem solving, reasoning, and concept formation. One of the learning strategies advocated by cognitive theorist is problem-based learning. Learning can be achieved by formulating questions or problems that motivate students to seek answers.

Humanistic psychology and learning

Humanistic psychologists share the belief that human beings have two basic needs: A need for growth and development, and a need for positive regard by other people. The approach focuses on how individuals perceive and interpret events rather than on objective scientific interpretation. To promote learning, the nurse educator needs to develop a genuine, lasting, non-threatening relationship with the student. By encouraging learner participation, a relationship of mutual trust can promote the

natural potential for growth and development (Hand 2006:58).

Improved quality health care, professional development and achievement

The goal of CPD is quality care and it is important for nurses to see a clear relationship that exists between continuing education, nursing practice, and quality patient care. A number of studies about continuing education demonstrate that continuing education has a positive impact on nursing practice by advancing the delivery of better patient care (Cheesman 2009:341; Gallagher 2007:471; Malak & Hamdeh 2010:317; Yfantis et al. 2010:196), by providing an ability to gain up-to-date knowledge, questioning practice, promoting academic credibility, and raising professional status (Claflin 2005:263; Gallagher 2007:471; Lee et al. 2005:205).

Cooper (2009:501) associates CPD with safe and effective health care. On the other hand, Skees (2010:104) argues that CPD is associated with excellence in nursing practice as a result of commitment to learning and applying new knowledge.

The purpose of continuing education in health care is to enhance practice and ultimately to promote the delivery of quality care (Claflin 2005:263; Gallagher (2007:472) and the health of the public (Gallagher 2007:472). The author further indicates that the impact of continuing education must be fully recognised, and needs to be accessible for nurses in order for them to engage fully in continuing educational opportunities. She argues that for CPD programmes to be successful, it should be supported by government policies and nursing professional organisations. The literature review has found evidence that continuing education can positively and significantly impact patient outcomes by improving the nurses' knowledge, skills, attitude, and behaviour (Chappell & Drenkard 2010:293).

Quinn and Hughes (2007:483) indicate that CPD should be grounded in clinical governance. The authors define clinical governance as a framework that unites a range of quality initiatives, including clinical effectiveness, evidence-based practice, risk management, and clinical audits. The aim of clinical governance is to assure and improve clinical standards.

Gallagher (2007:471) suggests that CPD is the driving force that motivates nurses to continue their professional development. Professional development refers to a

constant commitment to maintain specific skills levels and career paths. This commitment ensures that a nurse's skills and knowledge are current and relevant. Professional development allows nurses to increase skills levels and advance to more complex levels of competence (Cooper 2009:501).

The author further emphasises that competence implies that a nurse is accountable to society for a continuing commitment to remain current and safe in the profession. Each nurse must take responsibility for personal and professional development (Cooper 2009:501).

According to Jaradeh and Hamdeh (2010:314), CPD is the key factor in nursing retention and job satisfaction. It is a mechanism to promote workforce development, international integration, and the recruitment and retention of nurses.

2.4 BACKGROUND OF CONTINUING EDUCATION

Nursing literature emphasises the importance of continuing education since the beginning of the nursing profession as indicated in Florence Nightingale's (1859, 1893) annotations, encouraging nurses to continue to learn (Gallagher 2007:467).

2.4.1 CPD and related terminology

Quinn and Hughes (2007:539) state that the terminology related to CPD programmes can be confusing, since there are a variety of terms currently used for what are essentially the same concepts namely; CPD, staff development, continuing professional education, and lifelong learning. The authors argue that the first three terms are normally applied to formal learning at an institution, whereas the latter refers to learning that takes place outside the formal educational system.

Continuing professional education (CPE) is a systematic professional learning experience that is designed to augment the knowledge, skills, and attitude of the nurses and, therefore, it enriches their contribution to quality health care while contributing to professional growth (Tame 2009:6).

Gallagher (2007:467) defines CPE as a lifelong professional development process which takes place after the completion of the pre-registration nurse education programme. It consists of planned learning experiences which are designed to

augment the knowledge, skills, and attitude of registered nurses for the enhancement of nursing practice and patient care.

According to Gallagher (2007:471), post-registration continuing education should be structured in such a way to ensure the development of nurses for clinical nursing roles. It should increase the nurse's level of responsibility, develop skills and expertise, and expand their scope of practice.

In addition, CPD is described as post-basic education aimed at updating existing knowledge and skills, improving or maintaining the quality of patient care (Claflin 2005:263; Tame 2009:6), adapting to the most recent developments in practice, and continued effectiveness. Continuing professional education and CPD form part of lifelong learning (Gallagher 2007:468; Tame 2009:6).

DeSilets (2006:100) defines staff development as a systematic process of assessment, planning, development, and evaluation that enhances the performance or professional development of health care providers and their continuing competence. The author further states that staff development activities are aimed at enhancing performance in the nurses' current role and are based on the employer's policies, procedures, equipment, and resources.

Staff development consists of orientation, in-service education, and continuing education for the purpose of promoting the development of personnel at any employment setting, consistent with the goals and responsibilities of the employer (DeSilets 2006:100; Kelly-Thomas 1998:3).

In-service education focuses on increasing competence in a specific area, for example new procedures, and new equipment. The key feature of the definition of in-service education explains that its content is specific to the employing organisation and that the knowledge may not be transferable. Orientation, on the other hand, is intended for familiarising new employees with their employer (DeSilets 2006:100).

CPD and staff development are synonymous terms, with staff development the preferred term in America, while CPD is preferred in countries, such as Europe and South Africa. The similarity emerging from the above definitions lies in the continuous nature of education, inclusive of planned learning that enhances the

nurses' existing knowledge, skills, and attitudes with the purpose of maintaining and improving the quality of patient care (Gallagher 2007:468) adapting to the most recent developments in practice, and continued effectiveness (Tame 2009:6).

The Nursing and Midwifery Council in the United Kingdom, formerly known as the United Kingdom Central Council for Nursing, Midwifery and Health Visiting (UKCC), scope of professional practice argues that foundation education on its own cannot effectively meet the changing and complex demands of modern health care. Post-registration education equips practitioners with additional and more specialist skills that are necessary for meeting the special needs of patients and clients (Quinn & Hughes 2007:540). According to Nalle, Wyatt and Myers (2010:107), continuing professional education assists with eliminating gaps between formal preparation and practice, enhancing clinical skills, and promoting the development of knowledge and skills that are necessary for continued professional competence.

DeSilets (2006:100) argues that CPD is a systematic professional learning experience that is designed to augment the knowledge, skills, and attitudes of nurses and, therefore, it enriches the nurses' contribution to quality health care. The author further states that staff development is a systematic process of assessment, planning, development, and evaluation that enhances the performance or professional development of health care providers and their continuing competence. On the other hand, in-service education focuses on increasing competence in a specific area or helping staff members to keep abreast of technological changes, new procedures, or new products in the organisation. In-service training is provided in the work setting to assist staff members with performing their assigned duties (DeSilets 2006:100).

Dickerson (2010:100) defines CPD as a lifelong process of active participation by nurses in learning activities that assists with developing and maintaining their continuing competence, enhancing their professional practice, and supporting the achievement of their career goals.

Camano-Puig and Pique-Angordans (2008:518) argue that the development of a profession demands a constant effort in self-education, as well as continuing research for the acquisition of recent changes to the nursing knowledge base.

Jaradeh and Hamdeh (2010:314) describe CPD as the maintenance and enhancement of the knowledge, expertise, and competence of professional nurses throughout their careers. The process happens in accordance with a plan that is formulated with regard to the needs of professional nurses, the employer, and society. Yfantis et al. (2010:194) support the idea that CPD is based not only on the needs of the individuals but also on the employer's needs, as well as the profession and society.

2.4.2 Advantages of CPD

The acuity of patients in hospitals has risen, resulting in the use of advanced non-invasive machinery for cost containment and quality care. Nursing is more stressful, intense, and technologically advanced than ever before. To support the nurses; CPD, and in-service training courses are seen as the best method to keep knowledge and skills recent. Continuing education has been linked to staff satisfaction (Jaradeh & Hamdeh 2010:314; Jukkala, Henly & Lindeke 2008:555; Levett-Jones 2005:229; Yfantis, Tiniakou, & Yfanti 2010:194) and strongly associated with good quality patient care (Levett-Jones 2005:229).

The purpose of continuing professional development in health care is to enhance practice and ultimately to promote delivery of quality health care to the public. For nurses, post-registration continuing education is essential if they are to maintain and develop their professional competence. The need for nurses to advance their knowledge and skills is a priority in health care and is also due to the increased pressure to deliver quality cost-effective care (Claflin 2005:263).

According to Lee et al. (2005:205), continuing education has been identified as a key strategy to assist nurses with maintaining cost-effective quality care and minimising risks for patients and nurses alike.

Numerous studies; such as Cooper (2009:507), Skees (2010:104), Nalle et al. (2010:108), and Gallagher (2007:471); have found a number of advantages that are associated with CPD. Cooper (2009:507) argues that creating a culture in which nurses feel encouraged to grow professionally should be emphasised in all health care settings. The author further states that increasing nurses' opportunities for professional development have proved helpful in increasing nurse retention and

satisfaction, and the quality of care provided.

According to Skees (2010:104), continuing professional education is a bridge to excellence. For nurses who are practising in critical care settings, continuing professional education serves as an essential way of achieving excellence. The author further states that excellence in nursing practice involves a commitment to learn and apply new knowledge with the aim of performing tasks and making complex decisions that might have life or death consequences on patient care. The demand of the public for competence and safe practice obliges the profession to meet the challenges of high quality care with current knowledge and skills. Bell, Petska, and Forsyth (2007:190), conducted a study about proving the efficacy of continuing professional education. They conducted a 1-day continuing education conference, focussing on genomics implications for psychiatric nursing practice. Their findings discovered that the attendees were applying new information to improve their own practice and patient care.

Rafath (2011: online) claims that rapid technological advances related to knowledge explosion have greatly transformed the practice of nursing. Surgical procedures are being performed successfully in areas that would not have been attempted 10 or 20 years ago. For example, in the Hamlin Fistula Hospital in Addis Ababa female patients whose fistulae are not able to be cured are educated and employed as nurses and nurse lecturers on rudimentary health issues and literacy. As a result, one of the nurses performed 2 500 fistula repairs (Barmania 2011:11).

DeSilets (2006:100) argues that to expect that the registered nurse will be maintaining accountability for his or her own practice means that the nurse cannot rely on what has been learnt during basic nursing education as his sole foundation for practice because the life expectancy of any portion of knowledge is short.

Gallagher (2007:471) states that it is necessary for nurses to see a clear relationship between CPD, improved client care, and nurse practice.

The author further states that continuing educational programmes are essential to help nurses update their clinical skills, nursing theory, research, local policy, and procedures. Therefore, while nurses are engaging in continuing education they become more aware of current trends in nursing education and clinical practice

which increases the likelihood of challenging practice. Nalle et al. (2010:108) argue that continuing education helps to eliminate gaps between theory and practice, enhances clinical skills, and promotes the development of knowledge and skills that are necessary for continued professional competence.

According to Claflin (2005:263), the purpose of CPD in the health care professions is to enhance practice and ultimately to promote delivery of quality health care to the public. These studies emphasise the part that CPD is playing in advancing the delivery of better patient care, providing the ability to gain up-to-date knowledge, to question and change practice, and to promote academic credibility and professional status.

According to Valerius (2007:56), the call for improved managed health care unquestionably adds to improved patient care. Szdlowski and Smith (2009: online) looked at the death of 98 000 patients in the United States of America who have succumbed due to preventable medical errors. The lack of incomplete patient information and, therefore, optimally managed care is a contributing factor that is leading to substandard health care to patients. However, it requires continuing education of health care personnel, especially nurses, to create awareness and an ability to provide optimal care. Levett-Jones (2005:229) agrees with the statement and confirms that the quality of patient care depends on continuing education of those practitioners who are responsible for its delivery.

According to Yfantis et al. (2010:193), patients' expectations of quality health care services have led health professionals to improve the educational status of nurses in order to meet these expectations. The authors further indicate that CPD is considered as the systematic maintenance, improvement, and broadening of knowledge, skills, and the development of personal qualities that are necessary for implementing professional and technical duties throughout the individual's working life.

Lee et al. (2010:33) argue that CPD also includes the development of a wide range of skills, such as problem solving, communication and team work in order for the health practitioner to practice successfully.

2.4.3 The link between CPD and evidence-based practice

Cullum, Ciliska, Marks and Haynes (2007:1) define evidence-based practice as the application of valid, relevant, and research-based information in nurse decision making. The well-being of the patient could be at risk when nurses practise according to outdated evidence. Practising the profession of nursing by using best evidence does make a difference to patient outcomes (Skees 2010:106). According to Cullum et al. (2007:6), the current United Kingdom nursing council namely, Nursing and Midwifery Council, outlines in its Code of Conduct an expectation that nurses will deliver care based on current evidence, best practice, and validated research.

2.4.4 Mandatory CPD in other countries

Many countries require CPD hours in fulfilment of a condition for licence renewal. Some countries are currently in the process of discussions that could eventually lead to the regulation of licence renewal with mandated CPD hours (Skees 2010:105). The American Nurses Association has been the first to advocate mandatory CPD for re-licensure. Subsequently, the UK has passed similar legislation. The Netherlands too has a legislated re-certification system. Australia is considering the need for CPD as a compulsory requirement for re- registration (Lee et al. 2005:205).

Lee et al. (2005:206) argue that mandatory CPD is a justifiable means of ensuring that professional competence of nurses is maintained. The authors further emphasise that commitment to CPD requires enormous effort and investment of time and money by the stakeholders.

The Nursing Act 33 of 2005 makes provision for CPD for nurses (RSA 2005: online), but to date the SANC does not require proof of CPD for re-licensure. Mseleku (2007:14) states that the South African National Quality Policy acknowledges the need for development programmes for nurses and midwives to keep up to date and to equip them with knowledge, skills, and attitudes that keep pace with a rapidly changing health care setting. The policy also recommends the use of evidence-based practice in decision making and service delivery.

Mandatory CPD is merely a formality for many nurses who are already committed to continuing learning. However, the ones who are not participating in CPD for a variety of reasons view the legislation as a challenge and a burden (Skees 2010:106).

Mandatory continuing education plays a significant role in promoting competence in nursing practice and is a mechanism for promoting public protection (Gallagher 2007:469). The author further states that continuing education has a potential ability to act as a safeguard against obsolescence and incompetence. Lee et al. (2010:34) highlight the benefits of mandatory CPD, such as compelling unmotivated practitioners to stay updated and ensuring competence. Lee et al. (2010:34), also argues that the detrimental aspect of mandatory CPD includes the violation of adult learning principles.

2.4.5 Promotion of CPD

According to Fouché (2007:53), the Department of Health has drafted a 10-point plan that is requiring CPD programmes to be:

- Developed by health professionals; and
- Established for measuring the competencies of health professionals on a continual basis.

The author further argues that 12 years after the inception of education and training transformation in South Africa, the SANC has not implemented CDP programmes for nurses.

2.4.6 Motivational factors and usefulness of CPD

Motivation for CPD is influenced by personal factors, for example career development and promotion and external factors, such as statutory requirements. However, the primary motivation is the innate desire to learn and enhance professional performance, while increasing self-esteem and job satisfaction (Jones & Jenkins 2006:4).

According to Lee et al. (2010:35), gaining more knowledge, improved performance at work, and improved patient care are rated as providing a considerable amount of motivation. These motivators are followed by better employment opportunities, better

remuneration, and compliance with the requirements of a professional body.

2.4.7 Constraints experienced

Nurses face barriers to advancing their professional development. Night duty, staff shortages, heavy workload, and personal commitments all create barriers to CPD. Given these barriers, it is important that health care institutions provide guidance to assist nurses with overcoming these barriers (Cooper 2009:502). Lee et al. (2010:36), in their study about CPD, have found that a lack of time is commonly experienced by the participants. It is followed by lack of access to continuing professional development activities, lack of funding, and lack of managerial support. In the study by Yfantis et al. (2010:196), they indicate that participants have mentioned too busy wards, and fully booked CPD activities as major barriers.

Gould, Drey and Berridge (2006:606), in their study about CPD, identify these barriers:

- Lack of staff replacement for CPD attendees;
- Course cancellation by educational providers due to a lack of attendance by other practitioners;
- Poor consideration for different learning styles and different teaching methods;
- CPD conflicts with home and domestic commitments and inability to achieve a desirable work-life balance; and
- Lack of managerial support.

According to Jones and Jenkins (2006:9), managers need to be aware of both the positive attitudes towards CPD and factors that facilitate it. Additionally, and most importantly, they need to consider the inhibitory factors that are affecting individuals' ability to engage in CPD. The authors further indicate that the managers have a responsibility to support their staff with the purpose of enabling them to embark on CPD. It can be achieved by providing learning opportunities that will benefit the organisation, the team, and the individual.

The working environment should be one that fosters and encourages growth by means of discussions, questions, and applied research. Managers should know how their personnel learn, both individually and collectively. There should be protected

time for CPD such study days and case study discussion.

2.5 CONCLUSION

This chapter discusses the process that is followed during a literature review, advantages and disadvantages of a literature review, the Systems Theory and its background, and the components of the Systems Theory as they apply to nursing education. Adult learning principles, learning theories, learning styles, are also described. The background to and the terminology of CPD; namely continuing education, continuing professional development, and staff development are contextualised. The chapter concludes with a description of CPD instructional methods, factors motivating participation in CPD, mandatory CPD, and constraints to participation in CPD.

The following chapter discusses research design and the methodology of this study.

CHAPTER 3

RESEARCH DESIGN AND METHOD

3.1 INTRODUCTION

This chapter describes the research design and methodology that are used in the study. The population, data collection and analysis, validity and reliability, and ethical consideration are also discussed.

The aim of the study is to:

Explore the perceptions of the nurses' continuing professional development (CPD) and its contribution to quality patient care in the Gauteng Province of the Republic of South Africa (RSA).

The objectives of the study are to:

- Explore the perceptions and the views of the nurses' CPD and its relationship with quality patient care;
- Assess the educational needs of nurses at a hospital in the Gauteng Province of the Republic of South Africa;
- Discuss the perceived barriers, motivating factors, and measures to enhance CPD acceptance; and
- Explore the nurses' views about the implementation of mandatory CPD activities.

3.2 RESEARCH SETTING

The setting is the location in which a study gets conducted, as defined by Burns & Grove (2011:352) and supported by Polit and Beck (2008:766), who define the setting as the physical location and conditions in which data collection takes place. There are two types of settings in terms of the amount of control that the researcher enforces, namely naturalistic (uncontrolled) and laboratory settings (highly controlled). Burns and Grove (2009:365) highlight that the naturalistic setting encompasses real life situations where no manipulation occurs.

The setting for this study is a level 2 hospital in the Gauteng Province of the RSA. A

comprehensive discussion of the research setting is provided in Chapter 1, Section 1.7. The data for this study have been collected in a naturalistic setting. The professional nurses have completed the questionnaire in a place of their choice. Data collection for this study has taken place at a selected health care institution in the Gauteng Province. The process of data collection is described in Section 3.5 of chapter 3.

3.3 RESEARCH DESIGN

This section contains the definitions of a research design, the rationale for the choice of the selected design, and the description of the concepts that are used in the design.

3.3.1 Definitions of research design

A research design is the organisation of the researched work into a framework that ensures that the research question, aim, literature review, the theoretical framework, and hypothesis interrelate (LoBiondo, Wood & Haber 2006:202). From the design the methodological decisions are made that organise the study into orderly steps and that contribute to the integrity and ability to generalise the findings (Brink et al. 2006:92; LoBiondo, Wood & Haber 2006:202; Polit & Beck 2010:74).

According to Burns and Grove (2005:211), research design is a blue print for conducting a study; it is the end result of a series of decisions made by the researcher concerning the study. The authors further argue that the design is closely associated with the framework of the study and guides planning and implementation of the research. Burns and Grove (2005:231) highlight that the purpose of the design is to establish a situation that maximises the possibilities of obtaining accurate responses to objectives, questions, or hypotheses. Polit and Beck (2004:730) describe research design as overall comprehensive plan for addressing a research problem.

Creswell (2009:3) argues that in order to make a decision about which design to use for a study, the researcher is guided by these interconnected components: the research paradigm; strategies of inquiry; and specific methods of data collection, analysis, and interpretation. Burns and Grove (2005:219) add that the elements of a

good research design are their appropriateness for the study, feasibility for implementation, and an effective reduction of the threats to the validity of the study. In this study, the researcher has utilised a quantitative, exploratory, descriptive design.

3.3.2 Rationale for the choice of the design

Literature about the education of nurses have been studied widely during the last decade but information about CPD and its outcomes, particularly at the hospital under study in South Africa is limited. Therefore, an exploratory, descriptive design has been chosen by the researcher because the study seeks to find information in this area of interest. This decision is consistent with the view of Wood and Ross-Kerr (2006:121).

3.3.3 Description of the related concepts of the research design

In this section, the concepts related to the research design are provided.

3.3.3.1 Quantitative research design

Quantitative research is a process which consists of stating the research questions or hypothesis in advance, operationalizing the concepts, devising or selecting the methods of data collection and analysis in advance, and finally presenting the findings in numerical and or statistical language (Parahoo 2006:48). According to Burns and Grove (2011:17, 24), quantitative research is a formal, objective, systematic process in which numerical data are used to obtain information about the world. The authors further indicate that quantitative research is a formal, objective, rigorous, systematic process for generating information about the world. It is conducted to describe new situations, events, or concepts in the world.

Parahoo (2006:55) also states that in quantitative research the data are collected by using predetermined, structured, and standardised methods; such as structured questionnaires, structured observations, and structured interviews and measuring tools. Polit and Beck (2008:16) state that in quantitative research, numerical information is gathered by using formal instruments and is analysed by means of statistical procedures.

Pearson et al. (2005:340) define quantitative method as a traditional scientific approach to research that is based on the positivist philosophical approach. It is a scientific approach and a general set of orderly procedures that are used to acquire information. Research that gets driven by a positivist tradition is a systematic and methodological process that places value on rationality, objectivity, prediction, and control (Pearson et al. 2005:340; Polit & Beck 2006:15; Walker 2005:572). A distinguishable feature of quantitative research is the collection of numerical data that can be subjected to statistical analysis (Polit & Beck 2006:36, 323).

Table 3.1: Characteristics of quantitative research

| Quantitative method | Application to the study |
|---|---|
| Focus | This study focusses on exploring the perceptions and the views of the nurses' CPD and its relationship with quality patient care. Quantitative research is useful for testing the validity of the relationship. |
| Objectivity | The researcher uses a self-administered questionnaire with the purpose of remaining detached from the study. |
| Control | The researcher controls the extraneous variables by selecting nurses (RNs and ENs) who meet the inclusion criteria as discussed in Section 3.4.3.7. Each respondent receives the same instruction about completing the questionnaire. |
| Scientific knowledge is obtained by measured, quantitative and statistical analysis | This study uses a questionnaire to collect quantitative data. Statistical methods are used with the support of a statistician. |
| Statistical interpretation | Numerical data is converted into understandable information. |

Source: Burns and Grove 2005:24

Quantitative research methods are classified into four categories; namely descriptive, correlational, quasi-experimental, and experimental (Burns and Grove

2009:24)

The researcher has adopted a quantitative approach. This approach is relevant for the study because concepts have been given operational meanings, a self-administered questionnaire is used to collect data, and the SAS software program, version 9.3 for data analysis is used. The findings in this study are presented in a numerical and statistical format. The researcher uses a structured questionnaire which is predetermined and planned in advance for data collection. Therefore, it could not be changed once data are collected with the view of maintaining the objectivity of data collection.

3.3.3.2 Descriptive design

LoBiondo-Wood and Haber (2006:240) explain the descriptive design as a collection of detailed descriptions of existing variables, and the use of the data to justify and assess current conditions and practices or to develop more plans for improving practices (in this case health care practices). Burns and Grove (2011:24 – 25) explain descriptive design as the exploration and description of phenomena in real-life situations, where it provides an accurate account of the characteristics of particular individuals, situations, or groups.

Brink et al. (2006:102) explain that a descriptive design is used where more information is required in a particular field by providing a picture of the phenomenon as it occurs naturally. Burns and Grove (2011:24–25) state that descriptive studies enable researchers to describe what exists, to determine the frequency with which something occurs, to discover new meanings, and to categorise information. The outcomes of descriptive research are the description of concepts, identification of relationships, and development of hypotheses that provide a basis for future quantitative research.

In this study, the researcher has chosen to use a descriptive design to explore the perceptions of the nurses' CPD and its contribution to quality nursing care at the hospital under study. Findings of this study may contribute to the planning, implementation, and practice of CPD at the hospital under study and possibly at other health care institutions as well.

3.3.3.3 Exploratory descriptive design

Exploratory studies are used to conduct preliminary investigations into relatively unknown areas of research. Explorative studies attempt to find new insights into phenomena (Terre Blanche, Durrheim & Painter 2006:44; Shi 2008:45). Exploratory research is conducted when relatively little is known about the phenomenon under study or the researcher is examining a new area of interest where the topic has been studied by other researchers. Mbambo (2009:36) confirms that exploratory research studies what has not previously been studied and attempt to identify new knowledge, new insight, new understanding, new meanings, and explore factors related to the topic.

This study explores the perceptions of nurses' CPD and its relationship with quality patient care at a level 2 hospital in the Gauteng Province, since little is known about the impact of CPD programmes at this hospital. The researcher further emphasises that exploratory studies are not necessarily generalizable to a larger population but provide a better understanding of the sample that is being studied. The data is used to assess current practices and to propose recommendations or to plan strategies for improving the CPD practices at the hospital under study. In this study, literature has been reviewed about the perceptions of the nurses with regard to the environment, input, throughput, and output factors that may influence CPD programmes.

Mbambo (2009:38) states that the characteristics of explorative descriptive designs are:

- It is flexible, since it provides opportunities for examining all aspects of the problem being studied;
- It strives to develop new knowledge; and
- The data may lead to suggestions of hypotheses for future studies.

3.3.3.4 Description of a cross-sectional design

A cross-sectional design applies when data are collected on one occasion from different subjects rather than collecting the data from the same subjects at different points in time (Brink et al. 2006:105).

In this study, time and financial constraints have been considered by using this design. Also, the data collection had to be collected at one point in time to avoid inconveniencing the respondents and the understaffed wards.

3.4 RESEARCH METHOD

The research methods are techniques that researchers use to structure a study and to gather and analyse information that are relevant to the research question (Polit & Beck 2010:16). According to Creswell (2009:15), the research method involves data collection, analysis, and interpretation that the researchers use as a guide to conduct their studies.

Peffer, Tuunanen, Marcus, Rothenberger and Chatterjee (2007:50) define research methodology as a system of principles, practices, and procedures that are applied to a specific branch of knowledge. The authors further emphasise that methodology helps researchers to produce and present high quality research that is accepted as valuable, rigorous, and publishable in research journals. Research methodology includes three elements: conceptual principles to define what is meant by research, practice rules, and a process for carrying out and presenting the research.

According to Peffer et al. (2007:50), the principles of the research methodology involve a rigorous process design to solve observed problems, to make research contributions, to evaluate the designs, and to communicate the results to appropriate audience. Such tools may include constructs and models. The authors further argue that the practice rules prescribe guidelines for conducting good research:

- Produce a tool that is created to address a problem;
- Be relevant to the solution of an unsolved and important problem;
- Utility, quality, and efficacy must be rigorously evaluated;
- Represent a verifiable contribution, and rigor must be applied during both the development of the tool and its evaluation; and
- Effectively communicate to appropriate audience (Peffer et al. 2007:49).

3.4.1 Phases of this research project

Table 3.2 contains the steps and phases of the research process as described by

Polit and Beck (2008:64).

Table 3.2: Steps and phases of a research process

| Phases | Application to this study |
|--|---|
| Phase 1: Conceptual phase. | The researcher's background and position as CPD nurse prompted her to think about the CPD programmes in the Gauteng Province. She started reading, thinking, and forming creative ideas which were discussed with colleagues. |
| <ul style="list-style-type: none">Identifying the problem. | Quantitative research is based on previously conducted studies and a research review from various sources (Section 2.2.1). |
| <ul style="list-style-type: none">Communicating with other colleagues. | To gain further information, the researcher engaged in casual communication with peers and supervisors in the clinical setting in order to gain more insight into the area of enquiry. |

| Phases | Application to this study |
|--|---|
| <ul style="list-style-type: none"> Identifying a conceptual framework. | <p>While developing the structure of the study, the researcher decided to use the Systems Theory to serve as the foundation of this study. The researcher then decided about the input, throughput, and output factors as obtained from literature related to the CPD programmes in the setting under study.</p> |
| <ul style="list-style-type: none"> Formulating a hypothesis / research questions. | <p>The researcher rather formulated a research questions than a hypothesis.</p> |
| <p>Phase 2: Design and planning phase</p> | <p>During this phase, the researcher looked for methods and designs that would suit this study. The researcher formulated the research question, objectives and decided about a method for data collection and analysis. She consulted with a statistician to support the validity and reliability measures of the study.</p> |
| <ul style="list-style-type: none"> Selecting a design. | <p>The appropriate design which was used in this study was selected. The aim was to prevent bias and to enhance the quality of the findings. The chosen study design was quantitative, exploratory, descriptive, and cross-sectional.</p> |
| <ul style="list-style-type: none"> Developing protocols. | <p>This aspect was not applicable to this study, since it did not include an</p> |

| Phases | Application to this study |
|---|--|
| | experimental design. |
| <ul style="list-style-type: none"> Identifying the study population. | <p>The entire population which was accessible to the researcher consisted of professional and enrolled nurses. This population was of interest to the researcher and the findings of the research could be generalised for this population.</p> |
| <ul style="list-style-type: none"> Developing a sampling plan. | <p>A representative sample of the population was chosen (Section 3.4.3).</p> |
| <ul style="list-style-type: none"> Taking the ethical considerations into account. | <p>The researcher engaged in studying the general ethical conditions under which research should be conducted as prescribed by the Belmont Report and Declaration of Helsinki. She then applied the principles to this study. At this stage, the researcher also adhered to the ethical principles of the University of South Africa Health Sciences Higher Degrees Committee which issued a written permission (Annexure A) document to conduct the study, as well as the conditions set by the management of the hospital under study.</p> |
| <ul style="list-style-type: none"> Finalising the research plan. | <p>A pre-test of the questionnaire was performed before the data collection was undertaken. It was done to ensure that the data collection tool would be valid and reliable. This step was supported by the statistician.</p> |

| Phases | Application to this study |
|--|---|
| Phase 3: Empirical phase | During this phase, the data collection commenced and preparation for the data analysis took place. |
| <ul style="list-style-type: none"> <li data-bbox="185 459 448 495">• Data collection. | The data were collected by means of a structured questionnaire which was disseminated to the respondents (Section 3.5). A pre-established plan was followed and specific written instructions were provided. |
| <ul style="list-style-type: none"> <li data-bbox="185 806 620 842">• Preparing data for analysis. | The entire questionnaire was received and managed in a pre-established manner and presented to the data capturer. |
| Phase 4: Analytical phase | During this phase, raw data that were collected went through a series of refinement and were prepared for analysis. |
| <ul style="list-style-type: none"> <li data-bbox="185 1281 448 1317">• Analysing data. | Data were captured in the SAS software program, version 9.3. The data were coded and prepared for statistical analysis by the researcher. The coded data were presented to the statistician on a spread sheet for analysis. |
| <ul style="list-style-type: none"> <li data-bbox="185 1628 504 1664">• Interpreting results. | The statistician provided the researcher with the findings of the data and the researcher made sense by interpreting the findings. |
| Phase 5: Disseminating phase | This phase encompassed the preparation and disseminating of the research report that could be |

| Phases | Application to this study |
|---|--|
| | communicated to other stakeholders. |
| <ul style="list-style-type: none"> Communicating the findings. | <p>The findings of the study were communicated to the hospital under study, as well as to colleagues and interest groups who were dealing with CPD programmes.</p> |
| <ul style="list-style-type: none"> Utilising the findings. | <p>The research findings would be utilised according to the guidelines and results by applying the possible corrective measures to the CPD programmes (Chapter 5).</p> |

Source: Polit and Beck 2008:64

3.4.2 Population

A population are all the individuals that meet the criteria for inclusion as stipulated by the researcher (Brink et al. 2006:123). According to Polit and Beck (2008:337), a population is the entire aggregation of cases in which a researcher is interested. Parahoo (2006:256) defines a population as the total number of units from which data can be potentially collected. These units may be individuals, organisations, events, or artefacts.

According to Polit and Beck (2008:338), the target population are defined as the aggregate of cases about which the researcher would like to generalise. This point of view is supported by Stommel and Wills (2004:297) who state that the target population are the elements or units the researcher wants to study.

The target population of this study were all the registered professional and enrolled nurses at a selected hospital in the Gauteng Province of the RSA. The data collection for this study was conducted from the 1st September 2012 to 30th September 2012.

In Table 3.3, the number of professional and enrolled nurses, who were employed at the time of the study, is listed.

Table 3.3: Population of nurses at the hospital under study

| Status | Total number |
|---------------------|--------------|
| Professional nurses | 263 |
| Enrolled nurses | 305 |

Source: Hospital Information System (2012)

3.4.3 Sample, sampling, and sampling procedure

In this section, the definitions of the concepts are provided, as well as a step-by-step explanation of how the sample has been selected, the sampling process, and the procedures.

3.4.3.1 Sample

A sample is a set of elements that comprises the population, as stated by LoBiondo-Wood and Haber (2006:263). According to Brink et al. (2006:124), a sample is a part or fraction of a whole or a subset of a larger set selected by the researcher to participate in a research study. It consists of a selected group of elements from a defined population.

For this study, the sample comprised a sub-section of professional nurses and enrolled nurses, who complied with the eligibility criteria, and who were present at the hospital during 1st September 2012 to 30th September 2012.

3.4.3.2 Sampling

Sampling is the process of selecting representative units of a population for study in a research investigation. The purpose of sampling is to increase the efficiency of a properly conducted research study with the aim of enabling the researcher to draw inferences and to generalise about the population without examining each unit in the population (LoBiondo-Wood & Haber 2006:263). Brink et al. (2006:124) support this point of view.

In this study, sampling has been conducted by means of non-probability sampling. According to Burns and Grove (2005:350); in non-probability sampling, not every element of the population has an opportunity to be included in the sample.

Therefore, non-probability sampling methods increase the likelihood of obtaining samples that are not representative of the target population.

Non-probability sampling involves non-random methods to draw elements from the population for inclusion in the study (LoBiondo-Wood & Haber 2006:264). In this study, the researcher used convenience sampling in the selection of the research population. The researcher chose convenience sampling because it was inexpensive, accessible, and less time consuming.

Convenience sampling is the selection of readily available accessible persons in the study (LoBiondo- Wood & Haber 2006:265). Burns and Grove (2005:350) argue that in convenience sampling, subjects are included in the study because the subjects happened to be in the right place at the right time. This sampling method has been convenient for both the researcher and the CPD department at the selected health institution. The selected hospital conducts staff development activities on Wednesdays and Thursdays every week.

While considering at which health care facility the research study should be conducted, the researcher was referred to the hospital because it is a level 2 health care facility.

There are several types of non-probability sampling designs, namely:

- Convenience sampling;
- Quota sampling;
- Purposive sampling; or
- Network sampling.

3.4.3.3 Non-probability sampling method

A non-probability sampling method implies that not every member of the population has an opportunity for selection to participate in the study.

3.4.3.4 Characteristics of non-probability sampling

- Subjects are included in the study because they happen to be in the right place at the right time;

- Available subjects are simply entered into the study until the desired sample size is reached;
- Non-probability sampling is simple, inexpensive, accessible, and usually less time consuming; and
- Convenience sampling provides the means to conduct studies about topics that could not be examined by means of probability sampling (Burns & Grove 2005:251).

3.4.3.5 Limitation of non-probability sampling

A non-probability sampling method contains unknown sources of bias that may affect external validity of the study (LoBiondo-Wood & Haber 2006:265). In this study, the researcher increased the representativeness of the study by selecting a large number of subjects (N = 200) and by adhering to the inclusion criteria.

3.4.3.6 Sampling procedure and process of data collection

Table 3.4 illustrates a step-by-step sampling procedure.

Table 3.4: Step-by-step process of a sampling procedure

| Item | Explanation |
|---|--|
| Step 1: Obtaining permission | A letter requesting permission (Annexure B) to conduct research was forwarded to the deputy director of the selected hospital in the Gauteng province, RSA. This was followed by telephonic conversation between the deputy director and the researcher, a meeting was arranged in which a written permission was granted. |
| Step 2: Obtaining a list of the population | The total number of professional and enrolled nurses was obtained from the hospital information system (2012) |

| Item | Explanation |
|---|--|
| Step 3: Selecting respondents | Out of 568 registered and enrolled nurses working in the selected health institution. The researcher compiled a list of wards and the list of nurses who met the eligibility criteria from these wards. The sample size was N = 200 nurses. |
| Step 4: Appointment date and time of data collection | Data collection appointment date was obtained from the CPD managers at the selected health institution in the Gauteng Province, South Africa. The questionnaire was distributed to the respondents daily after the morning and evening report handover and during the staff development days that were conducted on Wednesdays and Thursdays every week. |
| Step 5: Venue for the data collection | Respondents were informed to complete the questionnaire wherever they felt comfortable. The researcher also emphasised that all questionnaires should be handed in before the end of their working shift. The completed questionnaires could be deposited into boxes that were conveniently placed in each ward. |
| Step 6: Explaining research | The researcher explained the research topic, and the aim of the study to the deputy director of nursing, to the CPD managers, and to the professional and enrolled nurses. |

| Item | Explanation |
|---|---|
| <p>Step 7: Obtaining permission from respondents</p> | <p>Before participating in the study, respondents were provided with all the information with regard to the study.</p> <p>They were also informed that taking part in the study is voluntary, and that a signed consent form was required from all participants (Annexure E).</p> |

Source: Parahoo 2008:386

3.4.3.7 Eligibility criteria

Eligibility criteria define who is included in the population (Polit & Beck 2008:338). Stommel and Wills (2004:305) add that eligibility criteria define who is eligible to become a study participant and who is not. Burns and Grove (2011:242) state that eligibility criteria include a list of characteristics essential for eligibility or membership in the target population, an element needs to possess these characteristics in order to be part of the target population. Exclusion criteria are those characteristics that cause an element to be excluded from the target population.

In this study, the inclusive criteria have been:

- Age: 20 years and older;
- Gender: Male and Female;
- Qualification: Registered professional and enrolled nurses;
- Years of service / experience: > 18 months; and
- Willingness to participate in the study; and
- Must have attended CPD during the past two years.

Exclusive criteria

Those nurse who:

- Do not comply with the inclusive criteria; and
- Were not willing to participate or to sign a written consent.

3.4.3.8 Sampling and sample size

LoBiondo-Wood and Haber (2006:264) state that it is not feasible to examine every element in a population, therefore, it is important to sample properly in order to draw inferences and to generalise about the population.

De Vos, Strydom, Fouché and Delport (2005:195) state that if the population is small, the sample should comprise a large percentage of the population. Larger samples enable researchers to draw more representative and accurate conclusions, and to make more accurate predictions than with smaller samples. This point of view is also supported by Polit and Beck (2008:348) who indicate that the larger the sample, the more representative of the population it is likely to be and the smaller the sampling error.

Neutens and Rubinson (2010:141) indicate that an ideal study should have a sample large enough to represent the population in order to generalise the findings, yet small enough to save time and money, as well as to reduce the complexity of data analysis (Cottrell & McKenzie 2010:134; Polit & Beck 2010:316).

LoBiondo-Wood and Haber (2006:278) state that it is important to determine the sample size before the study is conducted. The authors further emphasise that the researcher can enhance the representativeness of the population by always using a larger sample as opposed to a smaller sample.

The researcher used a non-probability sampling method in this study. The sample size was achieved by means of a non-random sampling method (LoBiondo-Wood & Haber 2006 :264).The study consisted of 200 professional and enrolled nurses who had met the inclusion criteria. The researcher used convenience sampling in selecting the sample.

The researcher obtained the cooperation of the staff development managers, who facilitated access to the respondents. Consequently, the researcher personally distributed the questionnaire to the respondents at the end of each CPD activity, and was also available to answer any questions that were raised by the respondents. At the end of each working shift, the researcher personally collected the completed and the uncompleted questionnaires from the boxes that were provided in all the wards.

3.5 DATA COLLECTION

Data collection refers to gathering information that is relevant to the research question. A quantitative researcher usually collects numerical data (Burns & Grove 2009:43). Polit and Beck (2010:339,360) identify three methods of collecting primary data: self-report, observation, and a questionnaire. The method of data collection needs to reflect the ontological and epistemological position of a study, and should be suited to the topic under investigation (Tame 2009:89).

The researcher, in this study, made use of a structured questionnaire. Burns and Grove (2005:398) state that although questionnaires do not provide in-depth information, they are presented in a consistent manner and there is less opportunity for bias than in an interview.

3.5.1 The questionnaire as a data collecting instrument

Polit and Beck (2004:729) define a questionnaire as an instrument for gathering self-reported information from respondents by means of self-administration of questions in a paper-and-pencil format. A questionnaire allows data collection from larger samples, and saves time and money (Burns & Grove 2009:406; LoBiondo- Wood & Harper 2006:325; Polit & Beck 2010:345).

The questionnaire of this study contained pre-developed closed items. It was also based on a literature review and discussions with two research experts, and on the theoretical framework of the study. The following items were included in the questionnaire:

Section A: Biographical information of the respondents

Section B: Input factors

- Educational department and the need for CPD;
- The South African Nursing Council;
- Responsibility for CPD; and
- The learners' educational needs and their willingness to learn; and
- Motivating factors for and constraints to participating in CPD.

Section C: Throughput factors

- The nurse educator;
- Curriculum; and
- Instructional strategy.

Section D: Output factors

- Knowledge, skills and attitudes; and
- Quality patient care, professional development, and achievement.

Division of the questionnaire

Section A: 34 items

Section B: 46 Items

Section C: 34 Items

Section D: 16 items

3.5.1.1 Pre-testing of the instrument

Pre-testing an instrument is conducted to determine its feasibility and validity. Validity ensures that the research results are credible and based on what the researcher wants to measure. It further enhances the extent to which the research forms a basis for further research, practice and theory development (LoBiondo-Wood & Haber 2006:209).

In this study, the researcher conducted a pre-test by issuing the questionnaire to three registered professional and three enrolled nurses. The researcher also submitted the questionnaire to two experts in the field of nursing. None of the individuals who formed part of the pre-test were included in the final data collection. The criteria for evaluation were based on item clarity and relevance to the study. The researcher discussed the inconsistencies and unclear questions with the experts and changed the questions accordingly. The pre-test was conducted three weeks before the final instrument was distributed for data collection.

3.6 VALIDITY AND RELIABILITY

Validity is used to determine whether the research measures what it intends to measure, and to approximate the truthfulness of the results (Polit & Beck 2010:377; Tariq 2009.1). It is concerned with the quality of the researcher's evidence with regard to the link between the independent and the dependent variables (Polit & Beck 2010:106).

Burns and Grove (2005:215) state that internal validity is attained when the findings of the study can be shown to result from an independent variable and not from the extraneous variables. The authors further state that external validity refers to the generalizability of the findings with respect to other settings (Burns & Grove 2005:217).

According to Chong-ho and Ohlund (2010:1), external validity refers to questions, such as:

- To what extent can the results be generalised?
- To what population, setting, treatment, and measurement do the variables apply?

Possible threats to external validity are factors; such as the sample size, and the reliability of the measuring instrument. In order to reduce threats to the study, the sample should be representative of the target population (Burns & Grove 2009:345; Polit & Beck 2006:201).

A research instrument should also be reliable. Burns and Grove (2009:377) argue that a reliable instrument enhances the power of the study to detect significant changes or relationships that are occurring in the population under study. Reliability refers to the consistency and accuracy of the measuring instrument (Burns & Grove 2009:377; Polit & Beck 2010:373).

In this study, the internal and external validity were enhanced by selecting a homogenous sample in order to reduce threats that might have invalidated the outcomes of the study.

3.6.1 Validity of the research instrument

Validity of the research instrument determines the extent to which it measures what it is supposed to measure (Burns & Grove 2009:380; Polit & Beck 2010:377). In assessing the research instrument, the researcher in this study used three aspects of validity, namely:

- **Construct validity:** The researcher created a meaningful image of the questionnaire, and consulted experts to examine its reliability, validity and usability (Burns & Grove 2009:333).
- **Content validity:** It determined whether the items in the questionnaire were accurate and representative of the study (Burns & Grove 2009:382; Polit & Beck 2010:378). To assess the content validity of the sampled items, the researcher referred the instrument to the experts (Burns & Grove 2009:382).
- **Criterion-related validity:** It involved the comparison of the respondent's score with the set criterion (Burns & Grove 2009:377).

The researcher depended on the respondent's mind set and attitude to provide valid responses (Tariq 2009: online).

3.6.1.1 Design validity

Internal and external validity are the criteria used to assess design validity. Internal validity determines whether independent variables have an effect on the dependent variables. Threats to internal validity include maturation, history, testing, mortality, and selection biases (LoBiondo-Wood & Haber 2006:209). In this study, selection biases could possibly have been a threat to internal validity. The researcher addressed selection biases by adhering to the inclusion criteria during the selection of the respondents (Section 3.4.3.7).

The researcher submitted a draft questionnaire for review to experts, the study leader, and a statistician for confirmation of clarity and absence of bias. This procedure aimed at determining whether the questionnaire was generating the desired information (Polit & Beck 2010:345).

3.6.1.2 External validity

Burns and Grove (2005:218) argue that external validity is concerned with the extent to which the study findings can be generalised beyond the sample used in the study. External validity deals with generalisation of findings to other populations and environments. Factors that may influence external validity include selection of subjects, and study conditions (LoBiondo-Wood & Haber 2006:213). Representativeness of the study is usually enhanced by the use of random selection of subjects. The key characteristics of a representative sample closely approximate those features of the larger population (LoBiondo-Wood & Haber 2006:264).

In this study, representativeness was enhanced by the use of the inclusion criteria and selecting a large sample of subjects.

A questionnaire, accompanied by a covering letter and a consent form were handed out to all the nurses who had met the inclusion criteria.

Administering the questionnaire

- Lists of nurses who had met the inclusion criteria in each ward were compiled and a questionnaire number was allocated to each name. The researcher was the only person who had access to the compiled list;
- The listed nurses who had met the inclusion criteria were given a questionnaire with a covering letter attached to it; and
- The researcher collected the questionnaire at the end of each shift, including night duty.

3.6.2 Characteristics of the data collection instrument

N = 200 item questionnaires were distributed for this study. The questionnaire was designed to address each of the objectives set out in the study. It was developed by the researcher and reviewed by research experts for clarity and absence of bias. This procedure aimed at determining whether the questionnaire was useful in generating the desired information (Polit & Beck 2010:345).

3.6.2.1 Advantages of a questionnaire

- A questionnaire is a quick way of obtaining data from a large group of people;
- It minimises researcher bias and enables a more objective comparison of the results;
- It is less expensive in terms of money and time;
- The format is standard for all subjects and not dependent on the mood of the interviewer (Brink et al. 2006:147); and
- According to Burns and Grove (2005:395), questionnaires are presented in a consistent manner.

3.6.2.2 Disadvantages of a questionnaire

- The researcher cannot use probing strategies;
- The development of a structured instrument needs much more effort in terms of content, format, and wording of questions;
- The respondents are unable to elaborate on their responses or to ask for clarification (Burns & Grove 2005:398; Polit & Beck 2008:414);
- According to Brink et al. (2006:147), the respondents may provide socially acceptable answers rather than true answers;
- Nonverbal behaviour cannot be observed; and
- The response rate may be low.

3.7 DATA ANALYSIS

After the data have been collected, the researcher needs to evaluate whether the research question has been answered by analysing the data. This process involves using descriptive and inferential statistics to describe, synthesise, and draw conclusions about the collected data; and to establish whether the findings from the sample can be generalised to other populations (Burns & Grove 2009:45, 463). The quantitative data were analysed and interpreted with the assistance of a statistician who used the SAS software program, version 9.3 to analyse the data. The results were presented in figures and tables.

Data were collected by means of a structured questionnaire. A total of 200 questionnaires were distributed and 162 completed questionnaires were returned,

giving a very good response rate of $162 \div 200 = 0.81$ (81%). According to Polit and Beck (2012:311), a response rates of 65% or higher limits the risk of bias.

The Likert-scale of the responses (1 = disagree / 2 = unsure / 3 = agree), although consisting of only three intervals, were regarded as continuous variables.

To determine whether groups of questions could be combined into constructs, the **validity** of the proposed constructs was evaluated. The validity of the measured responses was assessed by examining the reliability and **construct validity**. The reliability of each construct was assessed by means of Cronbach's α coefficient.

A theoretical construct measured by certain indicators is **valid** if it is *actually* measured by those indicators. There are many types of validity, but most importantly, we need to establish **construct validity** as determined by reliability.

Tests for significant relationships between categorical variables were carried out by using Pearson's X^2 test at the 95% confidence level. Fisher's exact test was used in the case of 2x2 tables, or where the requirements for Pearson's X^2 test could not be met. The strength of the associations was determined by Cramer's V (the Phi coefficient was used in the case of 2x2 tables). The absolute values of these coefficients were interpreted as follows:

- > 0.5 high / strong association;
- 0.3 to 0.5 moderate association;
- 0.1 to 0.3 weak association; and
- 0 to 0.1 little if any association.

Tests for significant relationships between continuous variables and the categorical stratification variables were carried out by using a General Linear Model (GLM), including all four stratification variables as independent variables.

For comparisons between the variables in Sections B – D of the questionnaire, the following techniques were used:

- Both continuous variables: Spearman's rank correlation coefficient;
- Both categorical variables: Pearson's X^2 test or Fisher's exact test; and
- Continuous vs. categorical variable: Analysis of variance (ANOVA).

3.8 ETHICAL CONSIDERATIONS

Ethics is a branch of moral philosophy which addresses issues of human conduct that are of great importance to nurses and other professionals. It is concerned with the meaning of words such as appropriate, inappropriate, good, bad and duty (Pera & Van Tonder 2005:4). LoBiondo-Wood and Haber (2006:563) define ethics as the theory that addresses moral values and conduct. According to Polit & Beck (2010:553), ethics are a system of values to which a researcher should adhere to when dealing with research participants.

According to the World Health Organization (2010: online), all research involving human subjects should be carried out in accordance with the fundamental principles of respect, beneficence, and justice.

The National Commission for the Protection of Human Subjects of Biomedical and Behavioural Research (NCPHS) was formed in 1978. This commission was developed to further protect human subjects during research. The commission developed The Belmont Report which further stipulated values and responsibilities that researchers should have while interacting with the study participants. These values and responsibilities were beneficence, justice, and self-determination (Burns & Grove 2005:179) .

Beneficence

Beneficence imposes a duty on the researcher to minimise harm and to maximise benefit (Polit & Beck 2006:87). This study was non-invasive and non-experimental, therefore, participants were not exposed to harm. The questionnaire was structured in a manner that was not hurtful to the participants. Also, the participants were reassured that the information they were providing would not be used against them.

Self-determination

Self-determination implies that the participants have the right to voluntarily participate or to withdraw from the study (Polit & Beck 2006:89). A subject's right to self-determination can be violated by coercion, covert data collection, and by deception (Burns & Grove 2009:190). The right to self-determination was adhered to

by ensuring that the participants voluntarily participated in the study.

Justice

Justice refers to the respondents' right to fair treatment. To comply with this principle, the researcher honoured all agreements that were recorded in an information leaflet, and had no prejudice against the respondents who withdrew from the study (Polit & Beck 2006:91). The researcher also ensured fairness during the selection of subjects by adhering to the inclusion criteria.

Anonymity and confidentiality

Burns and Grove (2009:196) state that the research subject has a right to anonymity and the right to assume that the data that are collected will be kept confidential. Anonymity exists if the subject's identity cannot be linked with her or his individual responses. The authors further state that confidentiality refers to a researcher's management of private information that is shared by the respondents and cannot be shared with other people without the expressed consent of the subjects.

In this study, the researcher stated in the respondents' letter that the data collected might be published in nursing journals, and that neither the names of participants nor the name of the institution would be disclosed. Burns and Grove (2009:196) state that people who accept information in confidence have an obligation to maintain confidentiality. This recommendation by the authors was strictly adhered to by the researcher.

Obtaining informed consent

Burns and Grove (2009:200) state that obtaining informed consent from human subjects is essential for conducting ethical research. Informing is the transmission of ideas and content from the investigator to the prospective subject. Consent is the prospective subject's agreement to participate in a study.

Each respondent in this study was issued with a consent form and information leaflet that indicated the key elements of the study; such as the research title, the purpose of the study, voluntary participation and when to withdraw, as well benefits of the study.

Protecting the rights of the institution

To protect the rights of the institution, the researcher sought and obtained permission (Annexure A) to conduct the study from the Higher Degrees Committee of the College of Human Sciences at the University of South Africa (UNISA). The researcher also obtained permission from the health institution where the data were collected (Annexure C).

In Table 3.5, the principles of the Nuremberg Code of ethics are provided and the application of these principles to this study are summarised.

Table 3.5: Summary of the principles of the Nuremberg Code

| Principles of the Nuremberg code | Application to this study |
|---|--|
| Voluntary consent is absolutely essential. | All participants are required to sign an informed consent form. |
| The study should be of benefit to society. | <ul style="list-style-type: none">• The findings and recommendations of the study will benefit the nurses and the patients.• The researcher is applying the study to recommend annual mandatory training in core clinical skills. |
| The study should avoid unnecessary mental and physical suffering. | There are no risks of harm to participants in this study, since there are no harmful interventions. |
| No study should be conducted where there is a possibility of death or disability occurring. | An information leaflet that explains the aims and objectives of the study is distributed to the respondents. The researcher reassures the respondents that the study is risk free. |
| The degree of risk should never exceed the benefits. | In this study, the respondents are not exposed to risks. |
| The study should be | The researcher is a registered professional nurse |

| Principles of the Nuremberg code | Application to this study |
|--|--|
| conducted by qualified people, | and a qualified nurse educator, and the supervisors are qualified experienced researchers. |
| Respondents should be at liberty to withdraw from the study at any time. | Respondents are informed that they are free to withdraw from the study when they find it impossible to continue with the study (Annexure D). |
| The researcher should be prepared to stop the study if continuation would cause harm to the respondents. | Approval for this study was provided by the University of South Africa Health Sciences Higher Degrees Committee (Annexure A). |

Source: (Burns & Grove 2009:186; 2005:180)

3.9 CONCLUSION

Chapter 3 provides a detailed discussion of the methodology that has been followed in this study. It includes an introduction, research design and methods, the population and sample selection, sampling and sample size, the data collection process, data analysis and internal and external validity, as well as the ethical considerations that have guided the study. In chapter 4 interpretation of data is provided.

CHAPTER 4

DATA ANALYSIS AND THE INTERPRETATION OF THE DATA

4.1 INTRODUCTION

The previous chapter describes the research design and the methodology of the study. This chapter focuses on the interpretation of the data. The purpose of this study is to explore the perceptions and the views of the nurses' CPD and its impact on quality patient care at a selected hospital in the Gauteng Province, South Africa.

The objectives of the study are to:

- Explore the perceptions and views of the nurses' CPD and its relationship with quality patient care;
- Assess the educational needs of nurses at a hospital in the Gauteng Province of the Republic of South Africa;
- Discuss the perceived barriers, motivating factors, and measures to enhance CPD acceptance; and
- Explore the nurses' views about the implementation of mandatory CPD activities.

4.2 DATA COLLECTION

The questionnaire has been presented according to the following sections:

Section A: Demographic information

- Age;
- Gender;
- Nursing status (registered professional nurse or enrolled nurse);
- Basic qualifications (diploma in general nursing, B Cur degree, or enrolled nursing certificate);
- Nursing speciality (surgical nursing, oncology, or paediatric nursing);
- Years of nursing experience; and
- Years of employment at the institution under study.

Section B: Input factors

- Education Department and the need for CPD;
- South African Nursing Council;
- The responsibility for CPD;
- The learners educational needs and their willingness to learn; and
- Motivating factors for and constraints to participating in CPD.

Section C: Throughput / processes

- The nurse educators;
- The curriculum; and
- Instructional methods.

Section D: Output factors

- The learner's knowledge, skills and attitudes; and
- Quality care, professional development, and achievement.

4.3 SECTION A: DEMOGRAPHIC DATA

The demographic information of the respondents were recorded, i.e. the age, gender, nurse status (enrolled nurse or registered nurse), qualifications, speciality, years of nursing experience, and years of employment at the facility.

4.3.1 Respondents' age

The majority of the respondents were aged between 30 – 39 years, almost 43% (n = 69), the second largest number was aged 40 – 49 years, almost 30% (n = 49). The lowest number of responses were by the 50 – 59 years age group, followed by 20 – 29 years age group. The SANC (2011:online) states that the age distribution indicates that the majority of nurses are 30 years and older. It is also consistent with the view of Altmann (2011:3) who indicates that participation in CPD increases with age. The low response amongst the 50 - 59 years age group is consistent with Lee, Reed and Poulos (2010:33) who have found that radiographers who are near retirement are not interested in career advancement. Figure 4.1 and Table 4.1 illustrate the respondents' age distribution.

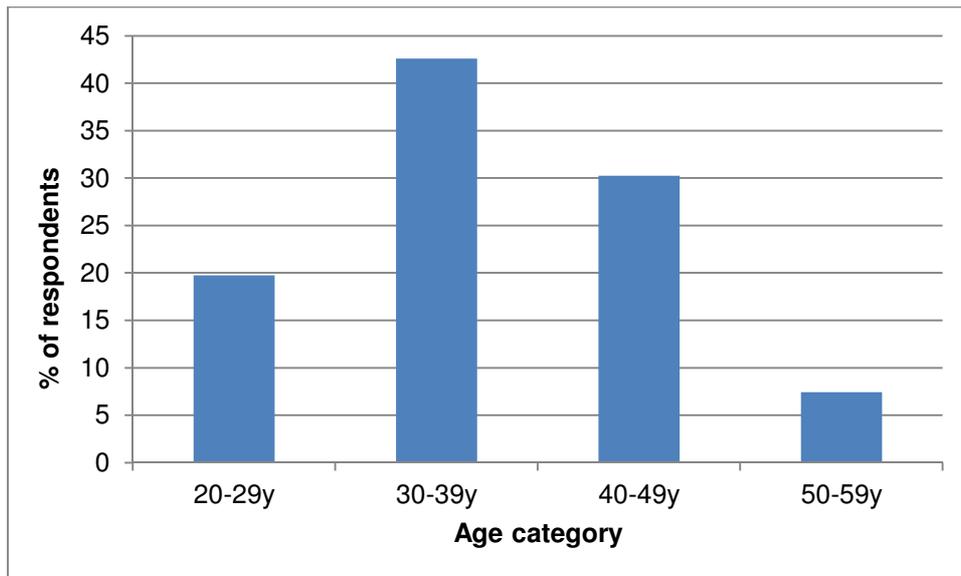


Figure 4.1: Respondents' age distribution (N = 162)

Table 4.1: Respondents' age distribution (N = 162)

| Age | Frequency | Per cent | Cumulative | Cumulative |
|----------|-----------|----------|------------|------------|
| | | | Frequency | Per cent |
| 20 – 29y | 32 | 19.75 | 32 | 19.75 |
| 30 – 39y | 69 | 42.59 | 101 | 62.35 |
| 40 – 49y | 49 | 30.25 | 150 | 92.59 |
| 50 – 59y | 12 | 7.41 | 162 | 100 |

4.3.2 Gender distribution

Table 4.1 depicts the respondents gender distribution. Of the respondents, almost 94% (n = 152) were women and men 6.17% (n = 10). It is consistent with Altmann (2011:19) who reiterates that registered nurses who are likely to return to school for bachelor degrees in nursing science are women. The author further indicates that the finding is not surprising, since the majority of working registered nurses are women. The SANC statistics (2011: online) also indicates that (92.9%) (n = 183 085) of registered nurses are women, while (7%) (n = 13,829) are male nurses, enrolled

nurses 53,451 women, and men 5271.

Table 4.2: Respondents' gender, status, and qualifications (N = 162)

| Gender | Frequency | Per cent | Cumulative Frequency | Cumulative Per cent |
|---------------|------------------|-----------------|---------------------------------|--------------------------------|
| Male | 10 | 6.17 | 10 | 6.17 |
| Female | 152 | 93.83 | 162 | 100 |

| Status | Frequency | Per cent | Cumulative | Cumulative |
|------------------|------------------|-----------------|-------------------|-------------------|
| | | | Frequency | Per cent |
| Enrolled Nurse | 51 | 31.48 | 51 | 31.48 |
| Registered Nurse | 111 | 68.52 | 162 | 100 |

| Qualifications | Frequency | Per cent | Cumulative | Cumulative |
|-------------------------------|------------------|-----------------|-------------------|-------------------|
| | | | Frequency | Per cent |
| Missing | 1 | 0.62 | 1 | 0.62 |
| Enrolled Nurse | 56 | 34.57 | 57 | 35.19 |
| Diploma in General Nursing | 92 | 56.79 | 149 | 91.98 |
| Baccalaureus Curationis | 13 | 8.02 | 162 | 100 |

4.3.3 Nursing status and participating in CPD

The nurses' status, in this study, refers to a professional position. Table 4.2 indicates that majority of the respondents were registered nurses. Approximately 69% (n = 111) of the respondents were registered nurses while 31% were enrolled nurses. This finding is consistent with the SANC (2011:online) that indicates the distribution of enrolled nurses and registered nurses is 55 408 enrolled nurses and 118 262 registered nurses (SANC 2011:online).

Fahnestock (2012:26) indicates that educational attainment is a greater predictor of participation in work related courses.

The study also revealed that 57% (n = 92) of the respondents, who participated in CPD, had completed a diploma in general nursing, while 35% (n = 56) had trained for the enrolled nurse certificate and 8.02% (n = 13) held Baccalaureus Curationis(BCur) degrees. Table 4.2 depicts the respondents' qualifications.

4.3.4 Nursing speciality and participation in CPD

Table 4.3 presents information about the respondents nursing speciality and CPD participation. Approximately 65 % (n = 106) specialised in medical and surgical nursing, 11% (n = 18) were intensive care nurses, 3.7% (n = 6) indicated paediatric and oncology, 1.85% (n = 3) were midwives, 1% (n = 0.62) indicated neonatal, and 11.73% (n = 19) had other specialities. Yfantis et al. (2010:196), in their study about CPD in Greece, report that 43% of their participants worked in emergency, 22% worked at surgical clinics, 17% worked in intensive care wards, and 9% worked at the pathology and cardiology clinics.

**Table 4.3: Respondents' fields of speciality and participating in CPD
(N = 162)**

| Department | Frequency | % | Cumulative Frequency | Cumulative Percentage |
|--------------------|-----------|-------|----------------------|-----------------------|
| Missing | 3 | 1.85 | 3 | 1.85 |
| Medical / Surgical | 106 | 65.43 | 109 | 67.28 |
| Intensive care | 18 | 11.11 | 143 | 88.27 |
| Paediatric | 6 | 3.7 | 118 | 72.84 |
| Oncology | 6 | 3.7 | 125 | 77.16 |
| Midwife | 3 | 1.85 | 112 | 69.14 |
| Neonatal | 1 | 0.62 | 119 | 73.46 |
| Other | 19 | 11.73 | 162 | 100 |

4.3.5 Nursing experience and participation in CPD

A wide variety of nursing experience was recorded by the sample. For further analysis, the 18 months and 2 years category was ignored and the 14 – 16 year and 17 – 19 year categories were combined as were the 20 – 22 year and 23 year and older categories.

There was no significant association between years of experience and gender. There was, however, a moderate association between years of experience and status (Pearson's X^2 test: $p < 0.001$; Cramer's $V = 0.45$). The study also found that enrolled nurses were inclined to have fewer years of experience than registered nurses. Figure 4.2 indicates the respondents' years of nursing experience.

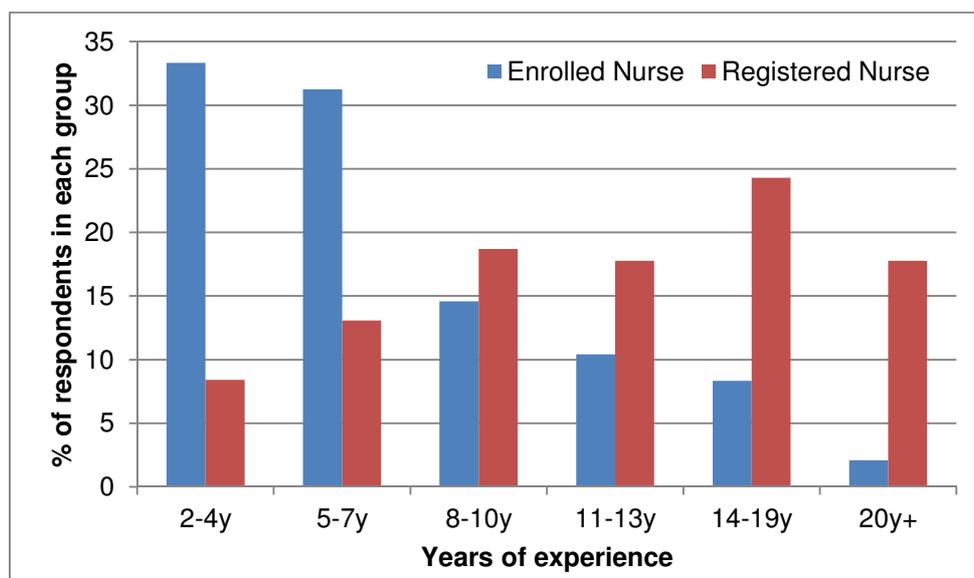


Figure 4.2: Years of nursing experience (N = 162)

According to Lee et al. (2010:35) there is a moderately strong relationship between experience and employment prospects, with more years of experience that are associated with lower career prospects. This observation is consistent with the study by Yfantis et al. (2010:195) who indicate that 35% of the respondents in their study on CPD have been working for 5 – 9 years, 22% for 10 – 14 years, 17% less than five years and 4% had been working for 22 years and more.

4.4 SECTION B: INPUT FACTORS

This section discusses the respondents' input with regard to continuing professional development. It involves the need for CPD, reasons, willingness to accept CPD, motivation and barriers to participating in CPD, as well as the clinical facilitators' involvement in mandatory CPD. Table 4.4 highlights the input factors showing the confidence intervals, as well as their P-values.

4.4.1 The need for CPD

The mean score for the CPD needs was 2.88 ± 0.06 indicating a high level of agreement with the statement. The value of 0.06 represents 95% confidence interval for the mean. This finding is consistent with Gallagher (2007:469) who argues that the rapid scientific and technological changes in health care necessitate continuing education. The author further emphasises that continuing education is essential for advancing professional competence and for preventing obsolescence.

Clafin (2005:267) highlights differing educational needs amongst nurses. One group identify managerial skills as their educational need. The study also indicates that other groups choose learning communication skills as their priority. The author further argues that nurses' educational needs differ according to age and speciality.

Table 4.4: Input factors

| Item | n | Overall (n = 162) | Enrolled Nurses (n = 51) | Professional Nurses (n = 111) | P-value for H0: no significant difference between Enrolled and Professional Nurses |
|--|-----|--------------------------------|--------------------------|-------------------------------|--|
| | | mean (95% confidence interval) | | | |
| Need for CPD / staff development | 161 | 2.88 (2.82-2.93) | 2.94 (2.87-3.01) | 2.85 (2.77-2.92) | 0.11 |
| Reasons for CPD / staff development | | | | | |
| Competence / care | 157 | 2.94 (2.90-2.98) | 2.90 (2.82-2.97) | 2.95 (2.91-3.00) | 0.17 |
| To improve the nurse's qualifications | 153 | 2.78 (2.69-2.86) | 2.72 (2.52-2.91) | 2.80 (2.71-2.89) | 0.89 |
| | | % yes | | | |
| Willingness to attend CPD | 161 | 95.6 | 94.1 | 97.3 | 0.38 |
| Available CPD activities | | | | | |
| In-service education | 162 | 98.0 | 95.0 | 99.0 | 0.23 |
| Seminars | 162 | 9.0 | 2.0 | 12.0 | 0.023 |
| Study days | 162 | 7.0 | 4.0 | 8.0 | 0.50 |
| Formal academic courses | 162 | 32.0 | 18.0 | 38.0 | 0.029 |
| CPD meets learning needs | 159 | 83.3 | 82.0 | 86.4 | 0.48 |
| CPD meets personal needs | 161 | 33.3 | 42.0 | 29.7 | 0.15 |
| | | mean (95% confidence interval) | | | |
| Motivational factors | | | | | |

| Item | n | Overall (n = 162) | Enrolled Nurses (n = 51) | Professional Nurses (n = 111) | P-value for H0: no significant difference between Enrolled and Professional Nurses |
|--|-----|---------------------|--------------------------|-------------------------------|--|
| Career development / employment | 144 | 2.24 (2.12-2.35) | 2.13 (1.88-2.38) | 2.28 (2.16-2.41) | 0.86 |
| Knowledge / performance | 158 | 2.98 (2.95-3.01) | 2.96 (2.91-3.02) | 2.98 (2.95-3.02) | 0.68 |
| Increased self-esteem and job satisfaction | 152 | 2.77 (2.69-2.85) | 2.68 (2.50-2.87) | 2.81 (2.72-2.90) | 0.77 |
| | | % yes | | | |
| CPD constraints | | | | | |
| Staff shortage | 162 | 94.0 | 87.0 | 97.0 | 0.028 |
| Heavy workload | 162 | 61.0 | 52.0 | 66.0 | 0.082 |
| Lack of time | 162 | 25.0 | 18.0 | 28.0 | 0.44 |
| Personal commitments | 162 | 10.0 | 10.0 | 11.0 | 1.0 |
| Lack of funding | 162 | 7.0 | 12.0 | 5.0 | 0.35 |
| CPD activity already fully booked | 162 | 7.0 | 8.0 | 7.0 | 1.0 |
| Poor consideration of learning styles | 162 | 5.0 | 4.0 | 5.0 | 1.0 |
| Preferred learning style | | | | | |
| Diverging | 159 | 30.3 | 51.0 | 49.0 | < 0.0001 |
| Assimilating | 159 | 30.9 | 8.0 | 92.0 | |
| Converging | 159 | 21.6 | 31.4 | 68.6 | |
| Accommodating | 159 | 16.1 | 38.5 | 61.5 | |

| Item | n | Overall (n = 162) | Enrolled Nurses (n = 51) | Professional Nurses (n = 111) | P-value for H0: no significant difference between Enrolled and Professional Nurses |
|--|-----|---------------------|--------------------------|-------------------------------|--|
| CPD funding | | | | | |
| I am prepared to pay for my CPD courses / activities | 162 | 57.0 | 31.0 | 69.0 | <0.0001 |
| I will take CPD courses if it is funded by the hospital | 162 | 86.0 | 88.0 | 85.0 | 0.43 |
| I am willing to undertake CPD during my off duties | 162 | 63.0 | 49.0 | 70.0 | 0.018 |
| If attend CPD in own times, does employer compensate? | 159 | 17.9 | 19.6 | 17.3 | 0.83 |
| Attended CPD in last two years | 162 | 99.4 | 100.0 | 99.1 | 1.0 |
| Number of courses attended | | | | | |
| 1-5 | 159 | 46.3 | 64.7 | 38.5 | 0.0013 |
| 6-10 | | 47.5 | 27.5 | 57.8 | |
| 11-15 | | 1.2 | 2.0 | 0.9 | |
| 16+ | | 3.7 | 5.9 | 2.8 | |
| CPD should be mandatory | 148 | 2.85 (2.78-2.93) | 2.67 (2.48-2.87) | 2.92 (2.86-2.99) | 0.0033 |
| CPD should be optional | 34 | 2.35 (2.07-2.64) | - | - | - |
| Responsibility for CPD | | | | | |
| Professional nurses | 162 | 74.0 | 66.0 | 77.0 | 0.18 |

| Item | n | Overall (n = 162) | Enrolled Nurses (n = 51) | Professional Nurses (n = 111) | P-value for H0: no significant difference between Enrolled and Professional Nurses |
|--------------------|-----|-------------------|--------------------------|-------------------------------|--|
| Government | 162 | 60.0 | 68.0 | 56.0 | 0.17 |
| Hospital | 162 | 85.0 | 82.0 | 87.0 | 0.47 |
| SA Nursing Council | 162 | 57.0 | 58.0 | 56.0 | 0.87 |

Yfantis et al. (2010:194) argue that patient expectations of high quality health care services lead providers to improve the educational status of health professionals in order to meet these expectations.

Lee et al. (2005:205) argue that as a public safety issue, it is important for nurses as health care workers at the forefront to have sufficient up-to-date knowledge and skills for maintaining and improving practice performance and quality patient care.

4.4.2 Benefits of participating in CPD

Respondents were asked to identify benefits of participating in CPD activities. They agreed very strongly with all four reasons, as shown in Figure 4.3. This finding is consistent with the study by Nalle, Wyatt, and Myers (2010:111) who report that 83% of nurses indicate that knowledge and skills are the primary benefits of participating in CPD.

In this study, 52 % (n = 93) of the respondents identified better patient outcomes as a significant benefit and 33% (n = 54) believed that CPD was influencing their clinical practice.

According to Yfantis et al. (2010:198), CPD empowers nurses with the knowledge to plan the nursing care, and critical thinking. Lee et al. (2010:34) argue that the benefit of mandatory CPD is encouraging unmotivated practitioners to stay up to date, and ensuring clinical competence.

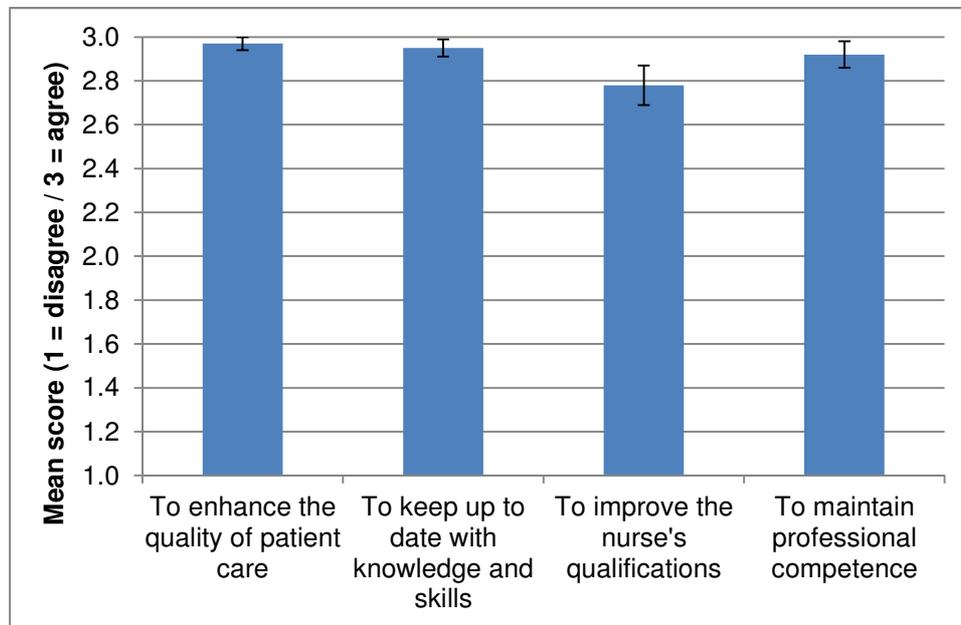


Figure 4.3: Benefits of participating in CPD (N = 162)

Cronbach's $\alpha = 0.736$, all four variables were loaded onto one factor and the factor loadings was in the range of 0.66 – 0.84. The item “To improve the nurse’s qualifications” was removed and a Cronbach's $\alpha = 0.729$ was obtained. The remaining three variables were loaded onto one factor, in the range 0.72 – 0.86. Therefore, construct one, two, and four, were retained and item three was analysed separately.

It is correct that Cronbach's alpha is used to establish the reliability of the scale. Further, factor analysis was used to establish the construct validity of the scale, as explained in Chapter 3, Section 3.7.

4.4.3 Willingness to attend CPD activities

The respondents were asked to indicate whether they participated in CPD willingly. Table 4.4 indicates that of respondents, 95.6% (n = 161) attended CPD activities willingly. Nalle et al. (2010:106) indicates that nurses value CPD regardless of

voluntary or mandatory status. The authors further emphasise that nurses voluntarily participate in CPD with the purpose of remaining current while believing that continuing professional development enhances their competence and improves patient care.

4.4.4 CPD Format

Table 4.4 and Figure 4.4 indicate the respondents' methods of staying recent in CPD activities. Of the respondents, 98% (n = 159) indicated that in-service education was available to them, while fewer than 9% (n = 16) indicated that seminars or study days were available to them. Just over 32% (n = 52) indicated that formal academic courses were available to them. These findings are inconsistent with the study by Yfantis et al. (2010:197) study that 40% of CPD activity takes place in seminar format, and during small group teaching.

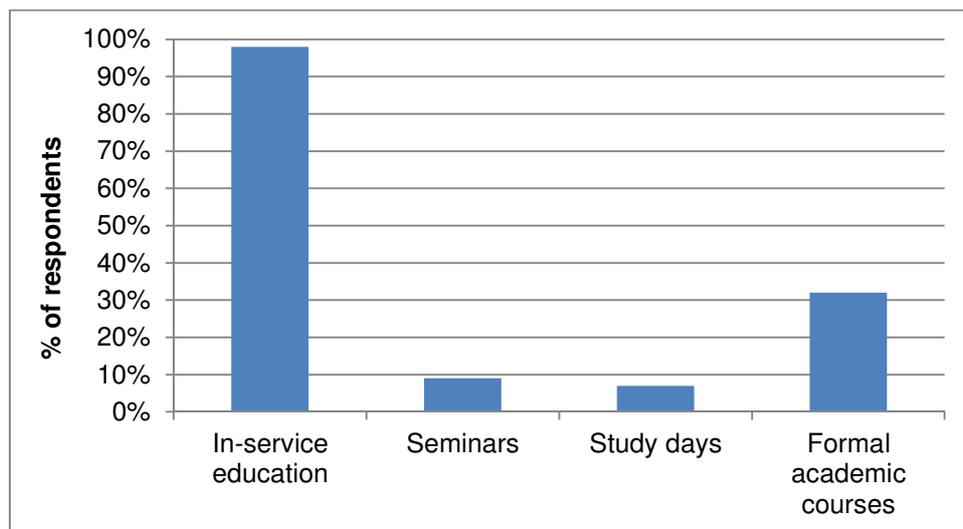


Figure 4.4: CPD format available to respondents (N = 162)

There is a weak but still significant association between age and the availability of seminars (Fisher's exact test: $p = 0.0051$; Phi coefficient = 0.27). In this study, it is found that younger nurses in the 20 – 29 years age group have had less access to seminars (Table 4.5).

Table 4.5: Respondents' answers about CPD Format (N = 162)

| CPD format | Total | Age | | | |
|-------------------------|-------|---------------|---------------|---------------|---------------|
| | | 20 – 29 years | 30 – 39 years | 40 – 49 years | 50 – 59 years |
| In-service education | 98% | 96% | 96% | 100% | 100% |
| Seminars | 9% | 0% | 4% | 17% | 25% |
| Study days | 7% | 0% | 7% | 8% | 16% |
| Formal academic courses | 32% | 19% | 29% | 44% | 33% |

There is a weak but still significant association between work status and the availability of seminars (Fisher's exact test: $p = 0.023$; Phi coefficient = 0.18) and formal academic courses ($p = 0.029$; Phi coefficient = 0.18). Enrolled nurses have less access to seminars and formal academic courses (Table 4.6).

Table 4.6: CPD format (N = 162)

| | Status | | | | Experience | | | |
|-------------------------|----------------|------------------|------------|------------|-------------|--------------|--------------|--------------|
| | Enrolled Nurse | Registered Nurse | 2 – 4years | 5 – 7years | 8 – 10years | 11 – 13years | 14 – 19years | 20yand older |
| In-service training | 95% | 99% | 100% | 96% | 100% | 91% | 100% | 100% |
| Seminars | 2% | 12% | 4% | 0% | 0% | 8% | 13% | 35% |
| Study days | 4% | 8% | 0% | 3% | 3% | 12% | 10% | 15% |
| Formal academic courses | 18% | 38% | 20% | 13% | 29% | 37% | 46% | 50% |

Table 4.7: Work experience and choice of CPD format (N = 162)

| | Work experience | | | | | | |
|-------------------------|-----------------|------------|------------|-------------|-------------|--------------|-----------------|
| | Total | 2 – 4years | 5 – 7years | 8 - 10years | 11 -13years | 14 - 19years | 20yrs and older |
| In-service education | 98% | 100% | 96% | 100% | 91% | 100% | 100% |
| Seminars | 9% | 4% | 0% | 0% | 8% | 13% | 35% |
| Study days | 7% | 0% | 3% | 3% | 12% | 10% | 15% |
| Formal academic courses | 32% | 20% | 13% | 29% | 37% | 46% | 50% |

There is also a moderate but still significant association between years of experience and the availability of seminars (Fisher’s exact test: $p < 0.0001$; Phi coefficient = 0.39) and a weak but still significant association between years of experience and the availability of formal academic courses ($p = 0.027$; Phi coefficient = 0.28). The participants with more years of experience have easier access to seminars and formal academic courses (Table 4.7).

4.4.5 Learning needs and CPD participation

Figure 4.5 depicts the feedback of respondents whether CPD meets their learning needs. Approximately 83% ($n = 135$) of the respondents indicated that the CPD activities of the institution were meeting their learning needs, only 33% ($n = 54$) indicated that CPD was meeting their personal (e.g. promotion / improved remuneration) needs. Jarader and Hamder (2010:319) indicate in their study that increasing professional knowledge is the prime motivator amongst nurses. Lee et al. (2010:35) emphasise that gaining more knowledge, improved performance at work, and improved patient care are rated to provide a considerable amount of motivation amongst radiographers.

This point of view is supported by Jarader and Hamder (2010:309) who indicate that

CPD improves the nurses' knowledge, skills and performance.

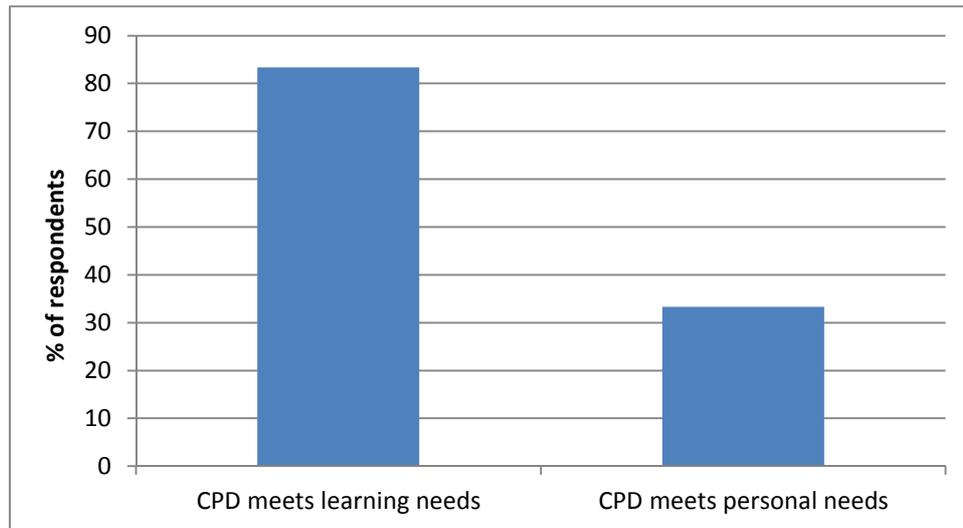


Figure 4.5: Learning needs and CPD participation (N = 162)

4.4.6 Motivational reasons for participating in CPD

Figure 4.6 indicates the feedback of the respondents about factors that motivate the nurses to participate in CPD. Five statements were listed and the respondents were asked to indicate which of these statements motivate their participation in CPD activities. Respondents strongly agreed with three of the statements, but seemed to be unsure about the other two reasons as motivating factors. This observation is consistent with Jarader and Hamder (2010:319) who highlight in their study that respondents are internally motivated to accept CPD activities. Lee et al. (2010:35) report that according to the principle of adult learning, internal motivation is more powerful for adults than external motivation. This idea is supported by Nalle et al. (2010:108) who argue that nurses are intrinsically motivated by enhanced knowledge and professional skills. The authors further report that nurses participate in CPD to enhance their competence and to improve patient care.

Lee et al. (2005:209) argue that in their study, that 50% of the respondents are motivated by personal interest to raise their qualifications and approximately 30% are motivated by the need for job promotion.

Fahnestock (2012:32) argues that the motivation to participate in CPD may be influenced by the dominant human need that a person is striving to satisfy. The

author further highlights that higher order needs such, as the self-esteem and self-actualisation are greater motivators for participation in CPD.

Literature differs about what motivates nurses to participate in CPD. Maslow (1947:388) cited in Fahnstock (2012:32) argues that human beings are motivated by predominant needs and the desire to know and understand. The author further indicates that an individual's dominant need varies according to life circumstances and the ability to satisfy the dominant need at any given time.

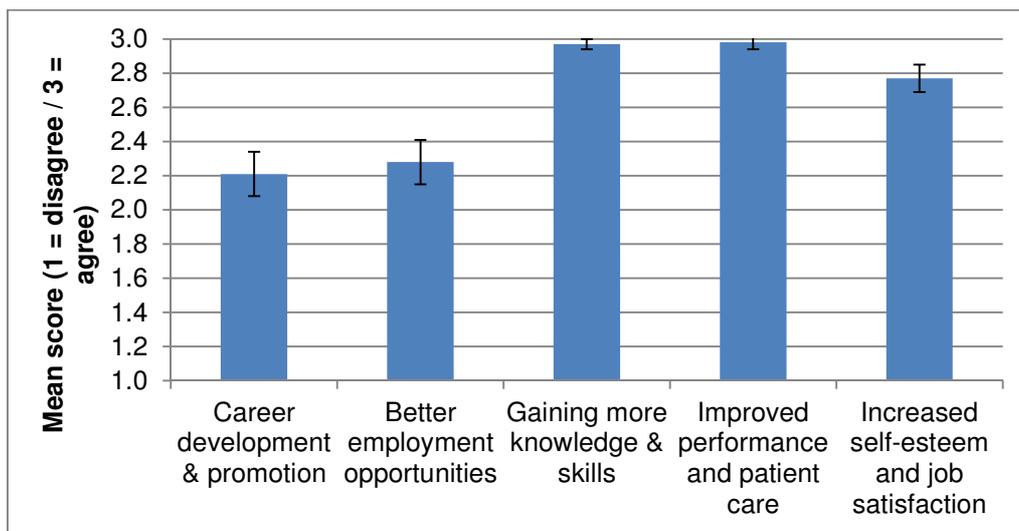


Figure 4.6: Motivational reasons for participating in CPD (N = 162)

For the construct formed from the first two reasons (career development / employment opportunities), Cronbach's α was 0.797; both variables loaded onto one factor. The factor loadings were 0.9.

For the construct formed from the last three reasons (gaining knowledge / improved performance / increased self-esteem), Cronbach's α was 0.787. All three variables were loaded onto one factor and the factor loadings ranged between 0.54 and 0.97. When increased job satisfaction and self-esteem were removed, the remaining construct (gaining knowledge / improved performance) had Cronbach's α 1.00 (the variables correlated perfectly).

For further analysis, the researcher used the following constructs: Reasons one and two (career development / better employment), reasons three and four (gaining more knowledge / improved performance) and reason five (increased self-esteem, and job satisfaction).

Those participants who were between 20 and 29 years old placed more importance on construct one (career development / employment opportunities) than the ones who were between 50 and 59 years old. The effect of age was significant ($p = 0.029$) as indicated in Figure 4.7. In the study by Drey, Goud and Allan (2009:744), organisational commitment is highest in younger, less experienced nurses.

The findings as discussed are consistent with Lee et al. (2010:35) who indicate that more years of experience are associated with lower career prospects.

As indicated in Section 4.4.2, it is correct that Cronbach's alpha is used to establish the reliability of the scale. Furthermore, factor analysis was used to establish the construct validity of the scale, as explained in Chapter 3, Section 3.7.

These are key differences between Factor Analysis and Principal Component Analysis. Factor Analysis is used to identify underlying factors / dimensions that reflect what the variables have in common. It is used when one wants to identify latent dimensions in the data. On the other hand, Principal Component Analysis is used to summarise most of the original information contained in the data into a minimum number of factors for prediction purposes, .i.e. when one:

- Wants to do prediction;
- Wants to get minimum number of factors to account for maximum proportion of the variance in the original data; and

In this study, we are interested in the underlying dimensions of the data (e.g. an underlying dimension would be 'competence, care' in question 2.2, measured by items 1, 2 and 4). That means we do Factor Analysis, it means we obtain factors (scales) which have meaning and can be interpreted. We do not want to simply reduce the number of variables into as few factors as possible so that we can do a prediction. In Principal Component Analysis, the factors typically do not have meaning and thus this approach is not appropriate for this study.

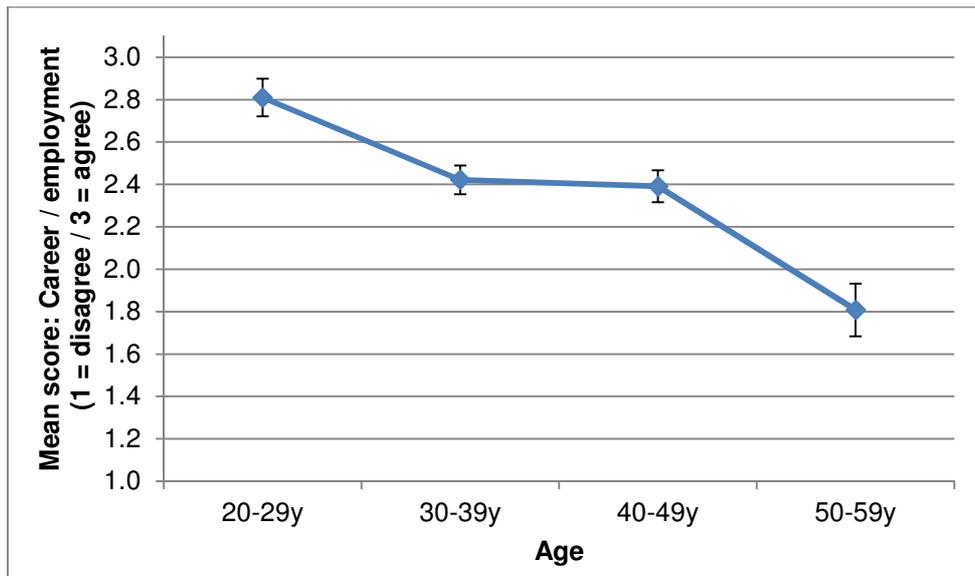


Figure 4.7: Respondents' feedback about motivational reasons and age groups (N = 162)

The contribution of gender was significant ($p = 0.030$). In this study, it is found that male respondents place a greater importance on reasons (career development / employment opportunities) than female respondents (Figure 4.8).

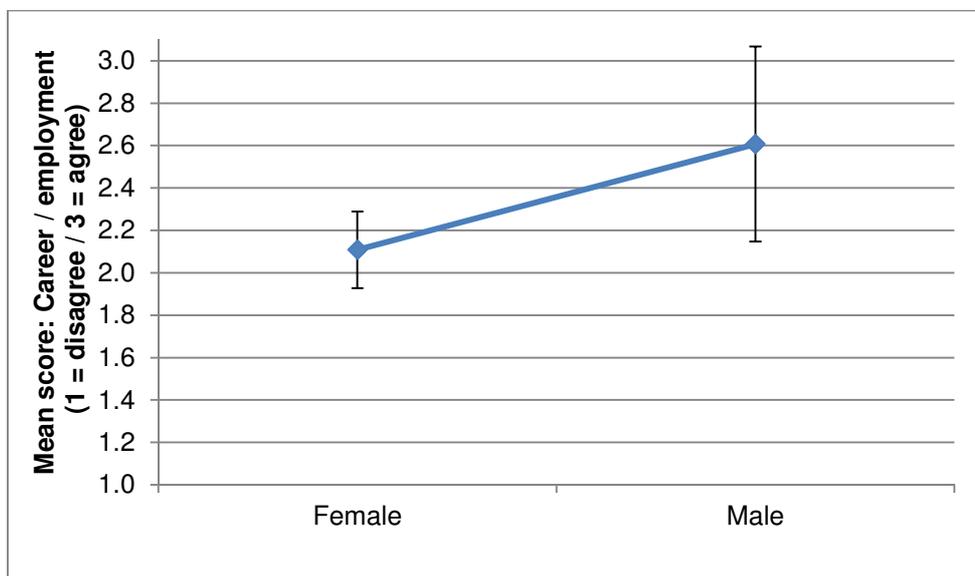


Figure 4.8: Motivational reasons of male and female nurses (N = 162)

With regard to self-esteem and job satisfaction, it is found that there are no significant differences between the mean scores to this question for either any of the categories, or for any of the stratification variables.

Jarader and Hamder (2010:319), in their study, have found that nurses who have

fewer years of experience are more willing to invest time and money in CPD participation. The authors further highlight that enhancing the quality of nursing care, improving performance, and increasing self-esteem have been important factors amongst their respondents.

4.4.7 CPD constraints experienced

Figure 4.9 presents information of the respondents about the barriers to participating in continuing professional development. The most frequent CPD constraints mentioned are staff shortages and heavy workloads. Factors; such as learning styles, and already fully booked CPD are the least common constraints indicated. This data analysis is consistent with the findings of Jarader and Hamder (2010:318) who indicate that perceived barriers to undertake CPD include lack of time, work load and a shortage of nurses. Yfantis et al. (2009:197) report that 83% of the respondents in their study have indicated that CPD already booked is one of their reported barriers.

Lee et al. (2010:36) indicate that a lack of time, funding, and access to CPD activities are the most common constraints experienced by the respondents in their study.

Nalle et al. (2010:112) find that 74% of the respondents have reported programme cost, 54% have indicated lack of funding, and 49% have selected travel requirements as significant barriers to CPD participation. Altmann (2011:5) finds that there is a significant positive association between employer assistance and participation in CPD.

Fahnestock (2012:49) reveals that researchers have identified three types of barriers to participating CPD namely; situational, dispositional, and institutional barriers. Situational barriers are those circumstances in life that impede a person's participation; such as family obligations, and work related responsibilities. These barriers change with adjustments in one's life situation. Dispositional barriers are related to a person's attitude about learning. Institutional barriers are those practices and procedures that discourage working adults from participating in educational activities; for example inconvenient working schedule or location, inappropriate courses, and study fees. The author further emphasises that situational barriers are cited more frequently. Specifically, cost of attending CPD and a lack of time are the top two barriers to participating in adult education. Lack of transport is also a greater

issue for the older nurses and for the poorer nurses. Fahnestock (2012:49) also argues that institutional barriers occur more frequently than dispositional barriers.

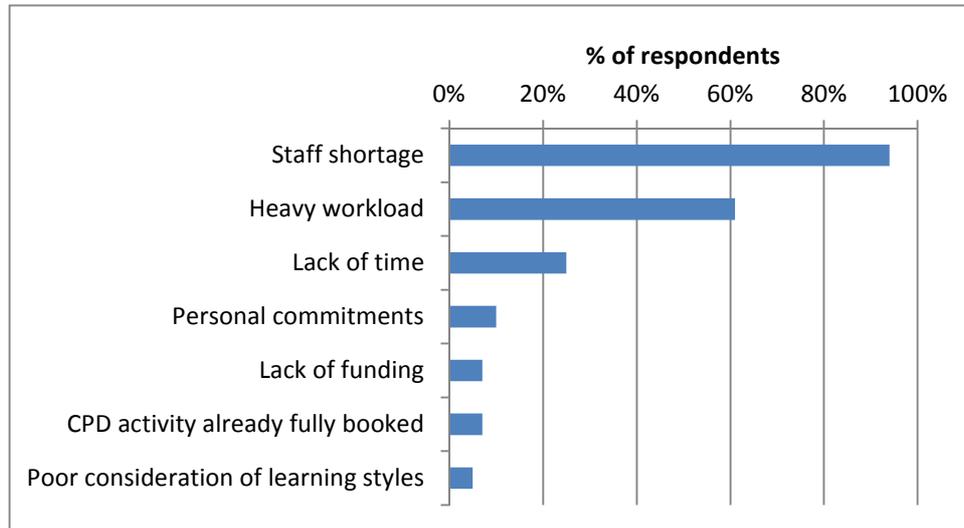


Figure 4.9: Constraints experienced (N = 162)

There was a weak but still significant association between age and CPD activities that have already been fully booked (Fisher’s exact test: $p = 0.0075$; Phi coefficient = 0.26). Significantly, older nurses mention this constraint more frequently, as Table 4.8 indicates.

Table 4.8: Respondents’ results in relation to CPD constraints and age (N = 162)

| | Total | Age | | | |
|----------------------|-------|----------|----------|----------|----------|
| | | 20 – 29y | 30 – 39y | 40 – 49y | 50 – 59y |
| Staff shortage | 94% | 93% | 96% | 91% | 91% |
| Heavy workload | 61% | 58% | 55% | 70% | 75% |
| Lack of time | 25% | 22% | 21% | 34% | 16% |
| Personal commitments | 10% | 3% | 9% | 17% | 16% |

| | Total | Age | | | |
|---------------------------------------|-------|----------|----------|----------|----------|
| | | 20 – 29y | 30 – 39y | 40 – 49y | 50 – 59y |
| Lack of funding | 7% | 9% | 4% | 10% | 8% |
| CPD activity already fully booked | 7% | 6% | 1% | 12% | 25% |
| Poor consideration of learning styles | 5% | 0% | 6% | 6% | 8% |

There is a weak but still significant association between gender and staff shortages (Fisher's exact test: $p = 0.012$; Phi coefficient = 0.27). Female nurses are mentioning this constraint more frequently as Table 4.9 indicates.

There is a weak but still significant association between status and staff shortages (Fisher's exact test: $p = 0.028$; Phi coefficient = 0.18). Registered nurses mention this constraint more frequently (Table 4.9).

Table 4.9: Respondents' information about CPD constraints, age, gender, and status (N = 162)

| | Total | Age | | | | Gender | | Status | |
|---------------------------------------|-------|----------|----------|----------|----------|--------|--------|----------------|------------------|
| | | 20 – 29y | 30 – 39y | 40 – 49y | 50 – 59y | Male | Female | Enrolled Nurse | Registered Nurse |
| Staff shortage | 94% | 93% | 96% | 91% | 91% | 70% | 95% | 87% | 97% |
| Heavy workload | 61% | 58% | 55% | 70% | 75% | 60% | 62% | 52% | 66% |
| Lack of time | 25% | 22% | 21% | 34% | 16% | 30% | 24% | 18% | 28% |
| Personal commitments | 10% | 3% | 9% | 17% | 16% | 10% | 11% | 10% | 11% |
| Lack of funding | 7% | 9% | 4% | 10% | 8% | 0% | 8% | 12% | 5% |
| CPD activity already fully booked | 7% | 6% | 1% | 12% | 25% | 10% | 7% | 8% | 7% |
| Poor consideration of learning styles | 5% | 0% | 6% | 6% | 8% | 0% | 5% | 4% | 5% |

4.4.8 Funding available for CPD

The most important observation to note is the amount of missing responses, particularly to the 1st and 3rd questions; it suggests that the nurses have feared that if they answer “true” to these questions that the hospital would indeed expect them to pay for CPD, or to attend CPD during their off duty (which presumably is not current practice).

Figure 4.10 indicates the respondents’ opinion about CPD funding. Despite these opinions, more than half of the respondents have indicated that they are prepared to fund CPD courses either financially and / or by participating in CPD during their off duty time. As might be expected, a higher proportion of over 86% (n = 146) have indicated that they would accept CPD if it is funded by the hospital. This finding is consistent with Altmann (2011:5) who has found that there is a significant positive association between employer assistance and participation in CPD. The author further highlights that lack of transportation or funding is one of the constraints to CPD participation. Tuition cost is one of the factors that are raised by respondents in the study by Lee et al. (2005:205).

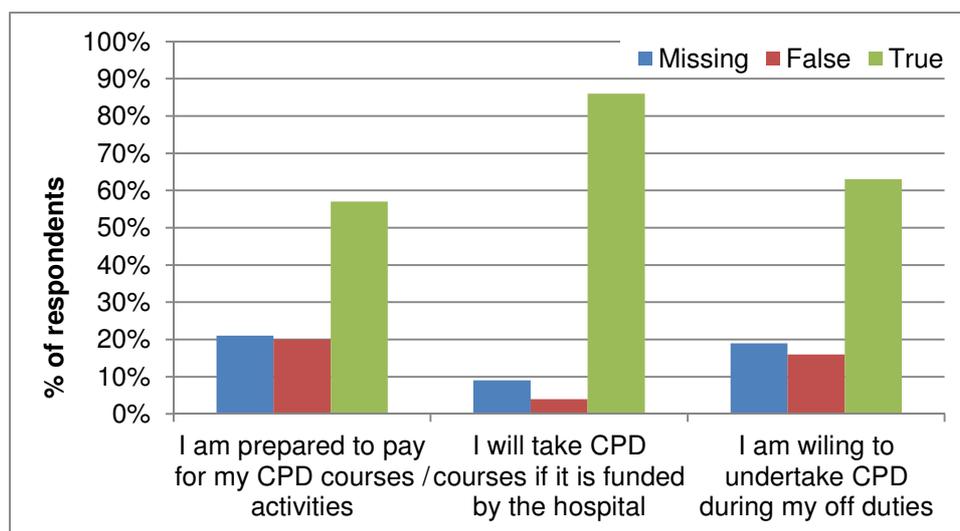


Figure 4.10: Funding available for CPD (N = 162)

There is a weak but still significant association between gender and a willingness to fund own CPD activities (Fisher’s exact test: $p = 0.012$; Phi coefficient = 0.25). Females nurses are more willing to do so than their male counterparts (Table 4.10).

Table 4.10: Funding of CPD (N = 162)

| CPD funding | | 20-29y | 30-39y | 40-49y | 50-59y | Male | Female | |
|---|--|--------|--------|--------|--------|------|--------|-----|
| I am prepared to pay for my CPD courses / activities | | | | | | | | |
| Missing | | 21% | 15% | 17% | 24% | 50% | 10% | 22% |
| False | | 20% | 37% | 18% | 14% | 16% | 60% | 18% |
| True | | 57% | 46% | 63% | 61% | 33% | 30% | 59% |

There is also a moderate but significant association between status and a willingness to fund their own CPD activities (Fisher's exact test: $p < 0.0001$; Phi coefficient = 0.36) and a weak but still significant association between status and a willingness to attend CPD during off duty ($p = 0.018$; Phi coefficient = 0.23). Furthermore, registered nurses are more willing to do so than enrolled nurses (Table 4.11).

Table 4.11: Respondents' information about funding of CPD (N = 162)

| CPD funding | | Age | | | | Gender | | Status | |
|--|-----|--------|--------|--------|--------|--------|--------|----------------|------------------|
| | | 20-29y | 30-39y | 40-49y | 50-59y | Male | Female | Enrolled Nurse | Registered Nurse |
| I am prepared to pay for my CPD courses / activities | | | | | | | | | |
| Missing | 21% | 15% | 17% | 24% | 50% | 10% | 22% | 33% | 16% |
| False | 20% | 37% | 18% | 14% | 16% | 60% | 18% | 35% | 14% |
| True | 57% | 46% | 63% | 61% | 33% | 30% | 59% | 31% | 69% |
| I will take CPD courses if it is funded by the hospital | | | | | | | | | |
| Missing | 9% | 6% | 5% | 14% | 16% | 10% | 9% | 9% | 9% |
| False | 4% | 3% | 5% | 4% | 0% | 0% | 4% | 1% | 5% |
| True | 86% | 90% | 88% | 81% | 83% | 90% | 86% | 88% | 85% |
| I am willing to undertake CPD during my off duties | | | | | | | | | |
| Missing | 19% | 15% | 17% | 20% | 41% | 20% | 19% | 23% | 18% |
| False | 16% | 25% | 15% | 14% | 8% | 40% | 15% | 27% | 11% |
| True | 63% | 59% | 66% | 65% | 50% | 40% | 65% | 49% | 70% |

There is a moderate but significant association between years of experience and a willingness to fund own CPD activities (Pearson's X^2 test: $p < 0.0001$; Cramer's V = 0.46). Those nurses with more years of experience are more willing to fund their own training as Table 4.12 indicates.

Table 4.12: Respondents' information about funding CPD (n = 162)

| CPD funding | Age | | | | | Gender | | Status | | Experience | | | | | |
|--|--------|--------|--------|--------|------|--------|----------|------------|------|------------|-------|--------|--------|------|-----|
| | 20-29y | 30-39y | 40-49y | 50-59y | Male | Female | Enrolled | Registered | 2-4y | 5-7y | 8-10y | 11-13y | 14-19y | 20y+ | |
| I am prepared to pay for my CPD courses / activities | | | | | | | | | | | | | | | |
| Missing | 21% | 15% | 17% | 24% | 50% | 10% | 22% | 33% | 16% | 44% | 17% | 22% | 12% | 13% | 30% |
| False | 20% | 37% | 18% | 14% | 16% | 60% | 18% | 35% | 14% | 32% | 41% | 14% | 4% | 6% | 15% |
| True | 57% | 46% | 63% | 61% | 33% | 30% | 59% | 31% | 69% | 24% | 41% | 62% | 83% | 80% | 55% |
| I will take CPD courses if it is funded by the hospital | | | | | | | | | | | | | | | |
| Missing | 9% | 6% | 5% | 14% | 16% | 10% | 9% | 9% | 9% | 20% | 10% | 11% | 0% | 3% | 10% |
| False | 4% | 3% | 5% | 4% | 0% | 0% | 4% | 1% | 5% | 0% | 3% | 3% | 4% | 3% | 10% |
| True | 86% | 90% | 88% | 81% | 83% | 90% | 86% | 88% | 85% | 80% | 86% | 85% | 95% | 93% | 80% |
| I am willing to undertake CPD during my off duties | | | | | | | | | | | | | | | |
| Missing | 19% | 15% | 17% | 20% | 41% | 20% | 19% | 23% | 18% | 24% | 24% | 22% | 12% | 16% | 20% |
| False | 16% | 25% | 15% | 14% | 8% | 40% | 15% | 27% | 11% | 32% | 20% | 11% | 4% | 10% | 15% |
| True | 63% | 59% | 66% | 65% | 50% | 40% | 65% | 49% | 70% | 44% | 55% | 66% | 83% | 73% | 65% |

4.4.9 Respondents' participation in CPD activities

Approximately 99% (n = 161) of the respondents have attended CPD activities in the past two years. Attending CPD is an eligibility criteria for this study. Only nurses who have participated in CPD activities during the past two years have been requested to participate in the study (Table 4.13).

Table 4.13: Respondents' participation in CPD during the past two years (N = 162)

| CPD in past 2 years | Frequency | Per cent | Cumulative Frequency | Cumulative Per cent |
|---------------------|-----------|----------|----------------------|---------------------|
| No | 1 | 0.62 | 1 | 0.62 |
| Yes | 161 | 99.38 | 162 | 100 |

4.4.10 The number of CPD courses attended

Figure 4.11 and Table 4.13 present analysed data about the number of CPD courses attended by the respondents during the past two years. Approximately 46% (n = 75) of the respondents have attended 1 – 5 courses, while a further 48% (n = 77) have

attended 6 – 10 courses.

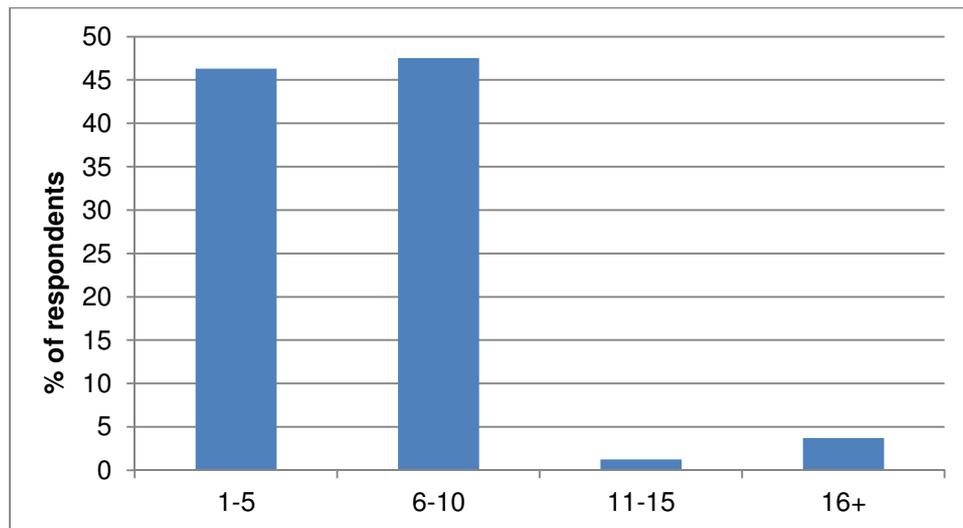


Figure 4.11: Respondents' participation in CPD (N = 162)

4.4.11 Perceptions of mandated CPD

Table 4.14 presents the respondents' information about mandatory and optional CPD. The respondents have been asked to indicate whether continuing professional development should be mandatory or optional. Approximately 81% (n = 132) of respondents have indicated that CPD should be mandatory.

Skees (2010:106) highlights that many states in the United States of America require continuing education hours as a method of fulfilling licence renewal. According to Lee et al. (2005:206), mandatory CPD is a justifiable means of ensuring that professional competence of nurses is maintained. Thomas, Benbow and Ayaris (2010:524) argue that continued competence for all licensed health professionals is an accepted premise for the provision of safe patient care.

According to Fahnestock (2012:44), mandating CPD violates the assumptions of adult education and, therefore, it may not produce the intended outcome of professionals improving performance in the practice setting.

Table 4.14: Respondents' analysed data about mandated CPD (N = 162)

| Mandatory CPD | Frequency | Per cent | Cumulative Frequency | Cumulative Per cent |
|----------------------|------------------|-----------------|-----------------------------|----------------------------|
| Missing | 14 | 8.64 | 14 | 8.64 |
| No | 6 | 3.7 | 20 | 12.35 |
| Unsure | 10 | 6.17 | 30 | 18.52 |
| Yes | 132 | 81.48 | 162 | 100 |

Knowles (1990) cited in Fahnestock (2012:44) argues that compelling professionals who are not motivated internally to participate in CPD may reduce learning. The author further indicates that adults desire to understand why they need to learn something and they need to see the immediacy of application.

Fahnestock (2012:43) argues that people who are required to learn are more likely to have up-to-date information than people who are not required, people who are motivated to learn are more likely to be better informed than people who are merely serving time in class, and voluntary learning is most effective, however, compulsory learning is better than nothing.

Almost 12% (n = 19) of the respondents think that CPD should be optional (Table 4.15).

Table 4.15: Respondents' analysed data about optional CPD (N = 162)

| CPD optional | Frequency | Per cent | Cumulative Frequency | Cumulative Per cent |
|---------------------|------------------|-----------------|-----------------------------|----------------------------|
| Missing | 128 | 79.01 | 128 | 79.01 |
| No | 7 | 4.32 | 135 | 83.33 |
| Unsure | 8 | 4.94 | 143 | 88.27 |
| Yes | 19 | 11.73 | 162 | 100 |

The researcher only has analysed the first question (should CPD be mandatory?) with regard to the stratification variables. The effects of age ($p = 0.019$) and status ($p = 0.0033$) are significant. The 50 – 59year age group are less in agreement than the 30 – 39year age group that CPD should be mandatory (Figure 4.12). Registered nurses are somewhat more in agreement that CPD should be mandatory as indicated in Figure 4.13.

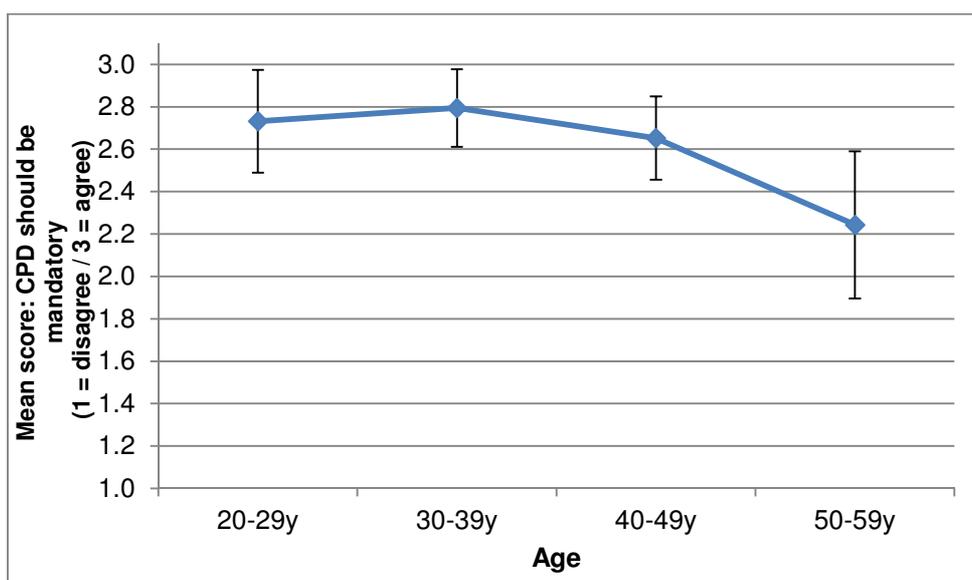


Figure 4.12: Mandated CPD (N = 162)

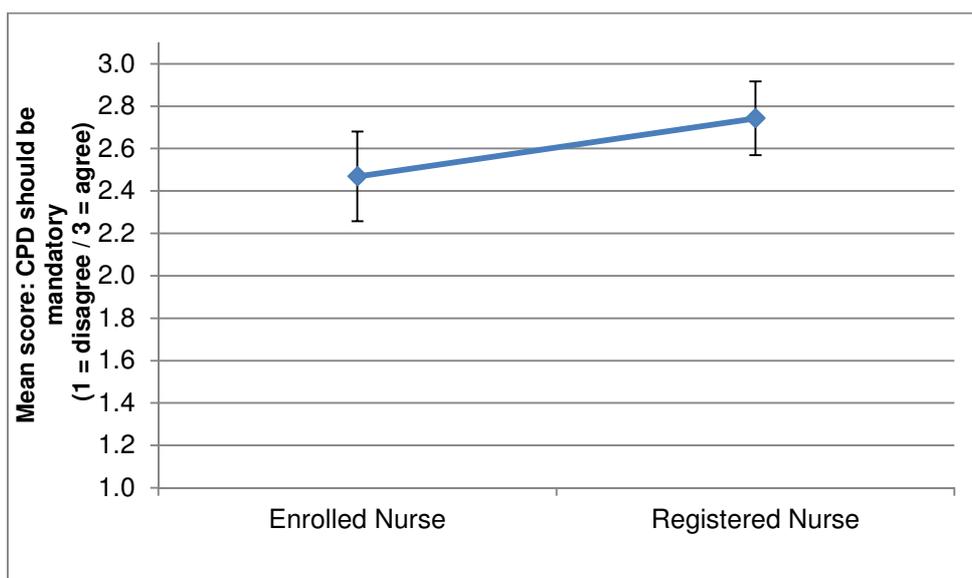


Figure 4.13: Respondents' professional status and mandated CPD (N = 162)

4.4.12 Responsibility of nurses' CPD activities

Table 4.16 and Figure 4.14 present information about the nurses' opinions about who should take the responsibility for the nurses' CPD. Approximately 85% (n = 139) of the respondents feel it should be the hospital, 74% (n = 120) have indicated that it should be nurses, 60% (n = 98) have reported that it should be the government, and 57% (n = 93) have indicated that it should be the SANC.

Table 4.16: Respondents' responses about who should be responsible for CPD (N = 162)

| Responsibility for CPD | % | Frequency |
|------------------------|-----|-----------|
| Professional nurses | 74% | 120 |
| Government | 60% | 98 |
| Hospital | 85% | 139 |
| SA Nursing Council | 57% | 93 |

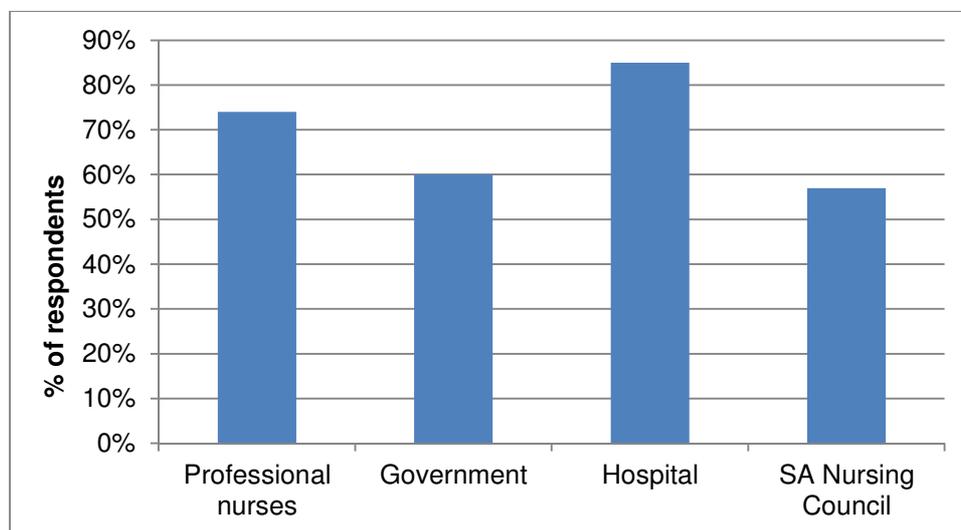


Figure 4.14 Respondents' points of view about who should be responsible for CPD (N = 162)

There is a weak but still significant association between years of experience and the opinion that professional nurses should be responsible for their own CPD (Fisher's

exact test: $p = 0.030$; Phi coefficient = 0.28). Nurses mention more frequently that nurses should be responsible for their own continuing education (Table 4.16).

4.5 SECTION C: THROUGHPUT FACTORS

This section describes the throughput factors. These factors are processes that are performed or utilised in order to convert an input to a success. For example, courses offered by an institution, instructional strategies, teaching and learning environment, and the teaching expertise that a health institution utilises in order to maintain the competency of their employees.

4.5.1 CPD courses available to the respondents

Figure 4.15 depicts the results of the courses that are available to the respondents. Of the respondents, 99% ($n = 161$) have indicated infection control, 93% ($n = 151$) basic life support, 90% ($n = 146$) hospital policies and standards, 84% ($n = 137$) conflict management and equipment training, 78% ($n = 127$) fire safety and awareness, 75% ($n = 122$) bedside teaching and learning, 71% ($n = 116$) managing difficult patient, 49% ($n = 80$) advanced life support, 38% ($n = 62$) manual handling of patients, 35% ($n = 58$) positive customer care, 32% ($n = 52$) conference attendance and mentoring a student or a new staff, and 4% ($n = 8$) have selected other factors.

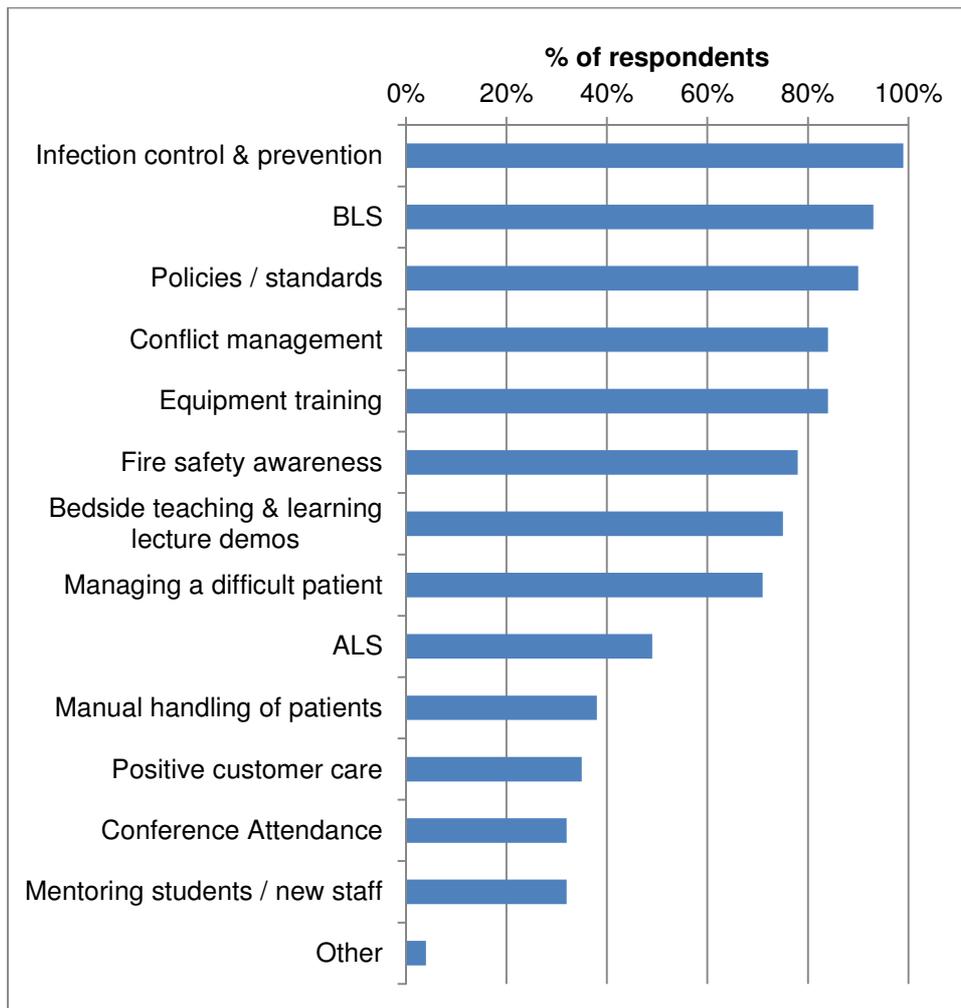


Figure 4.15: Respondents' analysed data about available CPD activities (N = 162)

There is a weak but still significant association between age and advance life support (Fisher's exact test: $p = 0.015$; Phi coefficient = 0.25), manual handling of patients ($p = 0.0086$; Phi coefficient = 0.26), positive customer care ($p = 0.024$; Phi coefficient = 0.25), and conference attendance ($p = 0.013$; Phi coefficient = 0.26). Older respondents are more aware of these courses (Table 4.17). There is a weak but still significant association between status and conflict management (Fisher's exact test: $p = 0.0086$; Phi coefficient = 0.23). Registered nurses are more aware of the course in conflict management than enrolled nurses (Table 4.18).

Table 4.17: Available CPD activities (N = 162)

| | Total | Age | | | |
|---|-------|----------|----------|----------|----------|
| | | 20 – 29y | 30 – 39y | 40 – 49y | 50 – 59y |
| Infection control and prevention | 99% | 100% | 100% | 97% | 100% |
| BLS | 93% | 90% | 92% | 93% | 100% |
| Policies / standards | 90% | 84% | 89% | 91% | 100% |
| Conflict management | 84% | 78% | 85% | 83% | 100% |
| Equipment training | 84% | 78% | 84% | 87% | 91% |
| Fire safety awareness | 78% | 75% | 78% | 77% | 91% |
| Bedside teaching & learning lecture demos | 75% | 78% | 75% | 71% | 83% |
| Managing a difficult patient | 71% | 78% | 66% | 73% | 75% |
| ALS | 49% | 31% | 53% | 46% | 83% |
| Manual handling of patients | 38% | 34% | 33% | 36% | 83% |
| Positive customer care | 35% | 31% | 28% | 38% | 75% |
| Conference Attendance | 32% | 15% | 31% | 36% | 66% |
| Mentoring students / new staff | 32% | 31% | 27% | 34% | 50% |
| Other | 4% | 3% | 1% | 6% | 25% |

There is a moderate but significant association between years of experience and conference attendance (Fisher's exact test: $p < 0.001$; Phi coefficient = 0.38). Those nurses with more years of experience are more aware of the opportunity to attend conferences (Table 4.18).

Table 4.18: Available CPD activities (N = 162)

| | Total | Status | | Experience | | | | | |
|---------------------------------------|-------|----------------|------------------|------------|--------|---------|----------|--------|---------------|
| | | Enrolled Nurse | Registered Nurse | 2 – 4y | 5 – 7y | 8 – 10y | 11 – 13y | 14 – y | 20y and older |
| Infection control and prevention | 99% | 100% | 99% | 100% | 100% | 100% | 100% | 96% | 100% |
| BLS | 93% | 92% | 93% | 88% | 86% | 88% | 100% | 100% | 95% |
| Policies /standards | 90% | 92% | 89% | 84% | 86% | 92% | 87% | 96% | 90% |
| Conflict management | 84% | 72% | 90% | 72% | 75% | 81% | 91% | 96% | 85% |
| Equipment training | 78% | 80% | 79% | 84% | 68% | 85% | 91% | 93% | 90% |
| Fire safety awareness | 84% | 76% | 79% | 84% | 58% | 77% | 87% | 83% | 80% |
| Beside teaching lecture demonstration | 78% | 70% | 77% | 72% | 75% | 55% | 87% | 76% | 80% |
| Managing a difficult patient | 75% | 68% | 72% | 56% | 68% | 70% | 70% | 80% | 95% |
| ALS | 71% | 54% | 46% | 52% | 27% | 55% | 41% | 56% | 60% |

| | | | | | | | | | |
|-----------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Manual handling of patients | 49% | 47% | 34% | 44% | 41% | 33% | 29% | 46% | 40% |
| Positive customer care | 38% | 43% | 32% | 32% | 24% | 48% | 29% | 33% | 50% |
| Conference attendance | 35% | 29% | 34% | 28% | 13% | 29% | 20% | 60% | 55% |
| Mentoring a student | 32% | 29% | 33% | 39% | 34% | 29% | 16% | 40% | 35% |
| Other | 4% | 3% | 5% | 4% | 3% | 0% | 0% | 6% | 15% |

4.5.2 Available time for CPD activities

The respondents have been asked whether the institution provides time for CPD during working hours. Of the respondents, 91% (n = 148) have indicated that time is provided by the hospital for participating in CPD (Table 4.19). This finding is inconsistent with Lee et al. (2010:37) who have found in their study that radiographers are required to provide their own time and money. The authors further emphasise that radiographers have indicated that time and money issues are their main constraint to attending CPD activities.

Whitehead and Lacey-Haun (2008: 495) report in their study that 44% of nurses have reported that they sometimes are not allowed time off to attend CPD activities.

Table 4.19: Respondents' analysed data about the time available for participating in CPD (N = 162)

| Provided time | Frequency | Per cent | Cumulative Frequency | Cumulative Per cent |
|---------------|-----------|----------|----------------------|---------------------|
| Missing | 2 | 1.23 | 2 | 1.23 |
| No | 12 | 7.41 | 14 | 8.64 |
| Yes | 148 | 91.36 | 162 | 100 |

Respondents have been asked whether they do attend the CPD when offered an opportunity to do so. Of the respondents, 94% (n = 153) have agreed that they attend CPD when they are allocated time to do so (Table 4.20).

Table 4.20 Respondents' data analysis about the time available for participating in CPD (N = 162)

| If time available I attend | Frequency | Per cent | Cumulative Frequency | Cumulative Per cent |
|-----------------------------------|------------------|-----------------|-----------------------------|----------------------------|
| Missing | 1 | 0.62 | 1 | 0.62 |
| No | 8 | 4.94 | 9 | 5.56 |
| Yes | 153 | 94.44 | 162 | 100 |

4.5.3 Importance of CPD activities

It is clear that nurses can no longer afford to practise nursing according to outdated principles learned during their basic education, nor can they rely on outdated policies. The well-being of the patients could be at risk when nurses practise on the premise of outdated evidence (Skees 2010:105). Whitehead and Lacey-Haun (2008:493) highlight that nurses have reported that CPD is the third most vital component for building nurses' skills.

Thomas et al. (2010:526) argue that CPD in clinical practice helps to develop the nurses' critical thinking skills.

The respondents have been asked to indicate why CPD is important for the nursing profession; 97% (n = 157) of respondents have agreed that CPD is important to the nurses because it improves the nurses knowledge and skills, resulting in enhanced performance and patient care (Table 4.21).

Table 4.21: Respondents' information about the importance of CPD activities (N = 162)

| Importance of CPD | Frequency | Per cent | Cumulative Frequency | Cumulative Per cent |
|-------------------|-----------|----------|----------------------|---------------------|
| Missing | 2 | 1.23 | 2 | 1.23 |
| No | 3 | 1.85 | 5 | 3.09 |
| Yes | 157 | 96.91 | 162 | 100 |

4.5.4 Teaching and learning environment

One of the major factors affecting teaching and learning is the environment in which CPD takes place. It implies that the environment should be continually monitored to ensure that it provides appropriate support and experience for learners and responds to the changes that take place (Hand 2006:61).

Skees (2010:104) argues that a work environment consists of internal and external forces that affect how nurses perform. The author further highlights that practices within the environment can be propelled or constrained by the organisation. Skees (2010:104) indicates that in evaluating the status of the work environment, nurses should ask the following questions:

- Does the employer support professional development?
- Is there an expectation for nurses to use research-based evidence for decision making in their practice?
- Are CPD activities offered in the clinical setting, and if so, are nurses relieved of their duties to attend them?
- Does the hospital view CPD as a critical element for excellence?

If the answer is no, then the nurses should address the work culture issues with management in an effort to share that a healthy work environment also include supporting CPD.

Price (2004:5) argues that the clinical nursing staff is responsible for creating an

environment that is conducive to learning.

According to Goppe (2004:36), a clinical learning environment should have the infrastructure for creating and maintaining a clinical learning environment.

Figure 4.16 shows the results of the respondents' perceptions about the clinical environment. In this study, respondents have been asked to evaluate the learning environment where they work. There is a high level of agreement with all five statements (Figure 4.16).

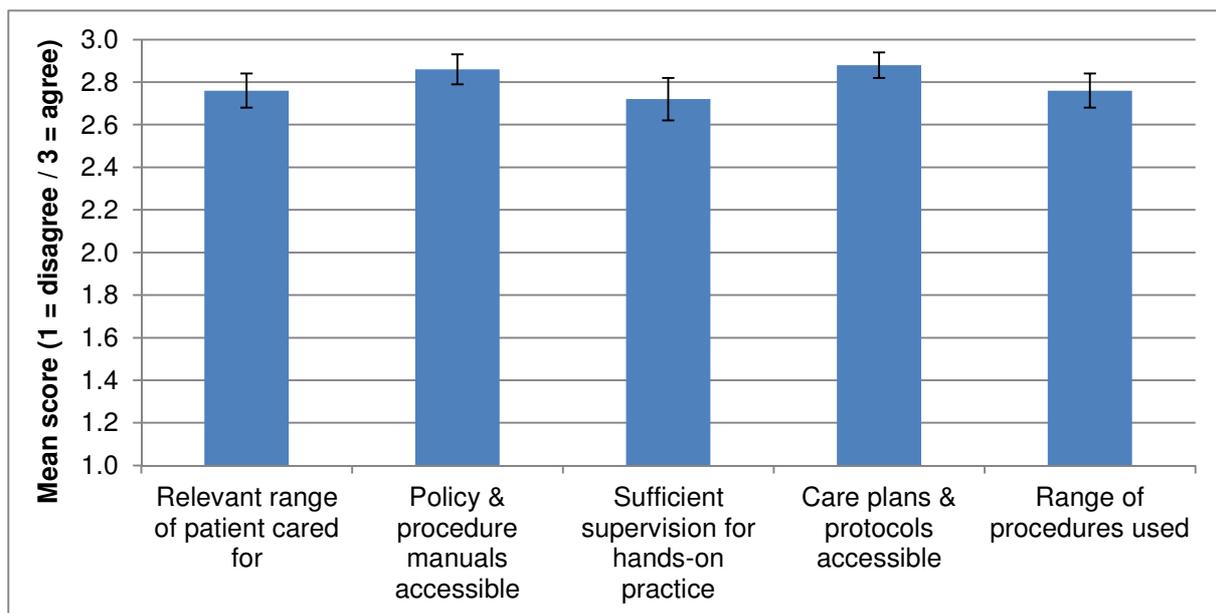


Figure 4.16 Respondents' analysed data of the teaching and learning environment (N = 162)

The construct formed from all five variables had Cronbach's $\alpha = 0.803$. All five variables loaded onto one factor, factor loadings ranged between of 0.66 – 0.85. To remove and group the variables with the slightly lower factor loadings was found not to be useful. Therefore, the researcher decided to keep the construct of five variables of the teaching and learning environment.

There are no significant differences between the mean scores for the teaching and learning construct in any of the categories for any of the stratification variables.

4.5.5 Clinical nursing educators

There are a variety of student, teacher, and environmental factors that can affect the

quality of learning. The qualities of the teacher are, therefore, the most significant factors in achieving lasting learning. A good teacher will be a lifelong learner, challenge the learner, and encourage the learner by giving positive feedback (Hand 2006:61). Figure 4.17 presents the data analysis of the qualities of a good teacher.

There is a high level of agreement with all statements except those statements about the quality of audio-visual material and handouts.

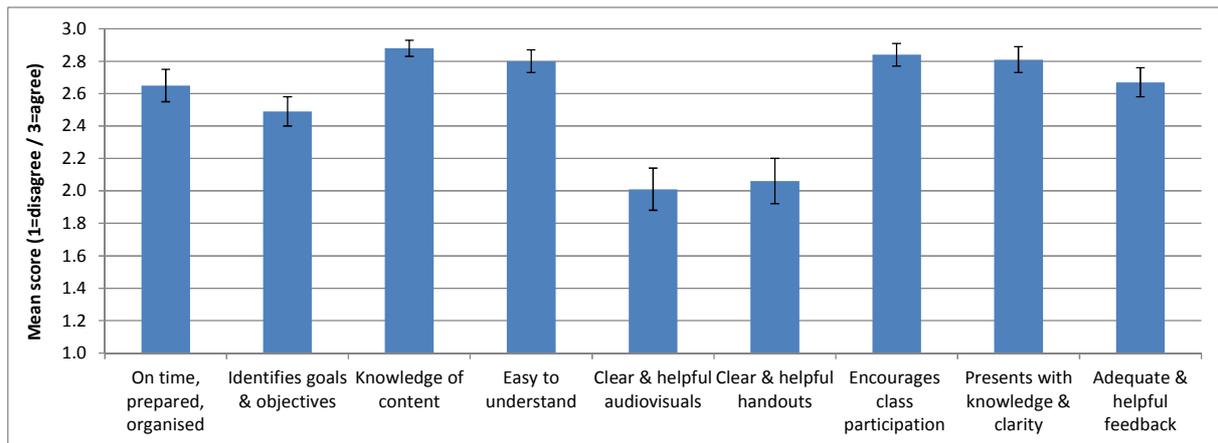


Figure 4.17: Respondents' results about the clinical educator (N = 162)

The following constructs have been considered:

- Teaching expertise (Items 3,4,7,8,9): Cronbach's $\alpha = 0.806$; all five variables have been loaded onto one factor; factor loadings is in the range 0.66 – 0.84.
- Teaching aids (Items 5,6): Cronbach's $\alpha = 0.796$; both variables have been loaded onto one factor; factor loadings is 0.91.

The construct "teaching expertise" (Items 3,4,7,8,9): There are no significant differences between the mean scores for this construct in any of the categories for any of the stratification variables.

The construct "teaching aids" (Items 5, 6): The effect of status is significant ($p = 0.0060$); registered nurses are less in agreement (Figure 4.18) .

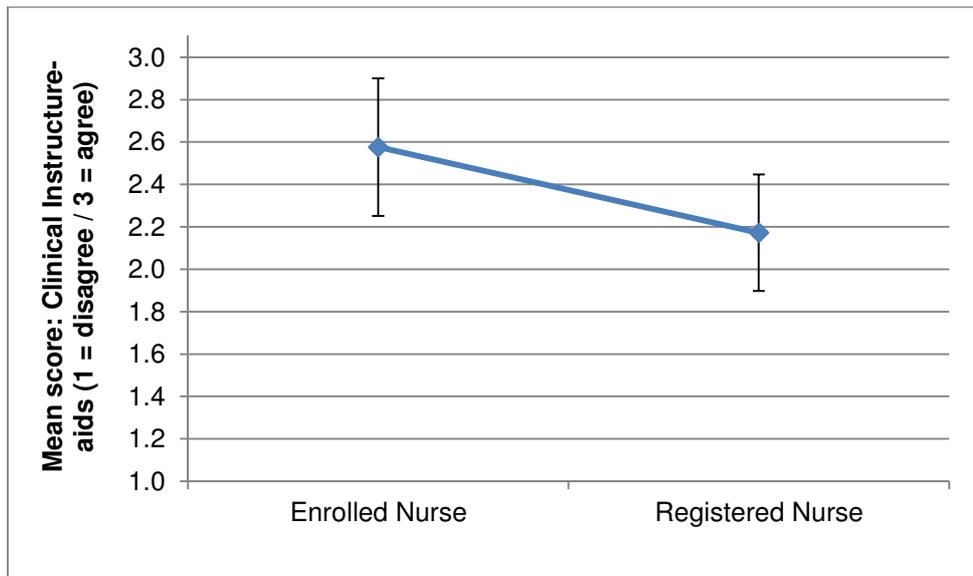


Figure 4.18: Respondents' differing opinion about teaching aids (N = 162)

“The clinical instructor is on time, prepared and organised” and “The clinical educator identifies goals and objectives”: There are no significant differences between the mean scores for these items in any of the categories for any of the stratification variables.

4.6 SECTION D: OUTPUT FACTORS

This section focuses on the output factors. It discusses the product of the systems throughput and how the throughput is transformed into output; such as knowledge, attitudes, skills, improvement in quality patient care, and research. For example, nurses (inputs) are transformed into knowledgeable skilled professionals who in turn use their knowledge and skills to challenge the practice and to improve the quality of patient care.

4.6.1 Cognitive skills

Cognition refers to the process of gaining knowledge through experience and senses (Oxford Dictionary & Thesaurus 2009:166).The respondents have been asked to indicate whether CPD improves their knowledge and skills, quality of care, and gives them confidence to challenge practice. There is a high level of agreement with all statements (Table 4.22 and Figure 4.19). It is consistent with Halfer (2009:135) who argues that helping nurses to build their clinical skills and to grow professionally enhances the quality of patient care. This point of view is also supported by Skees

(2010:105) who indicates that CPD provides safer care and positive patient outcomes. The author further argues that CPD increases the nurses knowledge, contributes to professional growth, and promotes critical thinking.

According to Fahnestock (2012:41) one of the purposes of attending CPD is to gain knowledge. This is supported by Yfantis et al. (2010:196) who argued that CPD keeps nurses up to date with knowledge and skills.

Yfantis et al. (2010:199) argue that in their study about CPD, professional knowledge is reported as the prime motivater for seeking CPD. The authors further indicate that other motivators which feature in the top four most important motivating factors include updating existing qualifications, increasing the status of the profession in general, and professional competence.

Table 4.22: Respondents’ data analysis about cognitive skills (N = 162)

| Variable | N | Mean | Lower 95% | Upper 95% | Standard Deviation |
|---|-----|------|----------------|----------------|-----------------------|
| | | | CL for Mean | CL for Mean | |
| Improves knowledge and skills | 161 | 2.94 | 2.89 | 2.99 | 0.33 |
| Improves quality of patient care | 159 | 2.95 | 2.9 | 3 | 0.29 |
| Confidence to challenge and change practice | 155 | 2.87 | 2.8 | 2.94 | 0.42 |

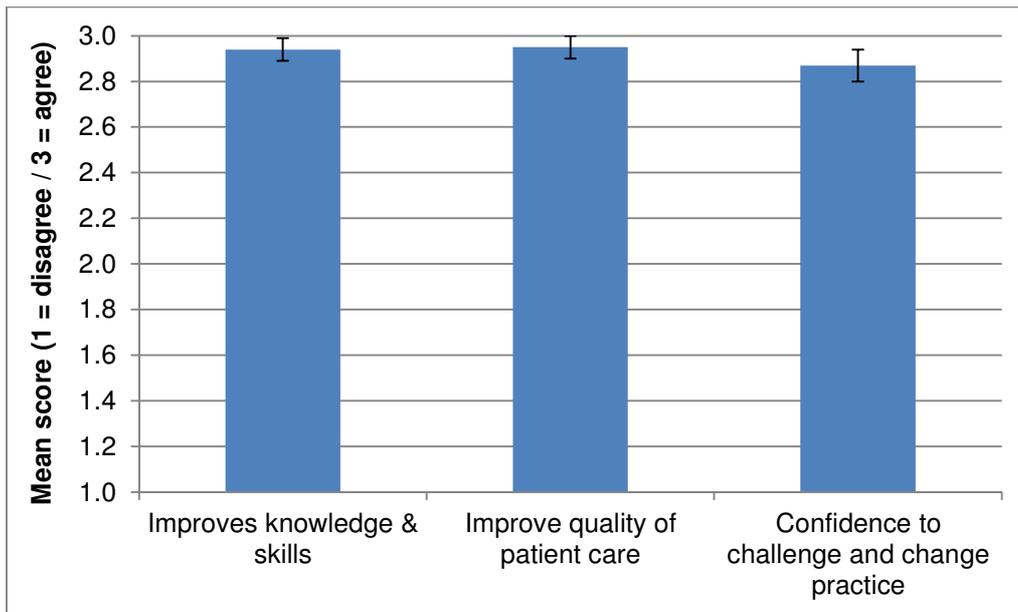


Figure 4.19: Respondents' cognitive skills mean score (N = 162)

The only significant effect in terms of the stratification variables on any of these items is the effect of status of Item 3 (confidence to challenge and change practice) ($p = 0.0095$): registered nurses are more in agreement with this statement than enrolled nurses (Figure 4.20).

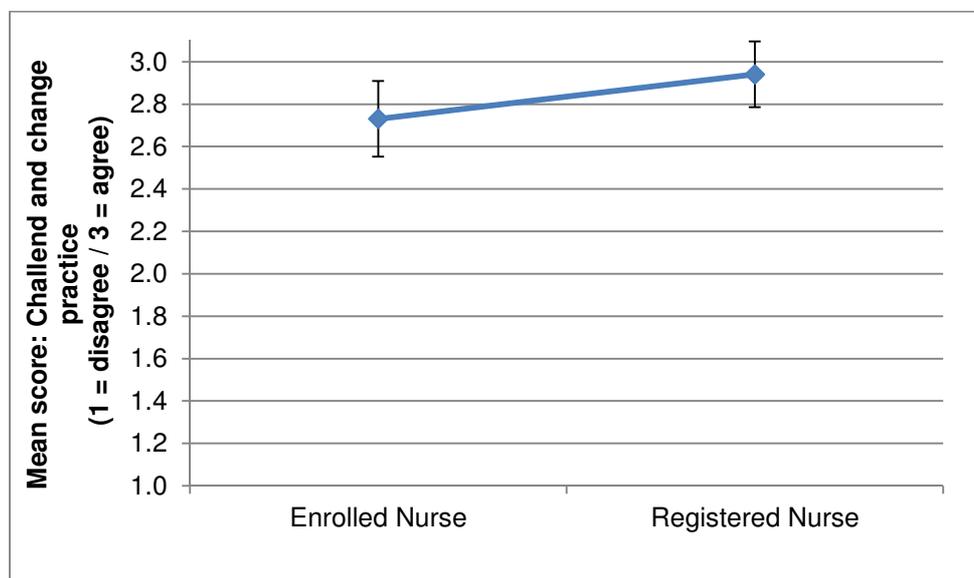


Figure 4.20: Respondents' opinions about cognitive skills (N = 162)

4.6.2 Professional development

In relation to professional development, 95% ($n = 154$) have reported a high level of

agreement with both statements (Figure 4.21). Nalle et al. (2010:111) indicate in their study that 79% and 59% respectively recognise that CPD contributes to personal and professional growth.

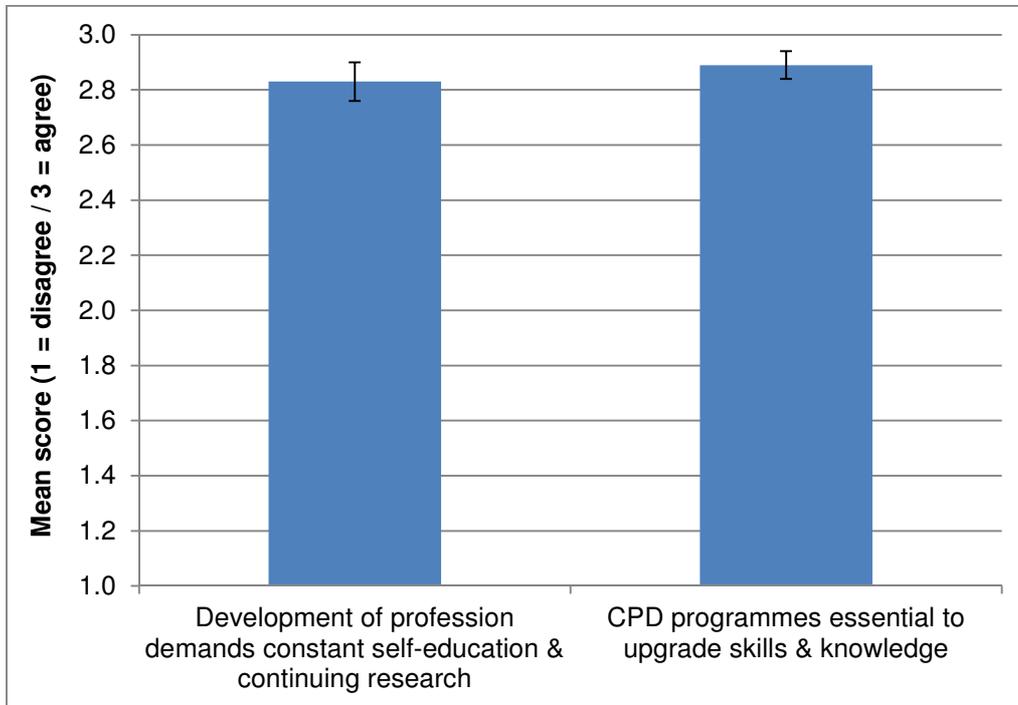


Figure 4.21: Respondents' mean score in relation to professional development (N = 162)

No suitable construct can be developed from these responses and they continue to be treated separately. The effect of status is significant for Item 1 (development of professional demands, constant self-education and continuing research) ($p = 0.021$): registered nurses are more in agreement with this statement than enrolled nurses (Figure 4.22).

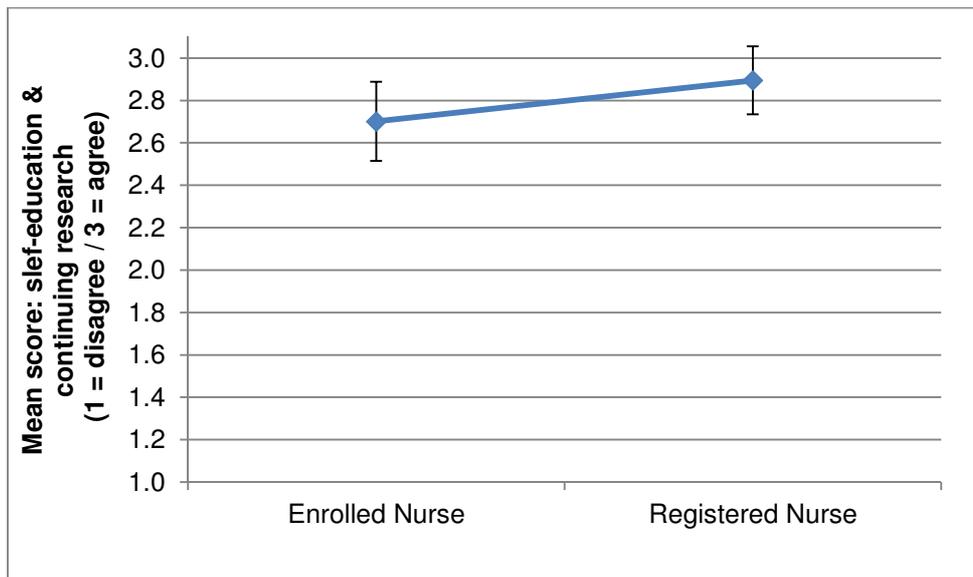


Figure 4.22: Respondents' opinions about professional development (N = 162)

4.6.3 Psychomotor skills

The psychomotor skills are concerned with the ability to manipulate objects (Bronk 2009:30). Respondents have been asked to indicate whether CPD contributes to the development of their psychomotor skills. There is a high level of agreement with all the statements. Figure 4.23 demonstrates the respondents' reactions.

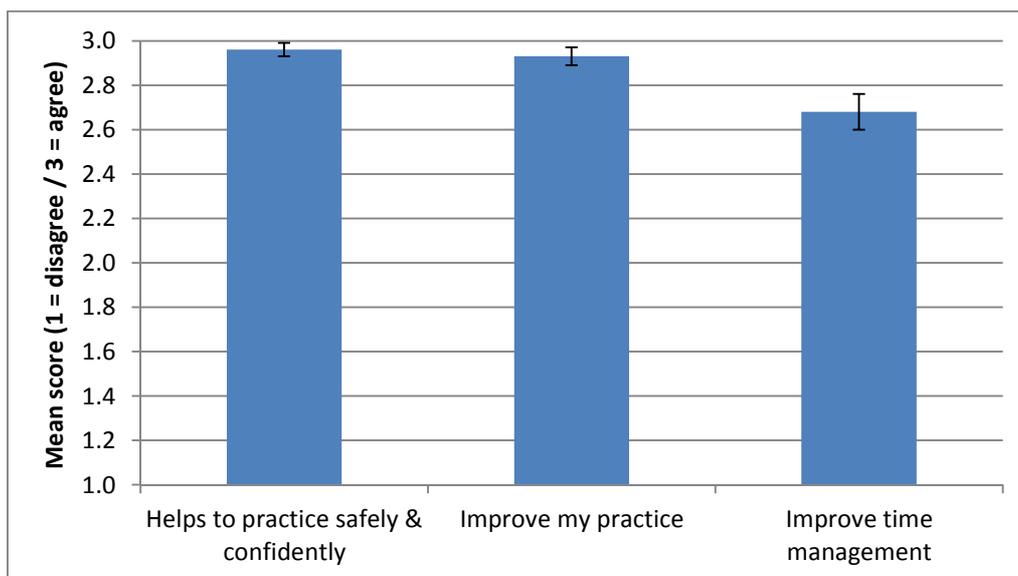


Figure 4.23: Respondents' mean score with regard to psychomotor skills (N = 162)

No suitable construct can be developed from these responses and they continue to be treated separately. The effect of status is significant for Item 2 (the skills have improved my practice) ($p = 0.044$): registered nurses are more in agreement with this statement than enrolled nurses (Figure 4.24).

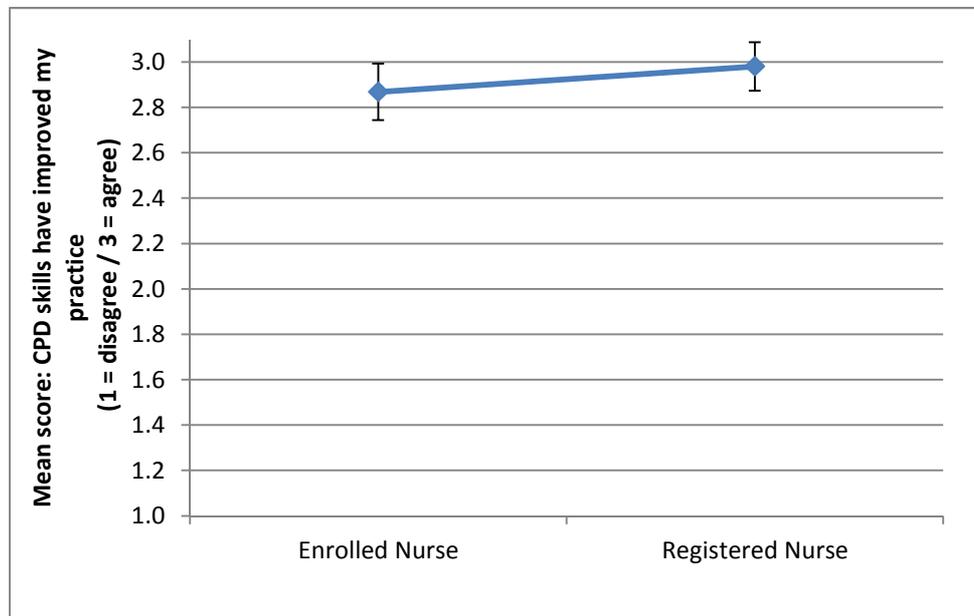


Figure 4.24: Respondents' score on effect of CPD on nursing practice (N = 162)

4.6.4 Affective skills

According to Bronk (2009:30), affective skills are concerned with human attitudes and behaviour. The author further indicates that there are five levels that define the way in which human beings process emotions, feelings, values, motivations, and attitudes.

Figure 4.25 presents information about CPD participation and its relation to the affective skills. There is a high level of agreement with all statements.

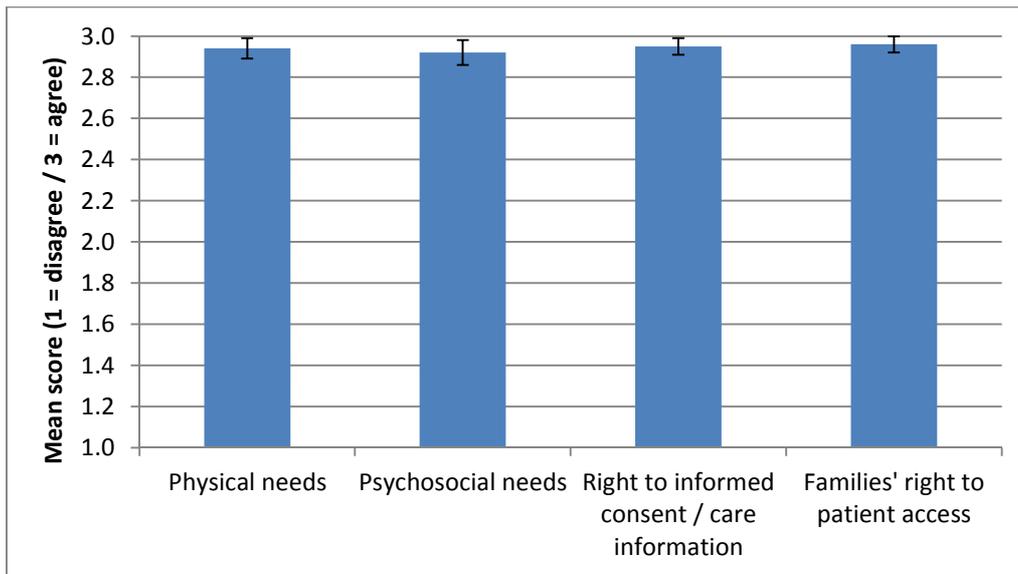


Figure 4.25: Respondents' score in relation to affective skills (N = 162)

Cronbach's $\alpha = 0.807$; all four variables have been loaded onto one factor; factor loadings in the range 0.70 – 0.91. There are no significant differences between the mean scores of this construct in any of the categories for any of the stratification variables.

4.6.5 Communication skills

Figure 4.26 indicates that the majority of the respondents agree that CPD improves communication skills. Gunn and Goding (2009:209) assert that CPD improves confidence, as well as competence, enabling individuals to form effective therapeutic relationships with patients and other members of the team. This study shows high levels of agreement with all statements.

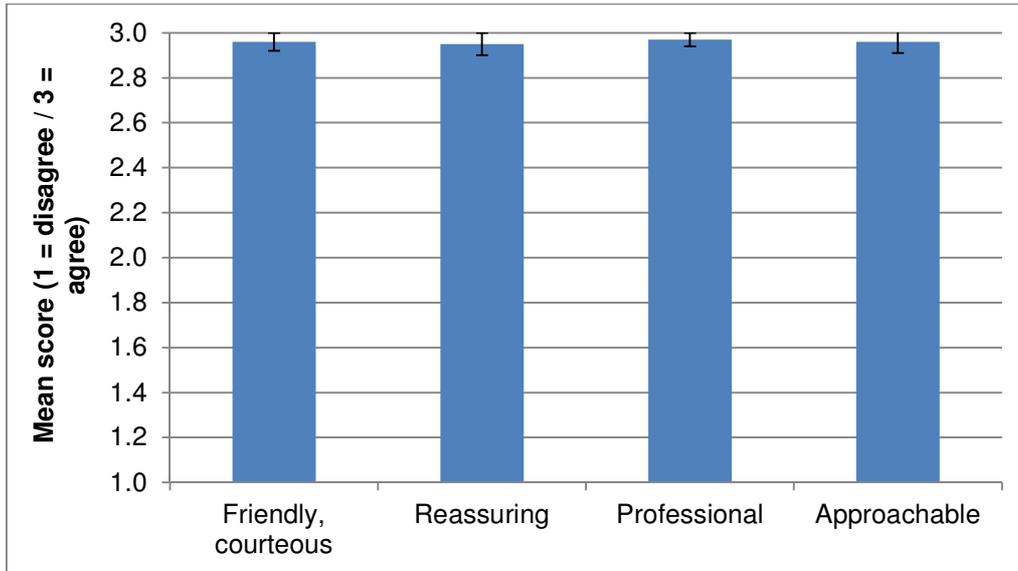


Figure 4.26: Communication skills (N = 162)

Cronbach's $\alpha = 0.846$; all four variables have been loaded onto one factor; factor loadings are in the range 0.78 – 0.89. The effects of the stratification variables are not significant.

4.7 CONCLUSION

This chapter presents and discusses the data analysis and the interpretation thereof. The data have been analysed by using the SAS software program, version 9.3. A reliability analysis has been performed on Likert scales used in the questionnaire and the reliability of each construct has been assessed by means of Cronbach's α . Chi-square tests have also been used to determine whether there is any relationship between the variables. Chapter 5 discusses the findings, limitations, and recommendations of this research project.

CHAPTER 5

FINDINGS, LIMITATIONS AND RECOMMENDATIONS

5.1 INTRODUCTION

This chapter addresses the findings, limitations of the study, recommendations for CPD, and future research. The aim of the study is to explore the perceptions of the nurses with regard to continuing professional development and its contribution to quality patient care.

The objectives of the study are to:

- Explore the nurses' perceptions and views about CPD and its relationship to quality care;
- Assess the educational needs of the nurses at a hospital in the Gauteng Province of South Africa;
- Discuss the perceived barriers, motivating factors, and measures to enhance CPD acceptance; and
- Explore the nurses' views about the implementation of mandatory CPD courses.

5.2 RESPONDENTS CHARACTERISTICS

A total of 200 nurses were sampled for the study. A total response rate was $162 \div 200 = 81\%$. The majority of the respondents were 30 – 49 years old, 94% (n = 152) of the respondents were women, 6% (n = 10) men, 69 % (n = 111) were registered nurses, and the remaining 31% (n = 51) were enrolled nurses. As far as educational qualification was concerned, 60 % (n = 98) of the respondents held a diploma in general nursing as their basic qualification, 31 % (n = 51) were enrolled nurses, and 65% (n = 106) indicated medical and surgical nursing as their speciality. Years of nursing experience varied from two to more than twenty years.

5.3 SUMMARY OF THE FINDINGS

5.3.1 Health care professionals need CPD for up-to-date professional development, better career prospects, and compliance with requirements of professional organisations

The Likert scale responses (1 = disagree / 2 = unsure / 3 = agree) were provided.

Findings indicate that the majority of health care professionals 95 % (n = 161) have indicated that there is a need for CPD. The mean score for this question is 2.9, with the value of 0.06 representing 95%.

Approximately 97 % (n = 157) of the respondents have revealed that CPD is necessary and important for the nursing profession. The majority 95% (n = 155) are participating in CPD to enhance the quality of patient care, and to keep up-to-date with knowledge and skills; of the respondents 96% (n = 156) have indicated that they are participating in CPD to maintain professional competence (mean score of 2.92); and 98% (n = 159) have indicated the improvement of professional qualifications (mean score 2.78).

5.3.2 Willingness to attend CPD activities

Almost 96% (n = 155) respondents have indicated that they are attending continuing professional development willingly in order to maintain professional competence. Of the respondents, 94 % (n = 153) have revealed that they are attending CPD activities when allocated to do so.

5.3.3 CPD Format

The respondents have been asked to select the most pertinent format of continuing professional development that is available to them. They could select from the following formats: in-service education, seminars, study days, and formal academic courses. Of the respondents, 98 % (n = 159) have indicated that in-service education is available to them, 16 % (n = 9) have reported that seminars or study days are available to them and slightly more than 30 % (n = 52) have indicated that formal academic courses are available to them. The findings indicate that younger nurses (20 – 29 years old) have less access to seminars with 0%, while enrolled nurses had

less access to seminars and formal academic courses with 2% (n = 3) exposure, as opposed to 12% (n = 20) of registered nurses.

The study has also revealed that those nurses with more years of experience (11 – 20+ years) have better access to seminars with a score ranging from 13% - 35 % (n = 22 – 58), and formal academic courses with a score ranging from 35% - 50 % (n = 58 – 82).

5.3.4 Learning needs / personal needs and participation in CPD

Approximately 83 % (n = 135) of the respondents have indicated that the institutions' CPD activities meet their learning needs, while 33 % (n = 55) have reported that CPD meet their personal (for example promotion / remuneration progression) needs.

5.3.5 Motivational reasons to participate in CPD

This study reveals that the respondents have been motivated to participate in continuing professional development by intrinsic factors, such as the desire to improve clinical practice that will be improving patient care 98.5% (n = 160), followed by the desire to gain more knowledge and skills 97.5% (n = 158), and increased self-esteem and job-satisfaction 93.5% (n = 152). The findings reveal that the majority of the respondents have been internally motivated to participate in CPD.

Factors; such as career development 90% (n = 146), and better employment opportunities 88 % (n = 144) have also been reported by respondents. The findings also indicate that male respondents place greater importance on career development and employment opportunities. There is also an increasing trend that correlates with an increase years of experience.

5.3.6 CPD constraints

The findings show the following distribution of perceived CPD constraints: 94% (n = 152) of the respondents have indicated staff shortage, 61% (n = 102) have reported heavy workload, 25% (n = 43) have selected a lack of time, 10% (n = 17) have indicated personal commitments, 7% (n = 12) have reported a lack of funding and CPD activities already fully booked, and 7% (n = 12) have indicated poor consideration of learning styles. The findings of this study confirm previous research

findings; for example shortage of staff, and heavy work load (Chapter 2 and Sections 2.4.2.1 and 4.5.7)

This study also finds that of the older nurses (50 – 59 years old), 25% (n = 41%) have mentioned already fully booked CPD activities as a constraint, while more female registered nurses, namely 97% (n = 157) have mentioned that staff shortages are hampering attendance at CPD activities.

The literature review reveals that cost of attendance and work constraints are the two most common constraints. Other deterrents include family and time constraints, lack of relevant programmes, lack of benefits, and travelling requirements. Most of the barriers that are cited are either situational or institutional. This occurrence is discussed in detail in Chapters 2 and 4 (Sections 2.4.2.1 and 4.5.7).

5.3.7 Funding for continuing professional development

The majority of the respondents, namely 40% (n = 67) have not completed the first and third questions (Chapter 4, Section 4.5.8). This reluctance may suggest that the nurses have feared that if they answer “true” to these questions, that the institution would expect them to pay for CPD or would demand that they participate in CPD in their own time (which presumably is not current practice). Despite this occurrence, more than half of the respondents, namely 93% (n = 57) have indicated that they are prepared to fund CPD courses either financially and / or by participating in CPD during their off duty time. As might be expected, 86% (n = 140) of the respondents have reported that they will participate in CPD activities if it is funded by the hospital.

The findings also indicate that female nurses 59% (n = 96) are more willing to fund their own CPD activities than male nurses 30% (n = 52). Also, the registered nurses 69% (n = 110) are more willing to fund their CPD than enrolled nurses 31% (n = 51). In the same manner, of those nurses with more years of experience (between 11 and 14 years), 83% (n = 134) are more willing to fund their own CPD activities.

5.3.8 Compensation for CPD

The study records that 81% (n = 132) of the respondents have answered “no”. The study finds no significant association between this question and any of the stratification variables.

5.3.9 Participation in CPD activities during the past two years

One of the inclusion criteria for participating in this study have been participation in CPD during the past two years. Approximately 99% (n = 161) of the respondents have indicated that they have been attending CPD activities during the past two years.

5.3.10 Number of courses attended

Respondents have been asked to indicate the number of CPD courses they have attended during the past two years. Of the respondents, 46% (n = 75) have attended between one and five courses, while 48% (n = 77) have attended between six and ten courses.

5.3.11 Mandatory or optional CPD

The majority of the respondents 81% (n = 132) have indicated that CPD should be mandatory, while 12% (n = 19) have reported that CPD should be optional. The study finds that fewer older nurses (in the age group 50 – 59 years) than the younger ones (the age group of 30 – 39 years) agree that CPD should be mandatory. More registered nurses (mean score > 2.6) agree that CPD should be mandatory than the enrolled nurses (mean score > 2.4).

The literature review indicates that researchers differ about whether CPD should be mandatory or optional. People who are required to learn are more likely to have up-to-date information than people who are not required to learn, people who are motivated to learn are more likely to be better informed than people who are merely serving time in class, and voluntary learning is most effective but compulsory learning is better than no learning (Chapter 4, Section 4.5.11).

5.3.12 Responsibility for nurses' CPD activities

Approximately 85% (n = 135) of the respondents have indicated that CPD activities are the responsibility of the hospital, 74% (n = 120) have indicated it is the nurses' responsibility, 60% (n = 98) have reported that it is the responsibility of government, and 57% (n = 93) have indicated that it is the responsibility of the South African Nursing Council. The study also finds that the majority of nurses with more experience of between eleven and thirteen years 91% (n = 141) have expressed the opinion that nurses should be responsible for their own CPD activities.

5.3.13 CPD courses available to respondents

Of the respondents, 99% (n = 161) indicate that they have attended infection control and prevention CPD activities, 93% (n = 151) indicate that they have attended basic life support activities and training, 90% (n = 146) report hospital policies and standards have been addressed during their CPD activities, 84% (n = 137) state conflict management and equipment training have been part of their CPD training, 78% (n = 127) indicate fire safety and awareness CPD activities, 75% (n = 122) have selected bedside teaching and learning CPD activities, 71% (n = 116) have identified managing difficult patients, 49% (n = 80) have stated advanced life support, 38% (n = 62) have indicated manual handling of patients, 35% (n = 58) have selected positive customer care, 32% (n = 53) have reported conference attendance and mentoring a student or a new staff member, and 4% (n = 8) have selected the other option.

5.3.14 Time provided by the hospital to participate in CPD

The majority of the respondents 91% (n = 148) have indicated that time is provided by the hospital for participating in CPD.

To encourage continuing professional development, employer support is important. In this study, the researcher has found that the institution under study allocates time for CPD regularly. The hospital CPD department indicates that it is a policy at the institution.

5.3.15 Teaching and learning environment is conducive to learning

The majority of the respondents (n = 161) (mean score 2.62) have agreed with the statement that the teaching and learning environment is conducive for learning. Of the respondents, (n = 159) (mean score 2.88) have indicated that the nursing care plans and protocols are accessible to the nurses, (n = 157) (mean score 2.72) have revealed that sufficient supervision is available for students and newly qualified employees, (n = 156) (mean score 2.86) have reported that policies and procedure manuals are accessible to the employees, (n = 155) (mean score 2.76) have indicated that they are exposed to a relevant range of procedures, and (n = 153) (mean score 2.76) have reported that the clinical setting has a relevant range of patients.

5.3.16 Satisfaction with clinical facilitators

Respondents have indicated their satisfaction with clinical facilitators in the following manner:

- Satisfaction with clinical facilitator with the exception of teaching aids and hand-outs (n = 155), mean score 2.65;
- The clinical facilitator encourages class participation (n = 156), mean score 2.84;
- The clinical facilitator arrives punctually for presentations (n = 155), mean score 2.65;
- The clinical facilitator demonstrates knowledge of the teaching material and the ability to clearly provide adequate and helpful feedback (n = 154), mean score 2.03; and
- The clinical facilitators uses clear and helpful audio-visual aids and hand-outs (n = 153), mean score 2.01.

5.3.17 Cognitive skills

The majority of the respondents, namely 95 % (n = 155) acknowledged that CPD improves knowledge and clinical skills, and that the acquired knowledge provides confidence to challenge and change practice. In this regard, more of the registered nurses (mean score 2.94) agree with this statement than the enrolled nurses (mean

score 2.73). Of the respondents, 95% (n = 155) have revealed that they use the knowledge gained during the CPD activities to improve the quality of patient care. It is clear that the nurses at the chosen institution perceive that CPD contributes to improved quality of patient care. The literature review has revealed that CPD is necessary for effective, safe, and quality nursing care (Chapter 2, Section 2.3).

5.3.18 Professional development

Approximately 95% (n = 155) of the respondents have agreed with the statement that development of a profession demands constant self-education, as well as continuing research for the acquisition of new nursing knowledge. More registered nurses (mean score 2.90) have agreed with this statement than the enrolled nurses (mean score 2.70). There are various reasons for the difference between the registered nurses and enrolled nurses. One possible reason can be that enrolled nurses do not benefit from the CPD programme. They do not get opportunities to attend seminars and conferences. Therefore, it is important for the employer and managers to ensure that all nursing categories are involved in CPD activities. No one should feel left behind. Enrolled nurses should be encouraged and considered for bridging courses that will lead to the diploma in general nursing. The literature review indicates that comprehensive assessment of learner needs is a key factor in CPD effectiveness and improves professional knowledge and performance

5.3.19 Psychomotor skills

In the question about the psychomotor skills, three possible answers have been provided to choose from. Of the respondents, 98% (n = 160) have reported that CPD activities have improved their skills, 97% (n = 158) have indicated that it has improved their time management in the clinical setting and 96% (n = 157) have indicated that CPD has helped them with practising safely and confidently. The literature review has revealed that nurses report improved knowledge and skills as the primary benefit of participating in continuing professional development (Chapter 4, Section 4.7.3).

5.3.20 Affective and communication skills

On the question whether CPD improves affective and communication skills, four possible answers have been provided for each item in relation to affective and communication skills. Of the respondents, 95 % (n = 155) have indicated a high level of agreement with all statements, namely that CPD is improving their ability to communicate with patients and to attend to the patients physical needs; such as pain, safety, and understanding the patient's rights. The literature review has indicated that CPD improves the nurses' confidence, resulting in improved nurse-patient relationship, and it improves the relationship between the nurse and members of the multi-disciplinary team (Chapter 4, Section 4.7.5).

5.4 LIMITATIONS

Several limitations have been identified in the study.

The study has been conducted at one of the urban hospitals in the Gauteng Province, Republic of South Africa. The institution has a well-developed continuing professional development department. Clinical facilitators at the institution conduct weekly CPD activities for both registered and enrolled nurses. The data analysis of this study reflect the opinion of nurses from one government funded hospital only and may not be generalised to other settings; since policies, development, accessibility, and availability of CPD may differ.

Also, the sample has not been chosen randomly. The researcher has used non-probability purposive sampling because it has been convenient for the researcher and the institution. To reduce the sampling bias, the researcher has increased the representativeness of the convenience sample. A total of 162 completed questionnaires have been obtained, yielding a response rate of $162 \div 200 = 0.81$ (81%) which is very good.

The questionnaire was entirely developed by the researcher. Although it was reviewed by other experts, the vagueness of some of the questions was not identified. These questions might not have been clear to the respondents. Data collection was limited to a closed-ended questionnaire. For example, questions which allowed for multiple responses (2.4, 2.8, 2.15, and 3.1) were not indicated as

such. While it was obvious to most respondents that multiple answers could be selected, some respondents might have limited their answers to one selection which could have biased the results.

5.5 RECOMMENDATIONS

The researcher regards CPD as an essential process for nurses if they are to maintain and develop their professional competence and awareness. Nurses need to keep abreast of the technological and societal changes that affect health care. It can be achieved by the provision of adequate, suitable, flexible, and quality CPD that takes into account the needs of the individual nurse.

The researcher is of the opinion that to achieve quality patient care, health institutions and other stakeholders need to invest intensively in the CPD of their employees by doing the following:

- Developing CPD programmes that are based on the assessed learning needs of the employees;
- The CPD programme needs to be based on the different educational needs of the employees according to educational levels (enrolled nurses and registered nurses);
- The hospital under study needs to fully fund CPD programmes. Nurses should be relieved from work to attend CPD activities. Nurses who participate in courses that last between six months and a year should receive recognition, for example financial incentives and consideration for promotion; and
- The hospital under study should adopt a system of allocating continuing educational points to ensure participation in CPD.

5.5.1 Continuing professional development

- The goal of CPD is to enhance the nurses' competence with the view of improving the public health. Continuing education helps to eliminate the gaps between formal preparation and practice, enhances clinical skills that are necessary for continued competence. Accessible and quality continuing professional education has been associated with quality patient care. Therefore, the researcher recommends the encouragement of CPD attendance

in the lower categories of nursing staff, including male nurses.

- Based on the previous point of view, all the stakeholders; such as the hospitals, the department of education, the SANC, and the nurses need to collaborate in order to devise systems that will ensure the participation of every practising nurse in CPD activities, to ensure continued competence and safe practice. CPD points should be introduced as evidence of continuing education and competence.
- Although mandatory CPD may be necessary in order to maintain continued competence among nurses, making CPD mandatory negates the principles of adult learning. However, the researcher believes that certain CPD courses should be mandatory for all practising nurses; for example basic life support, infection control and prevention, and preceptorship or mentorship.

5.5.2 Further research topics

- Perceptions of rural nurses about accessibility and availability of CPD in the Republic of South Africa;
- Knowledge of Gauteng nurses about evidence base practice; and
- Patient satisfaction about the care they are receiving at Gauteng hospitals.

5.6 CONCLUSION

This chapter provides the findings of the study, limitations, recommendations, and future research topics. The majority of the respondents have stated that CPD contribute to the quality of patient care. They have also indicated that CPD should be mandatory. The researcher wished that the findings of this study will benefit the institution under study, as well as other health care institutions in establishing effective CPD programmes that will keep in step with the nurses' professional development and competence.

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ANNEXURE B: RESEARCH PERMISSION REQUEST TO THE HOSPITAL

Telephone Number: 0842104342

E-mail address: winnieliphosa@yahoo.com

4th March 2012

To Whom It May Concern

Dear Sir, Madam

I am writing to request permission to conduct my research at your hospital. I am a Master's Degree student at the University of South Africa. My research topic is **“The perceptions of professional nurses with regard to continuing professional development and its contribution to quality patient care”**.

The study will employ a quantitative research design. For data gathering purposes, this research will employ a questionnaire methodology. The target population for this study is the professional nurses and enrolled nurses.

This letter also seeks to inform you that all information gathered from the professional nurses will be used for research purposes and that the anonymity of every member of staff is guaranteed.

In conclusion, I have enclosed a copy of an informed consent form for the research, as well as the ethics committee's clearance certificate. Should you have any questions or concerns about this letter or my research, please contact me at my email address. You may also want to contact Professor S. P. Hattingh: hattinghsu@NGHA.MED.SA .

Yours Sincerely

Winnie Liphosa (Master's degree candidate)

ANNEXURE C: GAUTENG DEPARTMENT OF HEALTH PERMISSION LETTER



Helen Joseph Hospital
Enquiries: Ms. Jordan LV
Assistant Manager- Nursing
Tel: +27 (0)11 489 1011
Fax: +27 (0)11 489 0883
Date: 10 February 2013

Dear Ms. W. Liphosa

Permission is hereby granted to do your research at Helen Joseph Hospital.
Please contact either Ms. T. Baloyi or Mrs. A. Malinga who will assist you. They can be
Contacted on 011 489 1011 and ask the switchboard operator to contact them.

Your Sincerely

Ms. L. V Jordan
Assistant Manger - Nursing

| |
|---|
| GAUTENG PROVINCIAL GOVERNMENT |
| HELEN JOSEPH HOSPITAL PRIVATE BAG X47 |
| 2013 -02- 12 |
| AUCKLAND PARK 2006 JHB HELEN JOSEPH HOSPITAL |
| GAUTENG PROVINCIAL GOVERNMENT |

ANNEXURE D: A LETTER TO THE RESPONDENTS

Winnifred M. Liphosa

449-592-6

Department of Health Studies

University of South Africa

Dear Respondent

I am a Master's student at the University of South Africa (UNISA). I wish to invite you to participate in my research. My topic is "**Perceptions of the professional nurses with regards to continuing professional development and its contribution to quality patient care**".

The significance of the study is to highlight the value of continuing professional development and its role in clinical governance.

This letter is aimed at giving you as much information as possible about your participation in this project.

Please be aware of the following:

- Ensure you fully understand the contents of this information letter.
- If you have any questions or concerns, please do not hesitate to contact the researcher.
- Please do not take part in the research if you have doubt, and feel free to contact the researcher with any doubts that you may have.
- Participation in the study is voluntary, and you could also withdraw from participating without giving any reason.
- You do not have to submit your personal particulars; anonymity of the participants is maintained at all times.
- Please be aware that the study could be published in nursing journals, and be assured that no names will be mentioned, not even the name of the hospital.

The Research Committee of the University of South Africa, Faculty of Health Studies has granted written approval for this study.

Your sincere participation will be highly appreciated.

Thank you

Winnifred M. Liphosa

Email address: winnieliphosa@yahoo.com

Telephone number: +27842104342

ANNEXURE E: CONSENT TO PARTICIPATE IN THIS RESEARCH STUDY

CONSENT TO PARTICIPATE IN THIS RESEARCH STUDY

If I agree to participate in this research, I will be asked to complete a questionnaire which will be made available for research purposes. I might be asked questions of a personal nature and I might feel uncomfortable talking about some issues. I am free to decline to answer any question that I do not wish to answer, or I may stop my participation in the research without any penalty.

The report from this study will be kept as confidential as possible. No individual identities will be used in any publication resulting from this study. Also, there will be no direct benefit to me from participating in this research. My participation is voluntary.

Researcher's name: _____

Signature: _____

Date: _____

Research Participant: _____

Signature: _____

ANNEXURE F: QUESTIONNAIRE

Winnie Liphosa - student. 449 592 6

This information will be used to understand the perceptions of the professional nurses with regard to continuing professional development (CPD) and its contribution to quality patient care. All data will be anonymous. After the questionnaire has been completed, please place it in the sealed envelope and drop it in the box that is located in the nurses' station.

1 SECTION A: BIOGRAPHIC INFORMATION

1.1 Age

| | Answer |
|---------------------|---------------|
| 1.1.1 20 – 29years | 1 |
| 1.1.2 30 – 39 years | 2 |
| 1.1.3 40 – 49 years | 3 |
| 1.1.4 50 – 59 years | 4 |
| 1.1.5 60 and above | 5 |

1.2 Gender

| | Male | Female |
|--------------|-------------|---------------|
| 1.2.1 Gender | 1 | 2 |

1.3 Indicate your status

| | Answer |
|------------------------|--------|
| 1.3.1 Enrolled nurse | 1 |
| 1.3.2 Registered nurse | 2 |

1.4 Indicate your basic qualifications

| | Answer |
|--|--------|
| 1.4.1 Enrolled Nurse | 1 |
| 1.4.2 Diploma in general nursing | 2 |
| 1.4.3. Post registration qualification | 3 |

1.5 Indicate your specialty or department

| | Answer |
|--|--------|
| 1.5.1 Medical/ Surgical | 1 |
| 1.5.2 Midwife | 2 |
| 1.5.3 Paediatric | 3 |
| 1.5.4 Neonatology | 4 |
| 1.5.5 Oncology | 5 |
| 1.5.6 Intensive care | 6 |
| 1.5.7 Other, please indicate: _____ _____ _____ | 7 |

| | |
|--|--|
| | |
|--|--|

1.6 Years of nursing experience

| | Answer |
|--|--------|
| > 18 months | 1 |
| 2 – 4 years | 2 |
| 5 – 7 years | 3 |
| 8 – 10 years | 4 |
| 11 – 13 years | 5 |
| 14 – 16 years | 6 |
| 17 – 19 years | 7 |
| 20 – 22 years | 8 |
| More than 23 years, please state the number of years: _____ | 9 |

1.7 Years of employment at this Health Institution

| | Answer |
|------------------|--------|
| Less than 1 year | 1 |
| 1 – 2 years | 2 |
| 3 – 4 years | 3 |
| 5 – 6 years | 4 |
| 7 – 8 years | 5 |
| 9 – 10 years | 6 |

| | |
|--|---|
| More than 10 years, please state the number of years: _____ | 7 |
|--|---|

2. SECTION B – INPUT FACTORS

2.1 Need for Continuing Professional Development (CPD) / staff development

| Category | Disagree | Unsure | Agree |
|--|----------|--------|-------|
| Health care professionals need CPD for professional update, better career prospects, and compliance with professional body requirements. | 1 | 2 | 3 |

2.2 Reasons for CPD / staff development

| Category | Disagree | Unsure | Agree |
|--|----------|--------|-------|
| 2.2.1 To enhance the quality of patient care | 1 | 2 | 3 |
| 2.2.2 To keep up-to-date with knowledge and skills | 1 | 2 | 3 |
| 2.2.3 To improve the nurses qualifications | 1 | 2 | 3 |
| 2.2.4 To maintain professional competence | 1 | 2 | 3 |

2.3 Willingness to attend CPD / staff development activities

| Category | No | Yes |
|--|----|-----|
| 2.3.1 I attend CPD activities willingly in order to maintain professional competence | 1 | 2 |

2.4 Which of the following CPD format is available to you?

| Category | Answer |
|-------------------------------|--------|
| 2.4.1 In-service education | 1 |
| 2.4.2 Seminars | 2 |
| 2.4.3 Study days | 3 |
| 2.4.4 Formal academic courses | 4 |

2.5 Learning needs

| Category | No | Yes |
|---|----|-----|
| 2.5.1 Does the CPD activity in your institution meet your learning needs? | 1 | 2 |

2.6 Personal needs

| Category | No | Yes |
|---|----|-----|
| 2.6.1 Would you agree that CPD meet your personal needs, for example promotion and salary increase? | 1 | 2 |

2.7 Motivational factors: I undertake CPD for the following reasons:

| Category | Disagree | Unsure | Agree |
|---|----------|--------|-------|
| 2.7.1 Career development and promotion | 1 | 2 | 3 |
| 2.7.2 Better employment opportunities | 1 | 2 | 3 |
| 2.7.3 Gaining more knowledge and skills | 1 | 2 | 3 |
| 2.7.4 Improved performance and patient care | 1 | 2 | 3 |

| | | | |
|---|---|---|---|
| 2.7.5 Increase self-esteem and job satisfaction | 1 | 2 | 3 |
|---|---|---|---|

2.8 Which of the following CPD constraints do you experience?

| Category | Answer |
|---|--------|
| 2.8.1 Staff shortage | 1 |
| 2.8.2 Heavy workload | 2 |
| 2.8.3 Personal commitments | 3 |
| 2.8.4 Lack of funding | 4 |
| 2.8.5 Lack of time | 5 |
| 2.8.6 Poor consideration of learning styles | 6 |
| 2.8.7 CPD activity already fully booked | 7 |

2.9 Which of the following is your preferred learning style?

| Category | Answer |
|--|--------|
| 2.9.1 Working in group, feel, watch, and listen with an open mind (diverging) | 1 |
| 2.9.2 Reading, reflecting, and exploring analytical models (assimilating) | 2 |
| 2.9.3 Problem solving and decision making (Converging) | 3 |
| 2.9.4 Action-orientated and prefers to work in teams to complete tasks (accommodators) | 4 |

2.10 CPD funding

| Category | False | True |
|----------|-------|------|
|----------|-------|------|

| | | | |
|--------|---|---|---|
| 2.10.1 | I am prepared to pay for my CPD courses / activities | 1 | 2 |
| 2.10.2 | I will take CPD courses if it is funded by the hospital | 1 | 2 |
| 2.10.3 | I am willing to undertake CPD during my off duties | 1 | 2 |

2.11 If you are attending CPD in your own time, does the employer provide over time payment or time back compensation?

| | No | Yes |
|--------|----|-----|
| 2.11.1 | 1 | 2 |

2.12 Have you attended CPD during the past two years?

| | No | Yes |
|--------|----|-----|
| 2.12.1 | 1 | 2 |

2.13 Indicate the number of learning / educational courses you have attended:

| | Answer |
|---------------------|--------|
| 2.13.1 1 – 5 | 1 |
| 2.13.2 6 – 10 | 2 |
| 2.13.3 11 – 15 | 3 |
| 2.13.4 more than 15 | 4 |

2.14 In your view, would you say that CPD should be compulsory or optional?

| Category | | No | Unsure | Yes |
|----------|------------------------|----|--------|-----|
| 2.14.1 | Mandatory / compulsory | 1 | 2 | 3 |
| 2.14.2 | Optional | 1 | 2 | 3 |

2.15 Who should be responsible for the nurses' CPD activities?

| | | Answer |
|--------|-------------------------------|--------|
| 2.15.1 | Professional nurses | 1 |
| 2.15.2 | Government | 2 |
| 2.15.3 | Hospital | 3 |
| 2.15.4 | South African Nursing Council | 4 |
| 2.15.5 | All the above | 5 |

2.16 Does the hospital provide time during working hours for CPD?

| | No | Yes |
|--------|----|-----|
| 2.16.1 | 1 | 2 |

2.17 If the hospital is providing time for CPD, do you attend?

| | No | Yes |
|--------|----|-----|
| 2.17.1 | 1 | 2 |

3 SECTION C: THROUGHPUT FACTORS

3.1 CPD Curriculum: Which of the following CPD courses are provided by your hospital?

| | | Answer |
|--------|--|--------|
| 3.1.1 | Infection control and prevention | 1 |
| 3.1.2 | Basic life support | 2 |
| 3.1.3 | Advance life support | 3 |
| 3.1.4 | Fire safety awareness | 4 |
| 3.1.5 | Managing a difficult patient | 5 |
| 3.1.6 | Conflict management | 6 |
| 3.1.7 | Equipment training | 7 |
| 3.1.8 | Policies/standards | 8 |
| 3.1.9 | Manual handling of patients | 9 |
| 3.1.10 | Positive customer care | 10 |
| 3.1.11 | Conference attendance | 11 |
| 3.1.12 | Mentoring students / new staff members | 12 |
| 3.1.13 | Bedside teaching and learning lecture demonstrations | 13 |
| 3.1.14 | Other, please specify: _____ _____ _____ | 14 |

3.2 The CPD courses / in- service training are important for my position

| Category | No | Yes |
|----------|----|-----|
| 3.2.1 | 1 | 2 |

3.3 CPD courses are advertised well in advance

| Category | Disagree | Unsure | Agree |
|----------|----------|--------|-------|
| 3.3.1 | 1 | 2 | 3 |

3.4 CPD instructional methods meet my learning style

| Category | Disagree | Unsure | Agree |
|----------|----------|--------|-------|
| 3.4.1 | 1 | 2 | 3 |

3.5 The teaching and learning environment is conducive to learning

| Category | Disagree | Unsure | Agree |
|--|----------|--------|-------|
| 3.5.1 The learning environment has a relevant range of patient cared for | 1 | 2 | 3 |
| 3.5.2 Policies and procedure manuals are accessible to the employees | 1 | 2 | 3 |
| 3.5.3 Sufficient supervision is available for learners to practice hands-on safely | 1 | 2 | 3 |
| 3.5.4 Care plans and protocols are accessible | 1 | 2 | 3 |
| 3.5.5 Relevant range of procedures employed | 1 | 2 | 3 |

3.6 The Clinical Instructor

| Category | Disagree | Unsure | Agree |
|--|----------|--------|-------|
| 3.6.1 Is on time, prepared and organised | 1 | 2 | 3 |
| 3.6.2 Identifies goals and objectives | 1 | 2 | 3 |
| 3.6.3 Demonstrates knowledge of content | 1 | 2 | 3 |
| 3.6.4 Is easy to understand | 1 | 2 | 3 |
| 3.6.5 Uses clear and helpful audio-visuals | 1 | 2 | 3 |
| 3.6.6 Provides clear and helpful hand-outs | 1 | 2 | 3 |
| 3.6.7 Encourage class participation | 1 | 2 | 3 |
| 3.6.8 The clinical instructor presents CPD material with knowledge and clarity | 1 | 2 | 3 |
| 3.6.9 Instructors provides adequate and helpful feedback | 1 | 2 | 3 |

3.7 The class room

| Category | Disagree | Unsure | Agree |
|---|----------|--------|-------|
| 3.7.1 The class room environment is conducive to learning | 1 | 2 | 3 |

4. SECTION D: OUTPUT FACTORS

4.1 Cognitive skills (Knowledge)

| Category | Disagree | Unsure | Agree |
|--|----------|--------|-------|
| 4.1.1 CPD improves my knowledge and skills | 1 | 2 | 3 |

| | | | |
|---|---|---|---|
| 4.1.2 I apply the knowledge gained in CPD activities to improve quality of patient care | 1 | 2 | 3 |
| 4.1.3 The acquired knowledge gives me confidence to challenge and change practice | 1 | 2 | 3 |

4.2. Professional development

| Category | Disagree | Unsure | Agree |
|--|----------|--------|-------|
| 4.2.1 Development of a profession demands a constant self-education as well continuing research for the acquisition of new nursing knowledge | 1 | 2 | 3 |

4.2.2

| Category | Disagree | Unsure | Agree |
|--|----------|--------|-------|
| CPD programmes are essential to help the nurses upgrade their clinical skills, nursing theory, research, policies and procedures | 1 | 2 | 3 |

4.3 Psychomotor skills (practical skills)

| Category | Disagree | Unsure | Agree |
|---|----------|--------|-------|
| 4.3.1 CPD helps me to practice safely and confidently | 1 | 2 | 3 |
| 4.3.2 The skills have improved my practice | 1 | 2 | 3 |
| 4.3.3 My time management has improved | 1 | 2 | 3 |

4.4 Affective Skills: CPD has improved my affective skills, for example tending to the patient's:

| Category | Disagree | Unsure | Agree |
|--|-----------------|---------------|--------------|
| 4.4.1 Physical needs (e.g. pain, discomfort, and safety) | 1 | 2 | 3 |
| 4.4.2 Psychosocial needs (e.g. emotions, dignity, and culture) | 1 | 2 | 3 |
| 4.4.3 Right to informed consent and information regarding their care | 1 | 2 | 3 |
| 4.4.5 Family' right to have access to their loved ones | 1 | 2 | 3 |

4.5 By attending CPD activities, I have learnt the value of verbal and non-verbal communication, such as:

| Category | Disagree | Unsure | Agree |
|------------------------------|-----------------|---------------|--------------|
| 4.5.1 Friendly and courteous | 1 | 2 | 3 |
| 4.5.2 Reassuring | 1 | 2 | 3 |
| 4.5.3 Professional | 1 | 2 | 3 |
| 4.5.4 Approachable | 1 | 2 | 3 |