

Nursing students' exposure to the clinical learning environment and its influence on their specialization choice

E.F. Du Toit

10794948

BCUR (NWU); Diploma in Operating Theatre Nursing (UJ); Diploma in Nursing Administration (UP); Diploma in Nursing Education (UP)

Dissertation submitted in partial fulfilment of the requirements for the degree *Magister Curationis* in Health Science Education at the Potchefstroom Campus of the North-West University

Supervisor: Ms E. Bornman

November 2013

LYN VOIGT LITERARY SERVICES

Lyn Voigt: B. Mus. (Eng Hons) [Wits] H. Dip. Ed. [JCE]

P O Box 383
Ridge Terrace
2168

Tel/Fax: (011) 478 0634

35 El Prado

Randpark Ridge

EDITOR'S DECLARATION

I, Lyn Voigt, confirm that I edited the mini-dissertation: Nursing students' exposure to the clinical practice environment and its influences on their specialization choice.

E. F. Du Toit
10794928

Mini dissertation submitted in partial fulfilment of the requirements for the Magister Curationis at the Potchefstroom Campus of the North-West University.



L.E. Voigt

Language Practitioner

7 November 2013

TABLE OF CONTENTS

LIST OF TABLES.....	v
LIST OF APENDICES:.....	vii
STRUCTURE OF THE DISSERTATION.....	viii
AUTHOR'S CONTRIBUTION.....	ix
ACKNOWLEDGEMENTS	x
ABSTRACT.....	xi
OPSOMMING.....	xii
SECTION 1: OVERVIEW OF THE STUDY	1
1.1 INTRODUCTION.....	1
1.2 BACKGROUND	1
1.3 PROBLEM STATEMENT	4
1.4 RESEARCH QUESTION.....	5
1.5 PURPOSE... ..	5
1.6 RESEARCH METHODOLOGY	5
1.6.1 Paradigmatic perspective.....	6
1.6.1.1 Metatheoretical assumptions.....	6
1.6.1.2 Theoretical assumptions	7
1.6.1.2.1 Central theoretical statement	7
1.6.1.2.2 Conceptual definitions	8
1.6.1.3 Methodological assumptions.....	9
1.6.2 Research design and method	9
1.6.3 Data collection	9
1.6.3.1 Population.....	10
1.6.3.2 Phase 1: Reflective essay	10
1.6.3.2.1 Sample.....	10
1.6.3.2.2 Data collection	11
1.6.3.2.3 Data analysis	11

1.6.3.3 Phase 2 : Focus group sessions	12
1.6.3.3.1 Sample.....	12
1.6.3.3.2 Data collection	12
1.6.3.3.3 Data analysis	13
1.7 RIGOUR.....	13
1.7.1 Credibility.....	13
1.7.2 Transferability	15
1.7.3 Dependability	15
1.7.4 Conformability.....	15
1.8 ETHICAL CONSIDERATIONS	16
1.8.1 Principle of respect for persons.....	16
1.8.2 Principle of beneficence	16
1.8.3 Principles of justice	17
1.9 LITERATURE CONTROL	17
1.10 CONCLUSION	17
1.11 REPORT OUTLINE.....	18
REFERENCES	19
SECTION 2: LITERATURE REVIEW: THE INFLUENCE OF THE CLINICAL ENVIRONMENT ON THE NURSING STUDENT’S CHOICE OF SPECIALIZATION.....	24
2.1 INTRODUCTION.....	24
2.2 SEARCH STRATEGY	24
2.3 REVIEW.....	25
2.4 CONCLUSION	28
REFERENCES	30
SECTION 3: ARTICLE	33
NURSING STUDENTS EXPOSURE TO THE OPERATING THEATRE AND ITS INFLUENCE ON THEIR SPECIALIZATION CHOICE	33
CURATIONIS’ GUIDE FOR AUTHORS.....	34
COVER PAGE.....	40

Abstract	42
Background	42
Objectives.....	42
Method	42
Results	42
Conclusions	42
Introduction.....	43
Problem statement.....	43
Aims of the study	43
Background	44
Definition of key concepts	45
Contribution to field.....	46
Research method and design	46
Design	46
Population and sample	46
Data collection method	47
Data analysis	47
Setting of the study	47
Results.....	48
Training specific factors impacting on students' experiences in a theatre unit.....	50
Organizational factors impacting on students' experiences of the theatre unit	53
Experiences of 'nurse-enslavement'	55
Experiences regarding inter- and intrapersonal dynamics.....	56
Ethical considerations	57
Potential benefits and hazards.....	57
Recruitment procedures.....	58
Informed consent	58
Data protection	58

Trustworthiness.....	58
Discussion.....	62
Outline of the results.....	62
Practical implications	63
Limitations of the study	63
Recommendations	63
Conclusion.....	64
Acknowledgements.....	64
Competing interest.....	64
Authors' contributions	64
References.....	65
SECTION 4: CONCLUSIONS, LIMITATIONS AND RECOMMENDATIONS	69
4.1 Conclusions of this study	69
4.2 Limitations of this study.....	71
4.3 Recommendations	71
4.3.1 Nursing education.....	71
4.3.2 Nursing practice.....	72
4.3.3. Nursing research.....	72
4.4 SUMMARY	72
REFERENCES..	74

LIST OF TABLES

Table 3.1 Summary of results 48

Table 3.2 Strategies to establish trustworthiness 59

LIST OF ABBREVIATIONS

NEI Nursing Education Institution

SANC South African Nursing Council

LIST OF APENDICES:

APPENDIX A: Ethical approval	76
APPENDIX B: Permission to involve students in research	77
APPENDIX C: Consent to participate in study	78
APPENDIX D: Example of reflective essays	80
APPENDIX E: Focus group sessions questions	81
APPENDIX F: Part of transcribed focus group sessions	82

STRUCTURE OF THE DISSERTATION

This dissertation on 'Nursing students' exposure to the clinical practice environment and its influence on their specialization choice' is presented in article format and is divided into four sections.

Section 1: Overview of the study

In this section the researcher describes this study by discussing the research topic under the headings: introduction, background, problem statement, research question and the purpose of this study. This is followed by a discussion of the methodology that guided the researcher in executing this study.

Section 2: Literature review

The literature relevant to this study is described.

Section 3: Article

In the third section, the researcher describes the study and the findings in article format. Title: Nursing students' exposure to the clinical practice environment and its influence on their specialization choice

Journal: Curationis Journal of the Democratic Nursing Organisation of South Africa

Section 4: Conclusion, limitations and recommendations

This section covers the researcher's conclusions, an examination of the study's limitations and the recommendations that are made.

AUTHOR'S CONTRIBUTION

This study was designed and implemented by two researchers from the School of Nursing Science of the North-West University at the Potchefstroom campus. The contributions of the authors are described as follows:

- Esther du Toit: MCur student responsible for the review of the literature, the conducting of the study and writing of the text
- Elsabe Bornman: supervisor and reviewer of this study

In the following statement, the co-author confirms her role in this study and agree that the article will be included in the dissertation:

I hereby confirm that the article will be included in the dissertation and published as part of the dissertation by me, E.F. Du Toit

E. Bornman

ACKNOWLEDGEMENTS

The following persons were essential to the completion of this study:

I would like to thank my Lord who moved mountains for me to complete this study.

Then also the following role players:

- My husband, Jannie du Toit, for supporting me in this venture
- My children Anli and Joa , for understanding and loving me
- My mother, Miemie, for encouraging me
- My supervisor, Elsabe Bornman, who gave me excellent guidance and support during this research journey and was always ready to assist me in every possible way
- My co-coder, Petra Bester, who helped me with her expertise in qualitative data analysis
- My librarian guide, Anneke Coetzee, thank you for all your support in the literature research
- My language editor, Lyn Voigt, thank you for your dedication
- The participants of this study, without your honesty and participation this study would not be completed, thank you.

ABSTRACT

Nursing students in South Africa are exposed to various clinical environments as part of the prescribed curriculum (SANC, 2008). These clinical environments not only positively or negatively influence nursing students but also greatly influence their decisions regarding future specialization. This relationship between the influence of the clinical environment and the decision to apply at a specific hospital was established by Andrews *et al.* (2005:147), but little is known about how it affects the decision of nursing students to specialize in a specific area. According to the South African Nursing Council's statistical data, an additional qualification in operational theatre is one of the least qualifications applied for (SANC, 2012b). This indicates that not many nursing students choose, for example, the theatre as a specialization area when their studies are completed. In light of this evidence, this study aimed to explore the influence that the clinical environment has on the decision of nursing students to specialize in a specific area.

An explorative and descriptive design, which is qualitative in nature, was followed to conduct this study. The data collection was conducted in two phases. Phase one: Nursing students' experiences after exposure to theatre as a clinical environment were explored by means of reflective essays. Data was analysed according to the principles of Tesch as described in Creswell (1994:154). Meetings between the researcher and an experienced co-coder resulted in consensus regarding the findings. Three main themes and eleven sub themes were identified and provided clarity on the influence of the clinical environment on nursing students. Phase two, consisting of two focus group discussions facilitated by an expert in focus group facilitation, was completed to validate the findings from the reflective essay. This data was transcribed, analysed and the findings validated by the existing data from phase one.

Conclusions drawn from this study were that the clinical environment does influence the students' decision to specialize in operating theatre, but many choose not to specialize in theatre due to personal preferences.

Keywords: Clinical environment, nursing student, specialized area, operating theatre

OPSOMMING

Verpleegkunde studente in Suid Afrika word blootgestel aan verskeie kliniese omgewings as deel van die voorgestelde kurrikulum (SANC, 2008). Hierdie kliniese omgewings het 'n invloed op die ondervinding van verpleegkundestudente en die ondervinding kan positief of negatief van aard wees. Die positiewe of negatiewe kliniese ondervinding kan 'n invloed hê op die verpleegkundestudent se besluitneming vir toekomstige beroepspesialisasie. Hierdie verwantskap tussen die invloed van die kliniese omgewing en die besluit om by 'n spesifieke hospital aansoek te doen vir 'n posisie is vasgestel deur Andrews *et al.* (2005:147). Min is bekend oor die invloed wat die kliniese omgewing het op die verpleegkundestudent se besluit om te spesialiseer in 'n spesifieke area. Volgens die statistiese data van die Suid-Afrikaanse Verpleegsters Raad (SANC, 2012b) is die aansoeke in die addisionele kwalifikasie in operasiesaalverpleegkunde die laagste. Dit dui daarop dat nie baie verpleegkundestudente die teater as spesialisasieveld kies wanneer hulle klaar is met hul basiese studie nie. Hierdie studie se doel is om die invloed wat die kliniese omgewing het op die besluit van die verpleegstudent om te spesialiseer in 'n spesifieke veld te ondersoek.

'n Eksploratiewe en beskrywende ontwerp, wat kwalitatief van aard is, is gevolg om die studie uit te voer. Data insameling was gedoen in twee fases. Tydens die eerste fase is die verpleegkundestudente genader om opstelle te skryf, waarin hul, hul ondervindinge, na blootstelling aan die teater as kliniese omgewing beskryf. Die navorser het die data geanaliseer volgens die beginsels van Tesch (Creswell, 1994:154). Die navorser en die medekodeerder het konsensus bereik oor die bevindinge. Drie hoof temas en ses en twintig sub temas is geïdentifiseer wat die invloed van die kliniese omgewing op die besluitenmingsproses van die verpleegkundestudente geïllustreer het. Die tweede fase is uitgevoer om die eerste fase se bevindinge te valideer. Die twee fokusgroepbesprekings is gefasiliteer deur 'n kundige op die gebied. Die data is getranskribeer, geanaliseer en het bestaande data van die opstelle gevalideer.

Gevolgtrekkings wat gemaak is deur die navorser was dat al het die kliniese omgewing 'n invloed gehad op sommige studente was daar studente wat nie spesialisasie in teater oorweeg het nie, as gevolg van persoonlike voorkeure.

Sleutel woorde: kliniese omgewing, verpleegstudent, spesialisasie area, teater

SECTION 1: OVERVIEW OF THE STUDY

1.1 INTRODUCTION

The clinical nursing environment has been the topic of many studies and various researchers have accentuated their concerns regarding the importance of meaningful experiences in the clinical environment (Brown *et al.*, 2008:1215; Clarke *et al.*, 2003:113; McGarry *et al.*, 2009:22; Midgley, 2006:338). Andrews *et al.* (2005:147) assert that there is a significant relationship between a nursing student's clinical experience and his or her decision to apply for a position at a specific hospital. Nursing students prefer hospitals where they experience positive support.

There is currently a great shortage of registered nurses in the clinical field, especially in specialized areas (Pretorius & Klopper, 2012:66). According to the South African Nursing Council's (SANC) statistical data for 2012, an additional qualification in operational theatre is one of the qualifications that are the least applied for (SANC, 2012b). This indicates that not many nursing students choose the operating theatre as an area of specialization. The purpose of this research was to explore the influence of the clinical environment on nursing students when they choose the theatre as an area of specialization upon completion of their undergraduate studies.

1.2 BACKGROUND

Nursing has a practical component and to ensure that the newly registered nurse is competent in the clinical environment, the nursing student must receive enough exposure in this environment (Hall, 2006:632). According to the South African Nursing Act (33 of 2005), the nursing student must work a minimum of 4000 hours in the clinical environment as part of a four year integrated programme. Exposure to all the clinical fields of nursing is necessary to reach the particular outcomes as prescribed by SANC (SANC, 2008). Placement in a specific clinical environment allows students to gain experience of providing care to patients and assisting them to reach their long- and short-term outcomes (Hall, 2006:632).

Nursing students' exposure to a clinical environment may be either a negative or a positive experience and various factors have an influence on creating this negative or positive environment (Andrews *et al.*, 2005:52; Chesser-Smyth, 2005:325; Saarikoski & Leino-Klipi, 2002:265). The clinical environment consists of human factors like unit managers, clinical facilitators and personnel, and physical factors like equipment and ward design (Andrews *et*

al., 2005:152; Brown *et al.*, 2008:1223; Pretorius & Klopper, 2012:69; Saarikoski & Leino-Klipi, 2002:265; Warren & Denham, 2010:10).

Unit managers are influential when it comes to personnel's attitude towards students and they can create circumstances for a positive unit culture (Andrews *et al.*, 2005:148; Saarikoski & Leino-Klipi, 2002:265). According to Chesser-Smyth (2005:325), when a unit manager is absent, both the unit and the supervision of students become disorganised. Pretorius and Klopper (2012:69) contend that in the South African context, nurses feel that unit managers should be more accessible to and supportive of personnel working in the unit. In the study conducted by Lekhuleni *et al.* (2004:22) in Limpopo, nursing students felt that unit managers were not available when they needed them. The unit manager's influence on the decision of a nursing student to work at a specific facility is acknowledged in a study conducted by Andrews *et al.* (2005:149). Thus unit managers could have an influence on nursing students' experience of the clinical environment.

Between the clinical environment and the classroom, a theory-practical gap may exist and to compensate for this gap preceptors are appointed (Jeggels *et al.*, 2013:106). Their task is to assist nursing students in the practical field to close the gap between the theory and the clinical environment by working with them in the clinical environment (Baxter, 2006:106). According to Kim (2007:375), it is important to have a preceptor in the clinical environment to enhance students' expertise. Andrews *et al.* (2005:148) state that the preceptor's intended role is to support students and simultaneously facilitate learning opportunities. Students tend to experience a positive environment as soon as they form a consistent relationship with their preceptor and feel that such a person values their goals and can help them to reach them. Saarikoski and Leino-Klipi (2002:265) elaborate the value of this relationship and identify aspects like mutual respect, interaction and trust. In the nursing education and training standards of the SANC, it is stipulated that preceptors in the clinical environment are vital for reaching the outcomes of the education programme (SANC, 2008). According to Mothiba *et al.* (2012:199), nursing students complain that the absence of preceptors in the units adds to the difficulties they experience in the clinical environment. Andrews *et al.* (2005:148) posit that in the absence of preceptors and supportive personnel, students cannot reach their objectives and are consequently appointed to perform menial duties. These authors conclude that the presence or absence of a preceptor in the clinical environment has an either positive or negative influence on the experience of nursing students.

Preceptors should have the expertise necessary to provide quality guidance to nursing students and assist them in a clinical setting that might have a positive influence on the

experience of nursing students (Dickson *et al.*, 2006:421). According to Chan (2002:523), it is important that preceptors recognize the vulnerability of students in the clinical environment and that good communication between the students and the preceptor can enhance a supportive clinical experience. SANC's nursing education and training guidelines state that the preceptor must have clinical expertise, act as a role model for students and support them in the clinical environment (SANC, 2008).

In a clinical environment, the personnel in a unit must be able to help students feel welcome. Students also feel more secure when personnel are highly skilled, knowledgeable and approachable (Brown *et al.*, 2008:1223). Levett-Jones and Lathlean (2008:108) assert that nursing students who feel welcome and accepted in a unit are able to learn more effectively. In South Africa, Watkins *et al.* (2011:6) believe that nursing students have a negative perception of personnel and feel that there is not sufficient support from them. Mothiba (2012:201) states that there are poor interpersonal relationships between personnel and nursing students and those personnel are also unwilling to work with nursing students, creating a negative clinical environment.

A study conducted in Australia suggests that when students experience a negative clinical environment, it can be a source of added stress and anxiety (Elliott, 2002:37). This author also believes that a negative experience can generate a negative perception of a specific environment and nursing students are more likely not to choose to work in those specific environments. Fenush and Hupcey (2008:94) describe a strong link between the experience of nursing students in a clinical environment and their future career choices. This is supported in an Australian study by McKenna *et al.* (2010:181) who comment that placement in a clinical environment may validate certain preconceptions or influence these conceptions about that specific environment and that it in turn may influence the career choice of nursing students. These studies prove that the clinical environment's impact on nursing students has far more implications than only practical experience. Clinical environments may also have a connection to the nursing shortages in specialized areas.

There is worldwide a shortage of nursing personnel and the number of nurses does not only not meet the growing demand for nurses in general wards, but also in specialized units (Duvall & Andrews, 2010:309). According to Worrall-Clare (2005:4), the current number of nurses practising in South Africa cannot satisfy the needs created by both public and private hospitals. Thomas *et al.* (2010:60) also conclude that, although some private hospitals have implemented several strategies like streamlining administrative documents and incentive projects to keep their skilled nurses, they continue to have personnel shortages. According to recent statistical data from SANC (2012a), between 2002 and 2012, the year-on-year

growth in professional nurses registering with SANC nationally, was astoundingly low at about 2.5% per annum. This growth rate is unquestionably insufficient to counter the existing shortages of professional nurses.

Further statistical data of SANC indicates that only 3% of the registered nurses applying for registration for additional qualifications complete their post basic diploma course in Medical and Surgical Nursing: Operating Theatre (SANC, 2012b). In turn, the same data highlights the fact that as few as 25% of registered nurses complete a post basic diploma in management and as few as 14% in education. It can thus be concluded that the operating theatre is clearly one of the specialized areas that is the least chosen for a post basic qualification. One can only assume that the possibility exists that a negative experience of the theatre as a clinical environment may influence nursing students' decisions to specialize in that area of expertise.

Andrews *et al.* (2005:152) suggest that the clinical environment may not only have an influence on the choice of facility, but also in terms of specialization and that further research may help to understand this. This researcher holds the view that the description of the phenomenon may enhance awareness regarding the recruitment of student nurses for specialized areas when they are placed in the clinical environment. This awareness may lead to an increase in personnel in the specialized units like the theatre, where a great shortage of knowledgeable personnel is a major problem.

1.3 PROBLEM STATEMENT

It is evident, in the practical field, that there is a shortage of registered professional nurses who choose the operating theatre as an area of specialization and this is supported when the statistical results of SANC (2012b) are examined. Many research studies describe the influence of the clinical environment on nursing students and their decision not to choose a certain area of specialization (Andrews *et al.*, 2005:151; Brown *et al.*, 2008:1223; Edwards *et al.*, 2004:253; Happell & Gaskin, 2012:156; McKenna *et al.*, 2010:181).

In the researcher's experience of the operating theatre and the placement of nursing students in that area, it was observed that students do not choose to work in the operating theatre when their studies are concluded, that there is a need for more theatre nurses and that little research on this exists. It could be beneficial to explore the influence that the clinical environment has on nursing students when they consider the option of making operating theatre their area of specialization.

1.4 RESEARCH QUESTION

It was established that nursing students experience a clinical environment as positive or negative. This experience may have an influence on nursing students' decisions to specialize. The researcher wished to explore and describe this influence on nursing students.

The research question for this study was:

How does the experience of the clinical environment of nursing students, when exposed to the operation theatre, influence their decision to work in that area of specialization, after completion of their studies?

1.5 PURPOSE

The purpose of this study was to explore and describe the experience of nursing students of the clinical environment, when exposed to operation theatre and how it influences their choice of specialization.

1.6 RESEARCH METHODOLOGY

Under this heading the methodology that the researcher used to guide this study is described and the rationale for choosing this methodology will be discussed.

According to Botma *et al.* (2010:182) qualitative research gives the researcher the opportunity to explore participants' experiences and the manner that it influences them. In this study a qualitative design was followed to give the researcher the opportunity to explore and describe the lived experiences of the student nurses in the specific clinical environment. The researcher followed a descriptive qualitative inquiry design to guide this study. Descriptive qualitative inquiry was described by Botma *et al.* (2010:194) as a straight description of events. This study presents a description of how the students experienced the clinical environment of the operating theatre and how it influenced their decision to specialize in that specific environment.

The paradigmatic perspective with the metatheoretical, theoretical and methodological assumptions as well as data collection aspects that guided this study are described in the following discussion.

1.6.1 Paradigmatic perspective

A paradigm provides a conceptual framework through which the researcher views a phenomenon in the world, a set of assumptions about the basic aspects of the reality (Burns & Grove, 2009:712; Nieuwenhuis, 2011:47). These assumptions guide the researcher and influence the way the data will be interpreted (Brink *et al.*, 2012:25). Many research paradigms are developed and described, but for this particular study the researcher found that meta-theoretical assumptions of interpretivism were the most appropriate to guide this study. Interpretivism is an approach that emphasizes the significance of the participants' viewpoint (Brink *et al.*, 2012:25). The experiences can only be explored in total depth and complexity when the participants' subjective meanings are described from their view points. The paradigmatic perspective consists of metatheoretical, theoretical and methodological assumptions (Botma *et al.*, 2010:187). The following statements defined the paradigmatic perspective.

1.6.1.1 Metatheoretical assumptions

Metatheoretical assumptions refer to the general orientation of the manner in which the researcher relates to the world, it is philosophical and therefore not to be tested (Botma *et al.*, 2010:187).

- **Person**

The researcher defined a person as a complex and unique being that interacts with the environment that surrounds the person. In this study, the nursing student was described as a unique and complex being that has emotional and social needs and that is in search of knowledge.

- **Health**

Health is seen as a state of physical, psychosocial and spiritual wellbeing. A person's wellbeing is described on a continuum with two extremities: namely, excellent health and terrible illness. The nursing student's health is seen on this continuum, which implies that if an emotional discomfort is experienced, the nursing student is not completely healthy although the physical health is acceptable.

- **Environment**

In this study the environment referred to the clinical environment that is physically based in a hospital setting: namely, the operating theatre. This environment consisted of various aspects that included the physical and emotional factors that influence the nursing student's experience of this environment. The physical environments included aspects like ambient

temperature, structure, lighting, equipment and the procedures that the students observe. The emotional environment consisted of all the role players in the theatre: namely, personnel, unit managers, preceptors, doctors and patients.

- **Nursing**

The researcher viewed nursing as the support for optimal health for all humans in their various environments. It was viewed as an evolving science that increases in scientific knowledge. Further, the care of the patient was the centre of and motivation for all the actions of the nurse.

- **Operating theatre**

The operating theatre is a specialized unit where surgical procedures are performed according to specific policies. All the expertise of the nurse is needed to keep the patient safe. Nursing personnel working in this unit should be advocates for the patient's rights and privacy.

1.6.1.2 Theoretical assumptions

Theoretical assumptions reflect the researcher's existing knowledge of theoretical frameworks and models (Botma *et al.*, 2010:187). They guide the central theoretical arguments and definitions of key concepts. Interpretivism argues that human life can only be seen from within and therefore it focuses on the subjective meanings of the experiences of participants. Theoretical constructs of research should then reflect the everyday constructs of how the participants interpret and interact with their environment. It is important to understand the uniqueness of a particular situation in order to interpret the meanings that the participants construct (Nieuwenhuis, 2011:59).

1.6.1.2.1 Central theoretical statement

An exploration and description of the lived experiences of the nursing students, after they were exposed to a specialized clinical environment, assisted the researcher to determine how this experience influences their decision to specialize in particular specialization areas, in this case the operating theatre. Understanding the influence that the clinical environment has on the specialization choice may lead to recommendations to facilitate a more positive clinical environment in this specialized unit. This positive experience may influence nursing students to choose the operating theatre as a specialization area after the completion of their studies, thus alleviating the nursing shortage in this specialized unit.

1.6.1.2.2 Conceptual definitions

- **Clinical environment** - this is the environment that relates to the training done in the hospital that may have an effect on behaviour or development (Oxford Advanced Learner's Dictionary, 2010). The clinical environment consists of the clinical setting, equipment, personnel, patients, preceptors and lecturers (Papp *et al.*, 2003:262). In this study, the clinical environment was divided into the physical environment and the emotional environment.
- **Physical clinical environment** - this refers in this study to the physical structure, ambient temperature and technical equipment in the operating theatre.
- **Emotional clinical environment** – in this study this refers to the emotional human aspects of the clinical environment, the attitudes of unit managers and personnel, and the experiences that may have an emotional impact on the nursing student.
- **Experience** – events shared by all the members of a particular group in the society that influences the way one thinks and behaves (Oxford Advanced Learner's Dictionary, 2010). Experience is the knowledge that is gained from being involved in an event (Burns & Grove, 2009:9). In this study it referred to the positive or negative experience the nursing students had in a clinical environment.
- **Nurse specialist** – a nurse that has an in-depth knowledge of and expertise in a specific practice area and a post-graduate qualification in a specific specialization. This qualification needs to be registered by SANC (SANC, 2012c).
- **Preceptor** – this person is a member of the personnel or the nursing educational institution and has the responsibility of teaching, being a role model and supporting the nursing students in the unit (Baxter, 2006:103).
- **Professional nurse** - according to the Nursing Act, 2005 (33 of 2005) a professional nurse is a person who is skilled and experienced enough to be independent in practising comprehensive nursing and is capable of assuming responsibility and accountability for his/her practice.
- **Specialize** - to become an expert in a particular area of work, study or business; spend more time on one area of work than on others (Oxford Advanced Learner's Dictionary, 2010). In this study the nursing student chose an area of nursing in which to be a nurse specialist, for example, the operationing theatre.
- **Student nurse** - according to the Nursing Act, 1978 (50 of 1978), this is a person who studies nursing at an approved training institution and is registered with SANC. In this study, the student nurse is described as a nursing student and is a student who was enrolled in a Baccalaureus Curationis degree at an university.

1.6.1.3 Methodological assumptions

Methodological assumptions are a description of what the researcher believes to be good science practice (Botma *et al.*, 2010:188). Methodological assumptions guided the researcher's decisions regarding the research design. Botes's research model grounded this study and guided the researcher in formulating the methodological assumptions by using the three orders Botes (1992:36) recommends. The first order represents the practice of nursing and it is represented by the experiences that the researcher wanted to understand in this study. It is about the influence the clinical environment has on the decision of nursing students to specialize in that clinical environment.

The second order represents nursing research and the researcher functioned in this domain by interacting with the nursing students to collect data, analyse it according to prescribed methodology and reach conclusions that explain the phenomenon (Botes, 1992:39).

The third order is represented by the paradigmatic perspective of the researcher and although functioning in the second domain, the third order guided the researcher.

The methodological assumptions were also based on the functional reasoning approach as described by Botes (1992:36), an approach that enhances the trustworthiness of this study. Nursing research should enhance nursing practice. The researcher wanted to improve the clinical environment for the nursing students by creating an awareness of the importance of the influence of the clinical environment.

1.6.2 Research design and method

The design was a descriptive qualitative inquiry with explorative and descriptive elements (Botma *et al.* 2010:194). The qualitative aspect gave the researcher the opportunity to explore the lived experiences of the nursing students in the clinical environment (Brink *et al.* 2012:120). This description and exploration of their experiences described how it influenced the students' choice of specialization after they had completed their studies. A description of their perceptions of operating theatre, as a clinical environment, was effectively explored in a qualitative descriptive research design. The descriptive qualitative inquiry design provided the opportunity for the researcher to ask the students to describe their experiences of the theatre as a clinical environment and whether they would consider making it their area of expertise.

1.6.3 Data collection

Data collection is a specific, methodical and meticulous action to reach the objectives and answer the research questions (Burns & Grove, 2009:43). Burns and Grove (2009:529) further state that the qualitative researcher focuses on the research in such a way that the

process will require complete concentration and fascination with the experience. A descriptive qualitative inquiry research design was followed to describe the experiences of a purposefully selected group of nursing students who were exposed to the operating theatre as a clinical environment. The data collection in this study consisted of two phases. The first phase of data collection consisted of reflective essays, followed by the second phase in which the data from the first phase was validated by two focus group sessions.

1.6.3.1 Population

The population consists of all the essentials that meet the sampling criteria for inclusion in the study (Burns & Grove, 2009:714). The population for this study was the nursing students of an educational institution that met the selected criteria for this study. Both of these data collection phases made use of the same population chosen for this study.

1.6.3.2 Phase 1: Reflective essay

In this study, the first phase of data collection was in the form of an essay. A narrative essay is an art of storytelling that researchers use to collect data from their participants' stories for their research (Holloway & Freshwater, 2007:5). Reflective essays consist of participants' thoughts and feelings about the situations they are experiencing (Poldner *et al.*, 2012:20). In this study, nursing students were asked to describe how they experienced the operating theatre as a clinical environment. An question were added to determine if they would consider the operating theatre as specialization area when they graduate.

1.6.3.2.1 Sample

Sampling refers to the process used to select a portion of the population for a study (Nieuwenhuis, 2011:79). Purposeful sampling is the process in which the sampling is done with a specific purpose and the target group has to meet certain criteria (Maree & Pieterse, 2011:178). In this study a purposeful sampling method was used to form a target group from the third year students who were exposed to the operating theatre as a clinical environment. Permission was obtained from the faculty to ask the nursing students to participate and their consent was obtained before the data collection commenced.

The sampling criteria were as follows:

- Nursing students in their third year of an undergraduate programme
- Nursing students that were exposed to the operating theatre as a clinical environment during their clinical placement

The third year nursing students that were exposed to the theatre were asked during a contact session to participate voluntary in the data collection of this study.

1.6.3.2.2 Data collection

The researcher's role in qualitative research is extensive and is responsible for data collection (Botma *et al.*, 2010:203). The researcher obtained access to the chosen population and sample by asking for permission to execute the study. An example of the permission that was obtained was added as an addendum (B) to the submitted document. The people that could link the researcher with the possible participants were identified and the researcher had open communication with them to gain access to the participants (Botma *et al.*, 2010:203). The researcher asked a mediator to facilitate the data collection. The facilitator explained the aim of the study and consent was obtained from the participants before the data collecting commenced.

The researcher gathered the data in an informal classroom setting during which the participants were asked to write a voluntary reflective essay about their experience in the operating theatre. Reflective essays, as a data collection tool, provided the opportunity to explore the experiences of nursing students who were exposed to the theatre as a clinical environment. An additional question to provide an indication of whether they might consider working in that specialized area was included to enrich the data. Adequate time was given to the students for reflection and for describing their experiences during their time in the operating theatre. One session with the students was sufficient to collect the reflective essays. The anonymous reflective essays were stored at the researcher's home in a locked cupboard.

1.6.3.2.3 Data analysis

The researcher used Tesch's analysing method to analyse the statements of the participants written in the form of a reflective essay (Creswell, 1994:154). This method entailed the following steps:

1. The researcher read the reflective essays to gain a sense of the whole.
2. The researcher randomly selected a reflective essay, read it and thought about the underlying meaning of the information. Thoughts were jotted down in the margins. This procedure was followed with all the essays.
3. A list was made of all the topics which were clustered together and formed into columns arranged into categories and themes.
4. The researcher returned to the data with this list and the topics were abbreviated as codes. These codes were written next to the appropriate segments of the text. The researcher tried this preliminary organization form to identify any new categories or codes.

5. The categories, themes and sub-themes were then described in descriptive wording. The themes and sub-themes were grouped together.
6. A final decision was made on each of the abbreviations for the categories, themes and sub-themes.
7. The data that belonged to each category was grouped together and a preliminary analysis was formed.

This qualitative analysis process of the reflective essays identified five categories, two themes and twenty-six sub-themes. An independent co-coder was engaged to analyse the data and after consensus was reached, the data was described.

1.6.3.3 Phase 2 : Focus group sessions

Focus groups are designed to gather participants' perceptions of a specific topic in a relaxed atmosphere in which the participants feel confident to share their perceptions. (Burns & Grove, 2009:513). The assumption is made that participants feel more secure in a group and are more willing to share their thoughts on the subject discussed (Burns & Grove, 2009:513).

1.6.3.3.1 Sample

The focus groups consisted of purposeful selected participants who took part in the reflective essay data collection phase. The students, who were participants during the first phase, were asked to participate in the focus groups sessions to clarify the data of the reflective essays. It was stressed that participation was anonymous and that they could withdraw at any time. Thirteen students volunteered to participate and gave their consent to be part of this second phase. These students were divided into two groups, one of six and one of seven.

1.6.3.3.2 Data collection

A focus group discussion is a planned group interview and it essentially focuses on the information that the researcher wants to acquire (Botma *et al.*, 2010:210). According to Burns and Grove (2009:513), one of the assumptions of focus groups is that participants are willing to express their views in ways that are less likely to occur in a one-to-one interview. Open ended questions provided the participants with the opportunity to air their opinions and to clarify the findings of the reflective essays. An example of these questions was added as an addendum (E) to this document. The researcher asked an expert in focus group discussions to be the facilitator in the groups and the researcher made field notes. The sessions were recorded and a typist was acquired to transcribe the taped discussions.

Field notes on the behaviour and activities of the participants were made during the focus group sessions (Creswell, 2009:181). These field notes, made by the researcher, were used to enrich the data obtained from the focus groups. Transcription is a word-for-word typed description of what is said during a focus group discussion (Burns & Grove, 2009:520). Transcripts of the focus groups' interaction were analysed and the field notes, made by the researcher, were added to the data. This data was used to validate the findings and ensure the credibility of the reflective essays. Two sessions with the focus groups were necessary to collect the data. The transcripts of the focus groups were kept at the researcher's home in a locked cupboard.

1.6.3.3.3 Data analysis

The focus group interviews were transcribed to ensure that all the data were captured. The same analysis method of Tesch was used to analyse the data (Creswell,1994:154). This method that was used to analyse the data was explained in the phase one discussion about the reflective essays. They were analysed and coded to ensure that all the data was captured (Creswell, 2009:187). Field notes made during the focus group discussions assisted in the data analysing procedure and during the interpretation of the data. This data was used to validate the data from the reflective essays.

1.7 RIGOUR

Brink *et al.* (2012:97) state that rigour refers to the principle of the truth value of the study. Burns and Grove (2009:54) refer to rigour in qualitative research as an openness, truthfulness and thoroughness from the researcher. The researcher's perception is important during this interactive process of qualitative research, because it might influence the way the researcher interprets the data. Thus to be rigorous in this study, the researcher must rise to an open perspective and be willing to let go of a one-sided outlook. The report of the views of the participants should be described as clearly as possible and without the view of the researcher to tarnish the data (Botma *et al.*, 2010:292). Guba's criteria and strategies (Krefting, 1991:214) were followed in this study to ensure trustworthiness.

1.7.1 Credibility

The researcher became familiar with the research culture and participants to gain adequate understanding of the research field and to establish a relationship of trust (Shenton, 2004:65). This intimate familiarity may lead to the disclosure of more sensitive information from the participants, with a possible side effect of this prolonged engagement resulting in the researcher's professional judgment being influenced by the participants (Krefting,

1991:217; Shenton, 2004:65). The researcher had a prolonged exposure to the culture of the specialized unit and was employed in this clinical environment for an extended time. The knowledge that the researcher gained of this environment was beneficial to this study and although the researcher did not have a prolonged relationship with the participants, the facilitator was known to and trusted by the participants. This aspect ensured that the responses of the participants were trustworthy and not the 'preferred social response', one of the threats to credibility of the study (Krefting, 1991:218).

Triangulation involves the use of different methods to collect data from participants (Shenton, 2004:66). Triangulation provided the opportunity for the conformation of the data and ensured that all the aspects were explored (Krefting, 1991:219). In this study the researcher used triangulation during data collection. The data collection was executed in two phases followed by data analysis and comparison. First the students were asked to write a reflective essay about their experience of the clinical environment. That data was compared with the data collected from the second phase which consisted of the two focus group sessions.

It is central to the credibility of qualitative research that the participants be able to recognize their experiences in the findings. Member checking is a technique that makes it possible for the participants to confirm their experiences (Krefting, 1991:219). In this study, the researcher asked the participants to confirm and clarify their experiences described in the reflective essays during the focus group sessions.

Peer examination is based on the same principle as member checks, but it involves a discussion of the research process and findings with an impartial colleague who is experienced in qualitative research (Krefting, 1991:219). The researcher discussed the findings with the co-coder, who is an expert in qualitative data analysis, and when consensus was reached, the findings were described.

Structural coherence implies that there are no unexplained inconsistencies between the data and the interpretation. Although there may be discrepancies in the data, the explanation for the conflicting data in the interpretation increases the credibility of the study (Krefting, 1991:220). Structural coherence is also achieved by the manner in which the researcher structures the report of the study.

According to Shenton (2004:69), the examination of previous findings to assess their congruence in relation to the current study may enhance the credibility of a study. This implies that the researcher relates the findings to the existing knowledge of the phenomenon.

1.7.2 Transferability

Transferability refers to the extent that the research findings can be applied to other settings or groups (Krefting, 1991:216). It is argued that qualitative research findings cannot be generalized to other settings because of the small number of participants and the particular environment (Shenton, 2004:69). Thus transferability can only be achieved if there is a dense description and that the reader understands this properly. Readers can make their own comparisons with similar situations that they see in their own situations (Shenton, 2004:69). The researcher provided a dense description of the data findings to enable the readers to make their own transferability judgements.

1.7.3 Dependability

Dependability relates to the reliability of the study. It implies that when the study is duplicated in the same context, with the same methods and the same participants it will lead to similar results (Shenton, 2004:71). The process of the study should be described in detail to enable any future researcher to repeat the work. The researcher described the research methodology in detail to enable any future researcher to duplicate the study.

Another strategy to enhance the dependability is to perform a code-recode procedure, in which the data is coded and then re-coded after a time period during the analysis period (Krefting, 1991:216). The researcher coded the data and revisited it after a time lapse of two weeks to re-code it and compare the results.

Another strategy to enhance dependability is to use another colleague and methodological experts to inspect the research plan and implementation (Krefting, 1991:216). The researcher acquired expert colleagues to assist with peer checking.

1.7.4 Conformability

Conformability refers to the exclusion of any biases, motivations and perspectives that may tarnish the research findings (Krefting, 1991:216). Objectivity is seen as the criterion of conformability. The findings need to reflect the participants' experiences and ideas and not the characteristics and perceptions of the researcher (Shenton, 2004:72). A detailed description of the methodology enables the reader to determine whether the data and constructs may be accepted. The audit trail of the study is important as it gives any observer the opportunity to trace the course of the study via the decisions made and procedures described. In this study all the documentation, that is, reflective essays, transcripts of the focus group sessions, field notes and analytical interpretations that the researcher used were made available for auditing.

1.8 ETHICAL CONSIDERATIONS

In this study, the researcher followed the ethical principles that Brink *et al.* (2012:34) describe. The three fundamental ethical principles are respect for persons, beneficence and justice. These principles are based on human rights that need to be protected during the research procedure: namely, self-determination, privacy, anonymity and confidentiality, fair treatment and protection from discomfort and harm (Brink *et al.*, 2012:34).

This research project was approved by the North-West University Ethics Committee: NWU-00010-11-51 and the Director of the School of Nursing Science. Their permission guaranteed that this study was ethically justified. The researcher adhered to the following principles in this study.

1.8.1 Principle of respect for persons

Participants are autonomous individuals that have the right of self-determination. This implies that they have the right to decide whether they want to be part of a study without the risk of being penalized in any manner. They may withdraw from the study at any stage and may refuse to give information. They have the right to ask for clarification of the study that they are requested to participate in and their decision to take part must be voluntary (Brink *et al.*, 2012:35). The participants in this study were nursing students and as students have diminished autonomy, they needed extra protection. Students might be influenced and manipulated to take part in the study and that could harm the integrity of the results.

The researcher provided clear information about the study's objectives and data collection method. This information was given verbally and in writing. Students were assured that they would be able to withdraw at any stage if they felt threatened or for some reason did not want to participate any longer. Participants who had no academic connection with the researcher or supervisor were accessed via a mediator from the School of Nursing Science. Written permission was obtained from the participants, based on informed consent. Confirmation was given that participants would not be discriminated against if they did not wish to participate in the research study.

1.8.2 Principle of beneficence

Participants also have the right to be protected from any harm or discomfort whether it be physical, psychological, emotional, financial, social or legal (Brink *et al.*, 2012:35). One may argue that qualitative research is non-invasive, but a researcher becomes part of the participants' lives. This can be very unsettling for participants and there is a risk that exploring unresolved issues may harm the participants (Brink *et al.*, 2012:36).

The researcher ensured that the participants were comfortable during the data collection sessions and was always aware of the participants' feelings when issues were explored during the data collection phases.

1.8.3 Principles of justice

The right to fair treatment means that the researcher must not express favouritism for any of the participants and only participants that relate to the research problem should be selected (Brink *et al.*, 2012:36). In this study, the researcher avoided any favouritism and selected from the population only participants that were relevant to the research problem.

The participants have the right to privacy, anonymity and confidentiality. This implies that the researcher must protect the information that the participants choose to share and that their names must not be used in the findings report (Brink *et al.*, 2012:35). The researcher assigned numbers to the reflective essays and the transcripts of the focus group sessions to ensure the anonymity of the participants. The documents and tapes were kept safe at the researcher's home in a locked cupboard and no unauthorized persons were allowed access to the data. The essays were kept apart from the written consent forms to avoid handwriting recognition and the shared information of the participants was kept confidential.

The researcher adhered to the proposed procedures, was aware of participants' safety and maintained ethical responsibility, scholarly integrity and honesty when transcribing, interpreting and reporting the findings of this study.

1.9 LITERATURE CONTROL

After the data collection and data analysis were completed, the research findings were compared with relevant literature. This was done in order to compare and validate the research findings with existing studies.

1.10 CONCLUSION

The nursing students' experience of the clinical environment has an influence, either positive or negative, on their perception of a specific specialization area. Their perception of the clinical environment does influence their decision to make the specialization area, namely the operating theatre, their area of expertise. The student nurses' lived experiences and the focus group discussions were analysed and portrayed in the discussion of this study's findings.

1.11 REPORT OUTLINE

The report was written in article format with the title: Nursing students' exposure to the clinical practice environment and its influence on their specialization choice.

The following elements were included:

- Introduction and background
- Research objectives
- Methodology
 - Sampling
 - Data collection
 - Data analysis
- Rigour
- Ethical considerations
- Conclusion
- Recommendations

REFERENCES

Acts **see** South Africa.

Andrews, G.J., Brodie, D.A., Andrews, J.P. & Wong, J. 2005. Placement matters: students' clinical experiences and their preferences for first employers. *International Nursing Review*, 52:142-153.

Baxter, P. 2006. The care model of clinical supervision: bridging the theory-practice gap. *Nurse Education in Practice*, 7(2):103-111.

Botma, Y., Greeff, M., Mulaudzi, F.M. & Wright, S.C.D. 2010. Research in health science. Cape Town: Heineman.

Botes, A. 1992. 'n Model vir kwalitatiewe navorsing in die verpleegkunde. *Curationis*, 15(4):36-42.

Brink, H., Van der Walt, C. & Van Rensburg, G. 2012. Fundamentals of research methodology for healthcare professionals. 3rd ed. Cape Town: Juta.

Brown, J., Nolan, M., Davies, S., Nolan, J. & Keady, J. 2008. Transforming students' views of gerontological nursing: realising the potential of 'enriched' environments of learning and care: a multi-method longitudinal study. *International journal of nursing studies*, 45:1214-1232.

Burns, N. & Grove, S.K. 2009. The practice of nursing research. 6th ed. Missouri: Saunders.

Chan, D.S.K. 2002. Associations between student learning outcomes from their clinical placement and their perceptions of the social climate of the clinical environment. *International journal of nursing studies*, 39:517-524.

Chesser-Smyth, P.A. 2005. The lived experiences of general student nurses on their first clinical placement: a phenomenological study. *Nurse education in practice*, 5:320-327.

Clarke, C.L., Gibb, C.E. & Ramprogus, V. 2003. Clinical learning environments: an evaluation of an innovative role to support preregistration nursing placements. *Learning in health and social care*, 2(2):105-115.

Creswell, J.W. 1994. Research design. Qualitative and quantitative approaches. London: Sage.

Creswell, J.W. 2009. Research design. qualitative, quantitative and mixed methods approach. 3rd ed. London: Sage.

Dickson, C., Walker, J. & Bourgeois, S. 2006. Facilitating undergraduate nurses clinical practicum: the lived experience of clinical facilitators. *Nursing education today*, 26:416-422.

Duvall, J. J. & Andrews, D. R. 2010. Using a structured review of the literature to identify key factors associated with the current nursing shortage. *Professional Nurse*, 26:309-317.

Edwards, H., Smith, S., Courtney, M., Finlayson, K. & Chapman, H. 2004. The impact of clinical placement location on nursing students' competence and preparedness for practice. *Nurse education today*, 24:248-255.

Elliott, M. 2002. The clinical environment: a source of stress for undergraduate nurses. *Australian journal of advanced nursing*, 20(1):34-38.

Fenush, J.K. & Hupcey, J.E. 2008. An investigation of clinical unit choices by graduating baccalaureate nursing students. *Journal of professional nursing*, 24(2):90-95.

Hall, W. A. 2006. Developing clinical placements in times of scarcity. *Nurse education today*, 26:627-633.

Happell, B. & Gaskin, C.J. 2012. The attitudes of undergraduate nursing students towards mental health nursing: a systematic review. *Journal of clinical nursing*, 22:148-158.

Holloway, I. & Freshwater, D. 2007. Narrative research in nursing. Oxford: Blackwell Publishing.

Jeggels, J.D., Traut, A. & Africa, A.S. 2013. A report on the development and implementation of a preceptorship training program for registered nurses. *Curationis: journal of the democratic nurses association*, 36(1):106-112.

Kim, K.H. 2007. Clinical competence among senior nursing students after their preceptor experiences. *Journal of professional nursing*, 23(6):369-375.

Krefting, L. 1991. Rigor in qualitative research: the assessment of trustworthiness. *The American journal of occupational therapy*, 45(3):214-222.

Lekhuleni, E.M., Van der Wal, D.M. & Elhers, V.J. 2004. Perceptions regarding the clinical accompaniment of student nurses in the Limpopo province. *Health SA Gesondheid*, 9(3):15-27.

Levett-Jones, T. & Lathlean, J. 2008. Belongingness: a prerequisite for nursing students' clinical learning. *Nurse education in practice*, 8:103-111.

Maree, K. & Pieterse J. 2011. Sampling. (In Maree, K., ed. *First steps in research*. Pretoria: Van Schaik. p. 171-181).

McKenna, L., McCall, L. & Wray, N. 2010. Clinical placement and nursing students' career planning: a qualitative exploration. *International journal of nursing practice*, 16:176-182.

McGarry, J., Aubeeluck, A., Simpson, C. & Williams, G. 2009. Nursing students' experiences of care. *Nursing older people*, 21(7):16-22.

Midgley, K. 2006. Pre-registration student nurses perception of the hospital-learning environment during clinical placements. *Nurse education today*, 26:338-345.

Mothiba, T.M., Lekhuleni, M.E., Maputle, M.S. & Nemathaga, L.H. 2012. University of Limpopo student nurses' clinical learning experiences in a public hospital at the Capricorn district, Limpopo province, South Africa. *African journal for physical, health education, recreation and dance*, 2:195-204.

Nieuwenhuis, J. 2011. Introducing qualitative research. (In Maree, K., ed. *First steps in research*. Pretoria: Van Schaik. p. 46-68).

Nieuwenhuis, J. 2011. Qualitative research designs and data gathering techniques. (*In* Maree, K., ed. *First steps in research*. Pretoria: Van Schaik. p. 69-97).

Oxford advanced learner's dictionary. 2010. 8th edition. New York: Oxford University Press.

Papp, I., Markkanen, M. & Von Bonsdorff, M. 2003. Clinical environment as a learning environment: student nurses' perceptions concerning clinical learning experiences. *Nurse Education Today*, 23:262-268.

Poldner, E., Simons, P.R. J., Wijngaards, M. F., Van der Schaaf, M. F. 2012. Quantitative content analysis procedures to analyse students' reflective essays: a methodological review of psychometric and edumetric aspects. *Educational Research Review*, 7:19-37...72

Pretorius, R. & Klopper, H.C. 2012. Positive practice environments in critical care units in South Africa. *International nursing review*, 59:66-72.

Saarikoski, M. & Leino-Klipi, H. 2002. The clinical learning environment and supervision by staff nurses: developing the instrument. *International journal of nursing studies*, 39:259-267.

SANC (South Africa Nursing Council). 2008. Nursing education and training standards. <http://www.sanc.co.za/pdf/Nursing%20and%20Training%Standards.pdf> Date of access: 27 Jun 2013.

SANC (South Africa Nursing Council). 2012a. S A Nursing Council growth in the registers. http://www.sanc.co.za/stats/stat_ts/Growth/Growth%202002-2011_files/slide0025.htm Date of access: 26 Jun 2012.

SANC (South Africa Nursing Council). 2012b. Registration of additional qualifications. <http://www.sanc.co.za/stats/stat2011/SANCStats2011AddQualsRegistered.pdf> Date of access: 26 Jun 2012.

SANC (South African Nursing Council). 2012c. Advanced practice nursing. <http://www.sanc.co.za/sanc%20regulations/SANC%20Advanced%20Practice%20Nursing%20-%20DRAFT%20Position%20Paper.htm> Date of access: 28 Jun 2013.

Shenton, A.K. 2004. Strategies for ensuring trustworthiness in qualitative research projects. *Education for information*, 22:63-75.

South Africa. 1978. Nursing act 50 of 1978 as amended.

South Africa. 2005. Nursing Act 33 of 2005.

Thomas, A., Bosch-Venter, A. & Boninelli, I. 2010. Addressing the nursing shortage at netcare: a new remedy or same prescription. *South African journal of labour relations*, 34(1):46-67.

Warren, A.L. & Denham, S.A. 2010. Relationships between formalized preceptor orientation and student outcomes. *Teaching and learning in nursing*, 5:4-11.

Watkins, K.D., Roos, V. & Van Der Walt, E. 2011. An exploration of personal, relational and collective well-being in nursing students during their training at a tertiary education institution. *Health SA Gesondheid*, 16(1):1-10.

Worrall-Clare, K. 2005. The national nursing act, nurse shortages, training nurses. *Professional nursing today*. 9(3):3-4

SECTION 2: LITERATURE REVIEW: THE INFLUENCE OF THE CLINICAL ENVIRONMENT ON THE NURSING STUDENT'S CHOICE OF SPECIALIZATION

2.1 INTRODUCTION

The clinical environment has been the topic of many studies in the past ten years. Various researchers have accentuated their concerns regarding the importance of meaningful experiences in the clinical environment. These clinical experiences are a very important aspect of students' professional education and have a great influence on students' decision making (Andrews *et al.*, 2005:146; Chan, 2002:522). This literature study focuses on the influence of clinical experience on students.

A study conducted by Andrews *et al.* (2005:147) established that there is a significant relationship between students' clinical experiences and their decisions to apply for positions at specific hospitals. Students prefer hospitals where they have had a supportive and positive experience. According to the literature, numerous factors influence the experience of students. These factors are elaborated on in this review.

There is currently a great shortage of registered nurses in the clinical field, especially in specialized areas like the operating theatre. According to the SANC's statistical data for 2012, an additional qualification in operating theatre is one of the qualifications that are least applied for (SANC, 2012b). This clearly indicates that not many nursing students choose the operating theatre as an area of specialization. Could it be that nursing students have a negative exposure in that specific environment? If so, what could be transformed in these environments to impart a positive exposure? In line with the above questions, the purpose of this literature study was to explore the experiences of nursing students of the clinical environment and how it influences their choice of specialization.

2.2 SEARCH STRATEGY

Related literature was explored while the above questions were continually kept in mind. *EbscoHost*, *ScienceDirect*, *Chocrane* and *SAePublications* were some of the databases searched for related articles. Keywords used during the searching process included *clinical environment*, *nursing students*, *clinical placements*, *clinical education*, *learning environment* and *nursing shortages*. There were twenty-seven related articles found, spanning the publication period between 2002 and 2012, but only twenty-one were found to be appropriate for this literature study. In addition, information was collected from the South African Nursing Council's website. Relevant topics identified include the influence that the

clinical experience have on the students, aspects that have an influence on these clinical experiences and the shortages of nurses in specialized clinical environments.

2.3 REVIEW

- **The influence of clinical experience on nursing students**

An important part of any undergraduate nursing curriculum is suitable exposure to a clinical environment. Clinical placement in a specific clinical environment allows students to gain experience in providing care to specific patients and assists them to reach their educational goals (Hall, 2006:632). Fenush and Hupcey (2008:94) concluded that there is a definite relationship between the experiences of a clinical environment and students' decision to work in that clinical environment where the experiences had occurred.

When students experience negative exposure in a clinical environment, it may be a source of added stress and anxiety (Elliott, 2002:37). Such negative experiences may generate a negative perception of the specific environment and diminish the learning experience of students. Students are more likely not to choose working in these specific environments.

According to Saarikoski and Leino-Klipi (2002:264), students identify a positive unit atmosphere as important for enhancing clinical learning. Chan (2002:532) concludes that students prefer a more positive clinical environment than they perceive as actually being present. Positive clinical environments for students should be designed to enhance clinical learning (Hosoda, 2006:488). The importance of a positive and supportive clinical environment to enhance learning is also highlighted in the study conducted by Nash *et al.* (2008:55). Levett-Jones and Lathlean (2008:107) also assert that a negative clinical environment has a negative and sometimes long-lasting impact on students' attitude to these specific environments.

According to Brown *et al.* (2008:1219), negative experiences shape students' perceptions of nursing the elderly in such a way that they will not consider working with the elderly after completing their studies. An interesting conclusion is that a positive experience in this specific environment may transform this perception of students in such a way that they may consider gerontological nursing. Edwards *et al.* (2004:253) conclude that when students are exposed to rural clinical environments they are encouraged to consider rural job opportunities when they graduate. Andrews *et al.* (2005:146) believe that students gain knowledge of the specific hospitals where they are placed to obtain clinical experience. Students then prefer to seek employment at hospitals where they are exposed to positive and supportive learning experiences. It is also suggested by Andrews *et al.* (2005:146) that

the recruitment of nursing personnel started as soon as students are allocated to a specific hospital and that it implies that the organization must ensure that a supportive clinical environment is provided to students. The exposure of students to the clinical environment has a significant impact on their future. It not only shapes their perception of their role as registered nurses, but also plays a major role in the development of their judgment of specific nursing areas.

- **Aspects that have an influence on the clinical experience of students**

In the paragraphs above, the importance of positive exposure in the clinical environment and its influence on students was discussed. The following discussion highlights aspects that have an influence on the experience of students.

A ward manager is influential when it comes to the unit's attitude towards students and can create circumstances for a positive unit culture (Andrews *et al.*, 2005:148; Saarikoski & Leino-Klipi, 2002:265). According to Chesser-Smyth (2005:325), when a ward manager is absent, the ward and the supervision of students become disorganized. Personnel can also contribute to making students feel welcome by helping them to believe that they are part of the team. Students feel more secure when personnel are highly skilled, knowledgeable and approachable (Brown *et al.*, 2008:1223). The implications of a ward manager's role are identified in a study by Andrews *et al.* (2005:149). If students feel confident about the management in a particular hospital, they are more likely to choose to work there.

Preceptors have the potential to influence the experience of students. Preceptors work in the wards and assist students in the clinical environment of hospitals. According to Kim (2007:375), it is important to have a primary preceptor in the clinical environment to enhance students' experience. Andrews *et al.* (2005:148) state that a preceptor's intended role is to support students and simultaneously facilitate learning opportunities. Students tend to experience a positive environment as soon as they form a consistent relationship with their preceptor and feel that such a person values their goals and can help them to reach their goals. Saarikoski and Leino-Klipi (2002:265) develop the value of this relationship by identifying elements like mutual respect, interaction and a sense of trust as important elements.

Warren and Denham (2010:10) conclude that a preceptor that lacks nursing expertise, teaching strategies, organizational skills and leadership skills, will be unsuccessful in a preceptor's role. They recommend that preceptors receive sufficient preparation before they assume a position as a preceptor of students. Another necessity is regular support from the faculty members. According to Midgley (2005:343), preceptors in the clinical field require

more effective training and support to enable them to meet the expectations of students. The study of Andrews *et al.* (2005:148) posits that in the absence of mentors and supportive staff, students cannot reach their objectives and are often appointed to perform menial duties as a result. Unqualified or absent preceptors thus create negative experiences and opinions of specific clinical settings.

Clinical preceptors are usually appointed to supervise students' learning experiences (Dickson *et al.*, 2005:417; Saarikoski *et al.*, 2002:341). They should have the expertise to provide quality guidance to students and assist them in the clinical setting (Dickson *et al.*, 2005:421). According to Chan (2002:523), it is important that the clinical preceptors recognize the vulnerability of students in a clinical environment. High-quality communication between students and clinical preceptors could provide a supportive clinical experience.

Personnel shortages in wards have a definite negative impact on students. The report by Maginnis and Croxon (2007:218) underscores the fact that the current shortage of nurses in the clinical field makes the preceptor strategy problematic and means that students are not exposed to efficient clinical experiences. One of the characteristics of a negative environment is insufficient personnel levels. In such an environment, students end up with large workloads, making it difficult for them to reach their learning goals (Brown *et al.*, 2008:1220; Andrews *et al.*, 2005:148). Students end up having a negative experience in that clinical area, which in turn influences their perception of the clinical environment.

It's clear that the above aspects have a significant influence on the experiences of the students in the clinical environment and that these experiences can in turn influence the opinion of students regarding specific environments.

- **Shortage of registered nurses in specialized areas**

According to Worrall-Clare (2005:4), the current number of nurses available in South Africa cannot satisfy the need created by both public and private hospitals. Thomas *et al.* (2010:60) also conclude that although hospitals have implemented several strategies to keep their skilled nurses, they continue to have personnel shortages. The SANC's website (SANC, 2012a) provides statistical data, that is notably relevant to this literature study. Between 2002 and 2012, the year-on-year growth in registered nurses registering with the SANC nationally, was an astoundingly low 2.5% per annum. This growth rate was unquestionably insufficient to counter the existing shortage of registered nurses. It is also very notable in the statistical data (SANC, 2012b), that even though the growth in the number of nursing students attending a course in nursing for the first time, increased by almost 100% over the ten-year period, the growth in the number of registered nurses that completed their studies

seems to be only 50%. This leaves the impression that only 50% of students who begin a nursing course complete it and register. The implication of this occurrence is that shortages in nursing staff will continue to be a dilemma, especially while the demand for nurses grows globally.

From further statistical data (SANC, 2012c) it is extrapolated that only 3% of the registered nurses applying for registration for additional qualifications complete their post basic diploma course in *Medical and Surgical Nursing: Operating Theatre*. In turn, the same data highlights the fact that as few as 25% of registered nurses complete a post basic diploma in administration and as few as 14% in education. It can be concluded that the operating theatre is clearly one of the specialized areas that is the least chosen for a post basic diploma course.

2.4 CONCLUSION

It is obvious that clinical experience has a profound influence on nursing students. According to Andrews *et al.* (2005:151), the most important finding of their research is that clinical experience, especially the absence or presence of a positive environment, influences students' decisions about where they would prefer to work. In addition to this, it is clear that clinical placement is important in attracting students to specific hospitals and encouraging them to remain in the profession. The study by Brown *et al.* (2008:1223) concludes that negative environments need to be taken into account as having a major influence on the shaping of students' future opinions of a speciality area.

Clinical environments have a direct influence on students' experiences and can be a source of stress and anxiety for students (Elliott, 2002:37). The presence of mutual respect and a positive regard for others, together with good communication among the various role players in a clinical environment, could create a positive experience for students (Chesser-Smyth, 2005:324; Chan, 2002:523). According to the study conducted by Levett-Jones and Lathlean (2008:110), it is possible to create clinical environments that make students feel comfortable and encourage them to feel that they are part of the team.

Worrall-Clare (2005:4) asserts that a shortage in nursing personnel is a persistent problem and areas like the operating theatre are found to be the least favourite choice of a specialization area (SANC, 2012c). Andrews *et al.* (2005:147) state that an organization's successful recruitment of staff should begin while students are at hospitals for clinical practice, concurrently providing the students with supportive environments.

Although articles were found regarding the influence of the clinical environment on students' decisions about where to work as soon as their studies are completed, none explore the impact of a clinical environment on the specialization choices of students. Andrews *et al.* (2005:152) suggest that the clinical environment may not only influence the choice of location, but may also influence decisions regarding specialization and patient groups and that further research may help to understand this.

REFERENCES

- Andrews, G.J., Brodie, D.A., Andrews, J.P. & Wong, J. 2005. Placement matters: students' clinical experiences and their preferences for first employers. *International Nursing Review*, 52:142-153.
- Brown, J., Nolan, M., Davies, S., Nolan, J. & Keady, J. 2008. Transforming students' views of gerontological nursing: realising the potential of 'enriched' environments of learning and care: a multi-method longitudinal study. *International journal of nursing studies*, 45:1214-1232.
- Chan, D.S.K. 2002. Associations between student learning outcomes from their clinical placement and their perceptions of the social climate of the clinical environment. *International journal of nursing studies*, 39:517-524.
- Chesser-Smyth, P.A. 2005. The lived experiences of general student nurses on their first clinical placement: a phenomenological study. *Nurse education in practice*, 5:320-327.
- Dickson, C., Walker, J. & Bourgeois, S. 2005. Facilitating undergraduate nurses clinical practicum: the lived experience of clinical facilitators. *Nursing education today*, 26:416-422.
- Edwards, H., Smith, S., Courtney, M., Finlayson, K. & Chapman, H. 2004. The impact of clinical placement location on nursing students' competence and preparedness for practice. *Nurse education today*, 24:248-255.
- Elliott, M. 2002. The clinical environment: a source of stress for undergraduate nurses. *Australian journal of advanced nursing*, 20(1):34-38.
- Fenush, J.K. & Hupcey, J.E. 2008. An investigation of clinical unit choices by graduating baccalaureate nursing students. *Journal of professional nursing*, 24(2):90-95.
- Hall, W. A. 2006. Developing clinical placements in times of scarcity. *Nurse education today*, 26:627-633.
- Hosoda, Y. 2006. Development and testing of a clinical learning environment diagnostic inventory. *Journal of advanced nursing*, 56(5):480-490.

- Kim, K.H. 2007. Clinical competence among senior nursing students after their preceptor experiences. *Journal of professional nursing*, 23(6):369-375.
- Levett-Jones, T. & Lathlean, J. 2008. Belongingness: a prerequisite for nursing students' clinical learning. *Nurse education in practice*, 8:103-111.
- Nash, R., Lemkce, P. & Sacre, S. 2009. Enhancing transition: an enhanced model of clinical placement for final year nursing students. *Nurse education today*, 29:48-56.
- Maginnis, C. & Croxon, L. 2007. Clinical teaching model for nursing practice. *Australian journal of rural health*, 15:218-219.
- Midgley, K. 2005. Pre-registration student nurses perception of the hospital-learning environment during clinical placements. *Nurse education today*, 26:338-345.
- Saarikoski, M. & Leino-Klipi, H. 2002. The clinical learning environment and supervision by staff nurses: developing the instrument. *International journal of nursing studies*, 39:259-267.
- Saarikoski, M., Leino-Klipi, H. & Warne, T. 2002. Clinical learning environment and supervision: testing a research instrument in an international comparative study. *Nurse education today*, 22:340-349.
- SANC (South Africa Nursing Council). 2012a. S A Nursing Council growth in the registers. http://www.sanc.co.za/stats/stat_ts/Growth/Growth%202002-2011_files/slide0025.htm Date of access: 26 Jun 2012.
- SANC (South Africa Nursing Council). 2012b. S A Nursing Council growth in the students / pupils. http://www.sanc.co.za/stats/stat_ts/Growth/Growth%202002-2011_files/slide0026.htm Date of access: 26 Jun 2012.
- SANC (South Africa Nursing Council). 2012c. Registration of additional qualifications. <http://www.sanc.co.za/stats/stat2011/SANCStats2011AddQualsRegistered.pdf> Date of access: 26 Jun 2012.
- Thomas, A., Bosch-Venter, A. & Boninelli, I. 2010. Addressing the nursing shortage at netcare : a new remedy or same prescription. *South African journal of labour relations*, 34(1):46-67.

Warren, A.L. & Denham, S.A. 2010. Relationships between formalized preceptor orientation and student outcomes. *Teaching and learning in nursing*, 5:4-11.

Worrall-Clare, K. 2005. The national nursing act, nurse shortages, training nurses. *Professional nursing today*. 9(3):3-4.

SECTION 3: ARTICLE

This article has been edited for dissertation purposes. The article is written according to the author guidelines of Curationis, as inserted.

Title:

**NURSING STUDENTS EXPOSURE TO THE OPERATING THEATRE AND ITS
INFLUENCE ON THEIR SPECIALIZATION CHOICE**

Authors:

Esther F. Du Toit

Elsabe Bornman

CURATIONIS' GUIDE FOR AUTHORS

Structure and style of your empirical research article

The page provides an overview of the structure and style of your empirical research article to be submitted to the *Curationis*. The empirical research article provides an overview of innovative research in a particular field within or related to the focus and scope of the journal presented according to a clear and well-structured format (between 3500 and 7000 words with a maximum of 60 references).

- Language: Manuscripts must be written in British English.
- Line numbers: Insert continuous line numbers.
- Font:
 - Font type: Palatino
 - Symbols font type: Times New Roman
 - General font size: 12pt
- Line spacing: 1.5
- Headings: Ensure that formatting for headings is consistent in the manuscript.
 - First headings: normal case, bold and 14pt
 - Second headings: normal case, underlined and 14pt
 - Third headings: normal case, bold and 12pt
 - Fourth headings: normal case, bold, running-in text and separated by a colon.

Our publication system supports a limited range of formats for text and graphics. Text files can be submitted in the following formats only:

- Microsoft Word (.doc): We cannot accept Word 2007 DOCX files. If you have created your manuscript using Word 2007, you must save the document as a Word 2003 file before submission.
- Rich Text Format (RTF) documents uploaded during Step 2 of the submission process. Users of other word processing packages should save or convert their files to RTF before uploading. Many free tools are available that will make this process easier.

The structure and style of your original article

Page 1

The format of the compulsory cover letter forms part of your submission and is on the first page of your manuscript and should always be presented in English. You should provide all of the following elements:

- Article title: Provide a short title of 50 characters or less.
- Significance of work: Briefly state the significance of the work being reported on.
- Full author details: Provide title(s), full name(s), position(s), affiliation(s) and contact details (postal address, email, telephone and cellular number) of each author.
- Corresponding author: Identify to whom all correspondence should be addressed to.
- Authors' contributions: Briefly summarise the nature of the contribution made by each of the authors listed.
- Summary: Lastly, a list containing the number of words, pages, tables, figures and/or other supplementary material should accompany the submission.

Page 2 and onwards

Title: The article's full title should contain a maximum of 95 characters (including spaces).

Abstract (first-level heading)

- Do not cite references in the abstract.
- Do not use abbreviations excessively in the abstract.
- The abstract should be written in English.
- The abstract should be no longer than 250 words and must be written in the past tense. The abstract should give a succinct account of the objectives, methods, results and significance of the matter. The structured abstract for an Original Research article should consist of five paragraphs labelled Background, Objectives, Method, Results and Conclusion.
 - Background: *Why do we care about the problem?* The context and purpose of the study (what practical, scientific or theoretical gap is your research filling?).
 - Objectives: *What problem are you trying to solve?* What is the scope of your work (a generalised approach, or for specific situation). Be careful not to use too much jargon.
 - Method: *How did you go about solving or making progress on the problem?* How the study was performed and statistical tests used (what did you actually do to get the results). Clearly express the basic design of the study, name or briefly describe the basic methodology used without going into excessive detail. Be sure to indicate the key techniques used.
 - Results: *What is the answer?* The main findings (as a result of completing the above procedure/study what did you learn/invent/create?). Identify trends, relative change or differences on answers to questions.
 - Conclusion: *What are the implications of your answer?* Brief summary and potential implications (what are the larger implications of your findings, especially for the problem/gap identified in your motivation?).

Introduction (first-level heading)

The introduction contains two subsections, namely the background section and the literature review.

- Problem statement (second-level heading): The setting section should be written from the standpoint of readers, that is, without specialist knowledge in that area and must clearly state and illustrate the introduction to the research and its aims in the context of previous work bearing directly on the subject. The setting section to the article normally contains the following five elements.
 - Aims of the study/Key focus (third-level heading): A thought-provoking introductory statement on the broad theme or topic of the research.
 - Background (third-level heading): Providing the background or the context to the study (explaining the role of other relevant key variables in this study);
 - Trends (third-level heading): Cite the most important published studies previously conducted on this topic or that has any relevance to this study (provide a high-level synopsis of the research literature on this topic).
 - Research objectives (third-level heading): Indicate the most important controversies, gaps and inconsistencies in the literature that will be addressed by this study. In view of the above trends, state the core research problem and specific research objectives that will be addressed in this study and provide the reader with an outline of what to expect in the rest of the article.
 - Definition of key concepts (third-level heading)

- Contribution to field (third-level heading): Explanation of the study's academic (theoretical and methodological) or practical merit and/or importance (provide the value-add and/or rationale for the study).
- Literature review (second-level heading): The literature review is the second subsection under the Introduction and provides a brief and concise overview of the literature under a separate second-level heading, e.g. literature review. A synthesis and critical evaluation of the literature (not a compilation of citations and references) should at least include or address the following elements, ensure these are in the literature review. Define conceptual (theoretical) definitions of all key concepts; A critical review and summary of previous research findings (theories, models, frameworks, etc.) on the topic; A clear indication of the gap in the literature and for the necessity to address this void; and A clearly established link exists between formulated research objectives and theoretical support from the relevant literature.

Research method and design (first-level heading)

This section should include:

- Design (second-level heading): Describe your experimental design clearly, including a power calculation if appropriate. Note: Additional details can be placed in the online supplementary location.
- Materials (second-level heading): Describe the type of organism(s) or material(s) involved in the study.
- Data collection method/Procedure (second-level heading): Describe the protocol for your study in sufficient detail (clear description of all interventions and comparisons) that other scientists could repeat your work to verify your findings.
- Data analysis (second-level heading): Describe how the data were summarised and analysed, additional details can be placed in the online supplementary information.
- Context of the study (second-level heading): Describe the site and setting where your field study was conducted.

Results (first-level heading)

This section provides a synthesis of the obtained literature grouped or categorised according to some organising or analysis principle.

Tables may be used and/or models may be drafted to indicate key components of the results of the study.

- Organise the results based on the sequence of Tables and Figures you will include in the manuscript.
- The body of the Results section is a text presentation of the key findings which includes references to each of the Tables and Figures.
- Statistical test summaries (test name, p-value) are usually reported parenthetically in conjunction with the biological results they support, use SI unit.
- Present the results of your experiment(s)/research data in a sequence that will logically support (or provide evidence against) the hypothesis, or answer the question, stated in the Introduction.

All units should conform to the SI convention and be abbreviated accordingly. Metric units and their international symbols are used throughout, as is the decimal point (not the decimal comma).

Ethical considerations (first-level heading)

Articles based on the involvement of animals or humans must have been conducted in accordance with relevant national and international guidelines. Approval must have been obtained for all protocols from the author's institutional or other relevant ethics committee and the institution name and permit numbers provided at submission.

- Potential benefits and hazards (second-level heading): What risks to the subject are entailed in involvement in the research? Are there any potential physical, psychological or disclosure dangers that can be anticipated? What is the possible benefit or harm to the subject or society from their participation or from the project as a whole? What procedures have been established for the care and protection of subjects (e.g. insurance, medical cover) and the control of any information gained from them or about them?
- Recruitment procedures (second-level heading): Was there any sense in which subjects might be 'obliged' to participate – as in the case of students, prisoners, learners or patients – or were volunteers being recruited? If participation was compulsory, the potential consequences of non-compliance must be indicated to subjects; if voluntary, entitlement to withdraw consent must be indicated and when that entitlement lapses.
- Informed consent (second-level heading): Authors must include how informed consent was handled in the study.
- Data protection (second-level heading): Authors must include in detail the way in which data protection was handled.

Trustworthiness (first-level heading)

This refers to the findings of the study being based on the discovery of human experience as it was experienced and observed by the participants.

- Reliability (second-level heading): Reliability is the extent to which an experiment, test, or any measuring procedure yields the same result on repeated trials. Without the agreement of independent observers able to replicate research procedures, or the ability to use research tools and procedures that yield consistent measurements, researchers would be unable to satisfactorily draw conclusions, formulate theories, or make claims about the generalizability of their research.
- Validity (second-level heading): Validity refers to the degree to which a study accurately reflects or assesses the specific concept that the researcher is attempting to measure. While reliability is concerned with the accuracy of the actual measuring instrument or procedure, validity is concerned with the study's success at measuring what the researchers set out to measure. Researchers should be concerned with both external and internal validity. External validity refers to the extent to which the results of a study are generalisable or transferable. Internal validity refers to (1) the rigor with which the study was conducted (e.g. the study's design, the care taken to conduct measurements, and decisions concerning what was and wasn't measured) and (2) the extent to which the designers of a study have taken into account alternative explanations for any causal relationships they explore. In studies that do not explore causal relationships, only the first of these definitions should be considered when assessing internal validity.

Discussion (first-level heading)

This section normally contains the following four elements. It is suggested that sub-headings are used in this section:

- Outline of the results (second-level heading): Restate the main objective of the study and reaffirm the importance of the study by restating its main contributions; summarise the results in relation to each stated research objective or research hypothesis; link the findings back to the literature and to the results reported by other researchers; provide explanations for unexpected results.
- Practical implications (second-level heading): Reaffirm the importance of the study by restating its main contributions and provide the implications for the practical implementation your research.

Limitations of the study (first-level heading): Point out the possible limitations of the study and provide suggestions for future research.

Recommendations (first-level heading): Provide the recommendations emerging out of the current research.

Conclusion (first-level heading)

This should state clearly the main conclusions of the research and give a clear explanation of their importance and relevance, with a recommendation for future research (implications for practice). Provide a brief conclusion that restates the objectives; the research design; the results and their meaning.

Acknowledgements (first-level heading)

If, through your study, you received any significant help in conceiving, designing, or carrying out the work, or received materials from someone who did you a favour by supplying them, you must acknowledge their assistance and the service or material provided. **Authors should always acknowledge outside reviewers of their drafts and any sources of funding that supported the research.**

- **Competing interests (second-level heading):** A competing interest exists when your interpretation of data or presentation of information may be influenced by your personal or financial relationship with other people or organisations that can potentially prevent you from executing and publishing unbiased research. Authors should disclose any financial competing interests but also any non-financial competing interests that may cause them embarrassment were they to become public after the publication of the manuscript. Where an author gives no competing interests, the listing will read 'The authors declare that they have no financial or personal relationship(s) which may have inappropriately influenced them in writing this article.'
- **Authors' contributions (second-level heading):** This section is necessary to give appropriate credit to each author, and to the authors' applicable institution. The individual contributions of authors should be specified with their affiliation at the time of the study and completion of the work. An 'author' is generally considered to be someone who has made substantive intellectual contributions to a published study. Contributions made by each of the authors listed, along the lines of the following (please note the use of author initials):

J.K. (University of Pretoria) was the project leader, L.M.N. (University of KwaZulu-Natal) and A.B. (University of Stellenbosch) were responsible for experimental and project design. L.M.N. performed most of the experiments. P.R. made conceptual contributions and S.T. (University of Cape Town), U.V. (University of Cape Town) and C.D. (University of Cape Town) performed some of the experiments. S.M. (Cape Peninsula University of Technology) and V.C. (Cape Peninsula University of Technology) prepared the samples and calculations

were performed by C.S., J.K. (Cape Peninsula University of Technology) and U.V. wrote the manuscript.

References (first-level heading)

Begin the reference list on a separate page with no more than 60 references. *Curationis* uses the Harvard referencing style, details of which can be downloaded from the journal website. Note: No other style will be permitted.

COVER PAGE

Article title: Nursing students exposure to the operating theatre and its influence on their choice of specialization

Significance of work: The nursing students' choice to work in specialization areas, as the operating theatre, might be linked to their experience of their exposure to that specific area. This study provides evidence of the influence of the exposure students had during placement in the operating theatre. This evidence may contribute to positive clinical experiences that might result in the enhancement of the number of nursing students that choose to specialize in operating theatre.

Author information:

First author

E. F du Toit

B.Cur; RN; Theatre specialist; RNE; RNM

Master degree student

School of Nursing Science

North West University

South Africa

Email: essiedt1@gmail.com

Second author and corresponding author

E. Bornman

MCur; RN; RNM; RNE; PHC

Senior lecturer

School of Nursing Science

North West University

Private bag x 6001

Potchefstroom

South Africa

Phone: +27 18 299 1829

Fax: +27 18 299 1827

Email: Elsabe.Bornman@nwu.ac.za

Authors contributions:

Esther du Toit contributed to the conceptualization of the study, data collection, analysis, interpretation of the findings and the writing of this manuscript. Elsabè Bornman contributed to the conceptualization, supervision and critical revision of this study and revision of the draft of this manuscript.

Summary

Number of words: 7 863

Number of pages: 27

Number of tables: 2

Abstract

Background

Clinical environments have a positive or negative influence on the experiences of nursing students. A relationship between the influence of the clinical environment and the decision to apply at a specific hospital was established, but little is known about how this relationship affects the choice of nursing students to specialize in a specific area.

Objectives

This study aimed to explore the influence that the clinical environment had on the decision of nursing students to specialize in a specific area.

Method

An explorative and descriptive design, which is qualitative in nature, was followed in this study. The population consisted of undergraduate third year nursing students from an educational institution, who were exposed to the clinical environment of a theatre. The data collection was completed in two phases. The nursing students' experiences and how it influences their decision to specialize, after exposure to operating theatre as a clinical environment, were explored by means of reflective essays. This data was analysed and five categories with two themes and twenty-six subthemes were identified in the reflective essays. The findings of these reflective essays were validated with two focus group sessions.

Results

Students' experiences in the theatre influenced their perceptions of this clinical environment.

Conclusions

The clinical environment had an influence on the nursing students' decision to specialize in the theatre, but their personal preference were also an influence on their decisions.

Introduction

Nursing students' experiences of the clinical environment has been the theme of many studies and it was established that these experiences could either be positive or negative (Brown, Nolan, Davies, Nolan & Keady, 2008:1215; Clarke, Gibb & Ramprogus, 2003:113; McGarry, Aubeekluck, Simpson & Williams, 2009:22; Midgley, 2006:338). The relationship between these experiences and its influences on the students' decisions to choose certain areas when they graduated were established in studies done by Andrews, Brodie, Andrews and Wong (2005:147), Brown *et al.* (2008:1224) and Fenush and Hupcey (2008:94).

In South Africa there is a shortage of registered nurses in the clinical field, especially in specialized areas (Pretorius & Klopper, 2012:66). An area that was identified when the South African Nursing Council's (SANC) statistical data for 2012 where examined was the operating theatre (SANC, 2012b). This indicated that not many nursing students chose the operating theatre as an area of specialization when they graduated.

An exploration and description of the relationship between the students' experience and their decision to specialize or to avoid the operating theatre as specialization area should enhance the understanding of this phenomenon.

Problem statement

It is evident, in the practical field, that there is a shortage of registered professional nurses who choose the theatre as an area of specialization and this phenomenon is supported when the statistical results of SANC (2012b) are examined. Many research studies describe the influence of the clinical environment on nursing students and their decision not to choose a certain area of specialization (Andrews *et al.*, 2005:151; Brown *et al.*, 2008:1223; Edwards, Smith, Courtney, Finlayson & Chapman, 2004:253; Happell & Gaskin, 2012:156 McKenna, McCall & Wray, 2010:181).

In the researcher's experience of the theatre and the placement of nursing students in that area, it was observed that students do not choose to work in the operating theatre when their studies are concluded, that there is a need for more theatre nurses. It could be beneficial to explore the nursing students' experiences of the theatre and how it might influence their decision to specialize in the operating theatre.

Aims of the study

The aim of this research was to explore and describe the relationship between the experience of nursing students of the operating theatre as clinical environment and how it influences their choice of specialization. This description of their experiences might assist

the researcher to make recommendations to enhance the students' experiences of the clinical environment.

Background

Nursing students should be exposed to a variety of clinical environments in order for them to reach the particular outcomes of the SANC (South Africa Nursing Council, 2008). These placements in a specific clinical environment allow students to gain experience of providing care to patients (Hall, 2006:632). Clinical environments may be either positive or negative experiences for nursing students, caused by various components of these environments (Andrews *et al.*, 2005:152; Chesser-Smyth, 2005:325; Saarikoski & Leino-Klipi, 2002:265). The clinical environment consists of human and physical components like unit managers, preceptors, personnel and the physical structure of units (Andrews *et al.*, 2005:52; Brown *et al.*, 2008:1223; Pretorius & Klopper, 2012:69; Saarikoski & Leino-Klipi, 2002:265; Warren & Denham, 2010:10).

All the role players in a clinical environment have the potential to influence the nursing students' experience. These include unit managers who have the potential to create either positive or negative circumstances for students in the units (Andrews *et al.*, 2005:148; Saarikoski & Leino-Klipi, 2002:265). Preceptors have the function to close the gap between theory and practice (Baxter, 2006:106; Andrews *et al.*, 2005:148). The absence of preceptors add to the difficulties that the students experience in the clinical environment (Mothiba, Lekhuleni, Maputle & Nemathaga, 2012:199).

Personnel are major role players in students' experiences in a clinical environment. They are in a position to make students feel welcome or unwelcome (Brown *et al.*, 2008:1223). In South Africa, Watkins, Roos and Van Der Walt (2011:6) found that nursing students have a negative perception of personnel and felt that they do not support them. Mothiba *et al.* (2012:201) reinforce the view that poor interpersonal relationships and personnel unwilling to work with nursing students create a negative experience of the clinical environment for students.

It was found that these experiences had an influence on the students' decision to choose certain areas to specialize in when they graduated (Fenush & Hupcey, 2008:84; McKenna *et al.*, 2010:181). It is thus evident that nursing students' experiences of the clinical environment influence their decision to specialize in specific nursing areas.

Nursing students' decision to avoid specific areas to specialize might result in shortages in those less preferred areas. Shortages in specialized units like the operating theatre are confirmed when statistical data of the SANC is examined (SANC, 2012b). In comparison

with other specialities, operating theatre is the speciality that has the smallest number of registrations. One can only assume that the possibility exists that a negative experience of the operating theatre as a clinical environment may negatively influence nursing students' decisions to specialize in that area of expertise.

This researcher holds the view that an analysis of the phenomenon may enhance awareness when student nurses are recruited for specialized areas and when they are placed in a clinical environment. That may lead to an increase in personnel in specialized units like the operating theatre, in which a great shortage of knowledgeable personnel is a major problem.

Definition of key concepts

Clinical environment: the environment that relates to hospital training that may have an effect on behaviour or development (Oxford Advanced Learner's Dictionary, 2010). The clinical environment consists of the clinical setting, equipment, personnel, patients, preceptors and lecturers (Papp, Markkanen & Von Bonsdorff, 2003:262). In this study the clinical environment is divided into physical environment and emotional environment. The physical environment refers to the physical structure. The emotional environment refers to all the role players in the theatre: personnel, unit managers, preceptors and doctors.

Experience: events shared by all the members of a particular group in a society that influences the way they think and behave (Oxford Advanced Learner's Dictionary, 2010). Experience is the knowledge that is gained from being involved in an event (Burns & Grove, 2009:9). In this study, experience refers to the positive or negative experience of nursing students in a clinical environment.

Nurse specialist: a nurse that has in-depth knowledge of and expertise in a specific practice area and a post-graduate diploma or degree in the specific specialization. This qualification needs to be registered by the SANC (SANC, 2012c).

Specialize: become an expert in a particular area of work, study or business; spend more time on one area of work than on others (Oxford Advanced Learner's Dictionary, 2010). In this study, nursing students choose an area of nursing to be a nurse specialist, for example, the operating theatre.

Student nurse: according to the Nursing Act, 1978 (50 of 1978) this is a person currently involved in an education and training program at an approved nursing school and is registered with the SANC. In this study a student nurse is also described as a nursing student that is registered at a university for a Bachelor Curator degree in Nursing Science.

Operating theatre: the operating theatre is a specialized unit where surgical procedures are performed according to specific policies. All the expertise of the nurse is needed to keep the patient safe. Nursing personnel working in this unit should be advocates for the patient's rights and privacy.

Contribution to field

This study adds to understanding the impact of a clinical environment on nursing students. When recruiting nursing students to specialize in certain clinical environments, like the operating theatre, organizations must realize that certain changes need to be made to make this specialization choice more attractive.

Research method and design

Design

The design that guided this study was qualitative, explorative and descriptive in nature (Botma, Greeff, Mulaudzi & Wright, 2010:194). The researcher had the opportunity to explore and describe the experiences of the nursing students in the clinical environment (Brink, Van Der Walt & Van Rensburg, 2012:120). This resulted in an understanding of the influence that experiences have on nursing students' perceptions of a specific area and how it influences their choice of whether to specialize in that specific area when they graduate.

This study was contextual and focused on nursing students from an educational institution who had experienced the operating theatre as a clinical environment (Botma *et al.*, 2010:194). Their experiences of the operating theatre were described and that influence on their decision to specialize in operating theatre or avoid that area were discussed. The researcher has noticed in the practical field that the students had negative experiences and were not interested to specialize in operating theatre when they graduated.

Population and sample

The population for this study was nursing students from an undergraduate program at an educational institution that met the selected criteria for this study. A purposeful sample was formed from students in their third academic year, who were exposed to the operating theatre as a clinical environment. The sampling criteria were as follows:

- Nursing students in their third year of an undergraduate programme
- Exposed to the operating theatre as a clinical environment during their clinical placement

Data collection method

The data collection consisted of two phases. The first phase consisted of collection of reflective essays and was followed by the second phase in which the data from the first phase was validated by focus group sessions.

The reflective essays consisted of students' thoughts and feelings about the situations they were experiencing in the clinical environment (Poldner, Simsons, Wijngaards & Van Der Schaaf, 2012:20). Thirty one nursing students volunteered to describe their experiences in the operating theatre as a clinical environment. A question was added to determine whether they would consider the operating theatre as a specialization area when they graduated. Students were given the opportunity to confirm the data from the reflective essays during the focus group sessions.

A focus group session is a planned group interview and essentially focuses on the information that the researcher wants to acquire (Botma *et al.*, 2010:210). According to Burns and Grove (2009:513), one of the assumptions of focus groups is that participants express their views in ways that are less likely to occur in a one-to-one interview. In this research, open ended questions gave the participants the opportunity to clarify the findings from the reflective essays. Two focus group sessions were necessary to collect data to validate these findings. An expert in focus group discussions facilitated these focus group sessions. The recording of the focus group sessions were transcribed. These transcripts were analysed and the field notes were added to the data which were used to validate the findings and ensure the credibility of the reflective essays.

Data analysis

Data analysis involves inductive reasoning and through the analysing method of Tesch, themes emerged from the reflective essays (Creswell, 1994:154). Five categories with two main themes and twenty-six subthemes were identified. When the focus group discussions were transcribed and the data analysed, the researcher found that the identified categories and themes duplicated the data in the reflective studies.



Setting of the study

Both data collection phases were conducted in a lecture room facility at the university. The ambient temperature was regulated by an air conditioning system and the lighting was satisfactory for writing essays. The mediator explained the aim of the study and emphasized that participation was voluntary and that no academic discrimination would result from withdrawing. Before the second phase was begun, the facilitator again stressed the voluntary nature of participation.

Results

Five categories, two themes and twenty six subthemes were identified in the reflective essays. The categories were as follows: training specific factors impacting on the students' experiences in the operating theatre unit; organizational factors impacting on students' experiences of the operating theatre unit; students' pre-theatre perceptions; experiences of 'nurse enslavement'; contradictory information regarding intra- and interpersonal dynamics. These categories were divided in to two main themes: either a negative or a positive experience. The subthemes, the experiences that the students described in the reflective essays, and which were confirmed during focus groups, are summarized in the following table:

Table 3.1 Summary of results

CATEGORIES	THEMES AND SUBTHEMES	THEMES AND SUBTHEMES
	 Positive experiences	 Negative experiences
Training-specific factors impacting on students' experiences in a operating theatre unit	<ul style="list-style-type: none"> • Although students spent limited time in operating theatre, they were exposed to a variety of procedures, except cardiothoracic and neurosurgery. • Professional nurses taking an interest in students and utilizing the training opportunity for students optimally, had a positive impact on students' attitude towards theatre. • Some students' initial negative perceptions of theatre changed towards a more positive experience by the end of the training period. 	<ul style="list-style-type: none"> • Students experienced the time allocated for operating theatre exposure as too limited to make an informed decision about operating theatre nursing as a specialization after completing their bachelor's degrees. • Lack of scientific foundation regarding operating theatre nursing within the curriculum caused students to have a poor knowledge base and that increased students' uncertainty and anxiety. • Students had a pre-conceived perception of operating theatre and were anxious when entering the operating theatre

		<p>unit.</p> <ul style="list-style-type: none"> Experiences of especially nursing staff's negative and irritated attitude towards undergraduate nursing students had a detrimental effect on the training of these students.
Organizational factors impacting on students' experiences in a operating theatre unit	<ul style="list-style-type: none"> Efficient orientation when students arrived decreased students' anxiety. Students' experienced true collaboration among members of the multi-professional team. Unit managers' positive attitude of acknowledgement and appreciation facilitated students' positive experiences of the operating theatre complex. Some students preferred the structured, clinical environment and routine of operating theatre. 	<ul style="list-style-type: none"> Poor reception and orientation of students increased students' anxiety and negative experiences. Students discovered that nurses had an inferior role within the multi-professional team. The operating theatre unit was physically cold and lacked sunlight. Some students experienced operating theatre as overregulated environment with a monotonous routine.
Perceptions of 'nurse-enslavement'		<ul style="list-style-type: none"> Some students felt like 'hired labour' in the operating theatre, functioning below their knowledge and competence and not having their training needs honoured. The majority of students experienced working in a theatre as a form of nurse-enslavement.

Experiences regarding intra- and interpersonal dynamics	<ul style="list-style-type: none"> • Students experienced doctors (medical officers, surgeons and anaesthetists) more friendly towards them than the nursing staff in general. • Students who had an affinity for stringent routine, a strong clinical and predictable environment acknowledged that they would consider operating theatre as an area of specialization. 	<ul style="list-style-type: none"> • Rude and inflexible nursing personnel had a negative impact on students' attitude towards theatre. • Theatre personnel in general were disrespectful to patients, especially when a patient was on the operating table. • Students experienced doctors as rude and unprofessional towards the nursing personnel. • Students who valued a relationship and interaction with patients, acknowledged that they would not consider the operating theatre as an area of specialization.
---	--	---

Training specific factors impacting on students' experiences in a theatre unit

Training specific factors relate to the aspects that are influential in students' education. In this study they consisted of the time allocated to students in the operating theatre, preparation before entering the specialized unit, and scientific knowledge provided to prepare students for this experience. Personnel attitudes towards students also impacted on their learning capabilities in the theatre.

Positive experiences

- Although students' time in the clinical environment was limited they felt that they were exposed to a variety of procedures. Thus some students felt that the learning opportunities in the operating theatre were sufficient for their allocation time.

'I am confident that I have a thorough picture of what happens in the everyday life of a specialized theatre nurse.'

'...there were a lot of procedures to observe...'

The focus group discussions validated the view that students were exposed to a variety of procedures although their time was limited. The quality of the exposure of a

clinical environment was a positive aspect in the study conducted by Papp *et al.* (2003:266)

- When personnel took an interest in the students and utilized training opportunities it often resulted in a positive impact on the attitude of the students regarding the operating theatre.

'The nurses went out of their way to make sure I know what is happening, when things are happening and way the things are run the way they are.'

Some of the students related, during the focus groups, that they had enjoyed a positive experience because the professional nurses had helped them to accomplish their clinical outcomes. This validated the findings of the reflective essays and the research by Levett-Jones and Lathlean (2008:108) reinforces this view.

- The experiences that some students had changed their pre-conceptions of the theatre to more positive perceptions.

'Many said that theatre personnel were mean and nasty...I experienced the theatre personnel as the friendliest and most organized.'

According to Brown *et al.* (2008:1223) students changed their negative perceptions of the clinical environment when they had more positive experiences in that environment.

Negative experiences

- Some of the nursing students felt that because the time period that they were exposed to the operating theatre was little, it was difficult to make an informed decision about choosing operating theatre as specialization.

'I feel that the time in theatre is too short. Seven days of exposure is not enough to decide whether I like it or not. It is only after the third day that you understand the routine.'

This feeling of too little time in operating theatre was validated during the focus group sessions. This is consistent with the systematic review of Happell and Gaskin (2012:149) who believe that limited time exposure in mental health, also a specialization, results in nursing students not considering mental health as a specialization.

- Many students felt that they didn't receive enough preparation before their placement in the operating theatre. They added that they had a poor knowledge base of operating theatre, with no scientific foundation regarding the topic. The information that were available to them were not South African based and many sources were unscientific and dramatized.

'The fact that we were given no background information or preparation for the theatre, made the first meeting difficult.'

'Television dramatized everything; which brought about anxiety in me. Anxiety that was materialised the moment I walked into the theatre.'

The importance of preparation before exposure to operating theatre was reinforced by students during the focus group sessions. They would like an information session in the classroom rather than orientation in the unit. This is consistent with studies done by Elliott (2002:35) and Watkins *et al.* (2011:4) in which they assert that students experience disillusionment when they are confronted by reality and that it increases stress levels. These stress levels could compromise training (Levett-Jones & Lathlean, 2007:109). This finding is concurrent with that of Chesser-Smyth (2005:324) who concluded that the unprepared student nurse experiences more anxiety than the prepared student nurse. A lack of knowledge about the procedures and wrong ideas about the theatre clinical environment add to the insecurity and stress of the students.

- The students' pre-conceived perceptions of operating theatre were grounded on the lack of scientifically based knowledge and caused many students to experience disappointment when confronted with reality.

'With the first operation I realized with a shock, it was nothing like I expected it to be.'

This finding is supported by Beck (1993:490) who reveals that participants' perceptions of nursing change when they are in contact with the reality of the clinical environment.

- One of the most vehemently expressed subthemes in both the reflective essays and the focus groups was nursing personnel's attitude towards students allocated to operating theatre. This negative attitude made the students feel wary of asking questions and learning was thus diminished.

'The doctors were very friendly and helpful, but the sisters made me feel that I was in the way and that I was wasting their time. They made me feel like an inexperienced first year student who was incapable of doing anything. I was only allowed to observe and stay out of everyone's way.'

During the focus groups, this finding was validated by students who explained that the rudeness of personnel made them feel a nuisance and unworthy. This correlates with the findings of Levett-Jones and Lathlean (2008:109). Students tend to be more confident about asking questions if personnel are friendly; and freedom to question enhances the learning experience. In the South African context, Mothiba *et al.* (2012:201) maintain that personnel appear antagonistic towards students and unwilling to teach them about the clinical environment.

Organizational factors impacting on students' experiences of the theatre unit

Organizational factors involve the placement of students in clinical areas including aspects like the orientation programme for operating theatre, experience of the multi-disciplinary team and the physical infrastructure of the operating theatre unit.

Positive experiences

- Many students praised the unit's orientation programme as being efficient. It decreased their anxiety levels as they felt welcome.

'...the staff welcomed us with a huge warm welcome, we were properly introduced to the whole staff, and we were properly orientated on the theatre setting.'

This finding was validated during the focus group sessions when students described their orientation before their operating theatre placements. The findings of Levett-Jones and Lathlean (2008:107) reinforce the view that when students feel welcome it lessens their anxiety and encourages questions.

- Students were impressed by the team work among multidisciplinary team members in the operating theatre unit. These different role players have to work together as a team to achieve the different objectives regarding patients.

'We have learned how to work in co-operation with the other multi professional team members such as the anaesthetist and doctors.'

During the focus groups, one of the comments was that the multidisciplinary team worked well together because they all had one goal. Atkinson and Fortunato (1996:97) explain that the multidisciplinary team strives to research the desired outcomes with each procedure and that it should always be patient motivated.

- Many of the students who were exposed to a clinical environment with a positive and approachable unit manager mentioned the favourable impression created.

'On my first day in the theatre the matron welcomed my group warmly and orientated us to the best of her ability. This really showed that she cared about us as a group. She also informed us about her open door policy which she stuck with throughout my time in her department.'

The view of a positive unit manager was validated during the focus group sessions when students discussed the attitude of unit managers. A unit manager whose positive attitude towards students creates a lasting impact on students is consistent with studies done by Andrews *et al.* (2005:52) and Chesser-Smyth (2005:325).

- Some students found the structured routine and physical infrastructure of the theatre unit as a positive aspect of the experience.

'I by nature like the clinical, fixed routine and order in a theatre.'

During the focus group sessions, students commented on the structured and organized theatre routine. This view validates the findings of the researcher that some students enjoy the structured routine of the theatre. The researcher could not find supporting literature about this finding.

Negative experiences

- It was found that students who experienced poor reception and were not exposed to a well-executed orientation programme had negative experiences of the clinical environment.

'Orientation into the theatre would have been welcome the moment we entered this environment...'

During the focus groups, some students expressed a desire for better orientation in the theatre. This is consistent with the findings of Levett-Jones and Lathlean (2008:109) who indicate that students who are not well received experienced negative clinical environment.

- Some students considered the role of nurses to be inferior to that of other members of the multiprofessional team resulting from the disrespect and patronising attitude of some doctors.

'...I was very shocked about the unbelievable disrespect that one doctor demonstrated towards the scrub sister.'

During the focus group discussions, some students explicitly articulated the view that nurses were inferior to doctors and that they resented the way that some doctors spoke to them. This relationship in which doctors are regarded as superior to nurses is discussed in an editorial article by Thompson and Steward (2007:139). The inferior role portrayal of the nursing profession made this area of specialization undesirable for some nursing students.

- The physical infrastructure of operating theatre units also had a negative effect on some students and influenced their decision not to choose theatre as a specialization. They felt that the physical coldness of the air conditioning system was uncomfortable and that the sunless atmosphere was depressing.

'...would not like to specialise in this area. Firstly as I don't tolerate the cold well...'

This was validated during the focus group sessions when students mentioned the lack of sunlight and coldness of the theatre. No supportive literature could be found.

- Some students disliked the monotonous routine of the operating theatre with limited exposure to exciting events. They felt that a repetition of procedures caused stagnation of the personnel and that this was not the place for future specialization

for them. They also felt they were trained to save lives and that they did not experience that in the theatre.

'...it feels as if the work is boring and the challenges few.'

"I was trained to save live lives not to clean and hand over instruments."

Some students explained during the focus group sessions that they felt operating theatre work was tedious and that witnessing a procedure several times was boring. No literature could be found to support this finding.

Experiences of 'nurse-enslavement'

Many students gained the impression that personnel in this specialized area worked like slaves. They felt that the personnel had no autonomy and only functioned according to requests from doctors. This portrayal of the nursing profession was a negative experience and many explained that they did not wish to work in an environment that they described as degrading.

Negative experiences

- Some students described their theatre experience as *'hired labour'*. It seemed to them to be a form of nurse-enslavement. Nursing personnel merely responded to the demands of doctors and were not required to think for themselves.

'...they had this perception that we are there to just help them.'

This perception of the relationship between doctor and nurse is described by Thompson & Steward (2007:139). Students also felt that they were functioning below their knowledge and competencies and believed that their training needs were not honoured. This view that the use of students merely for additional help with no recognition of their learning needs results in a negative clinical environment is reinforced by Elliott's study (2002:35).

- The majority of students experienced working in the operating theatre as a form of nurse-enslavement. They experienced that the professional nurse had less autonomy in the operating theatre than in other nursing areas like midwifery and primary health care. That created an undesirable environment in which many students could not envisage themselves working.

'The sisters can't work independent from the doctors and only comply with the doctors' requests.'

During the focus group discussions the above findings were validated by the students and many felt that the work was slave labour and that the nurses had no autonomy. No supporting literature could be found.

Experiences regarding inter- and intrapersonal dynamics

The relationship dynamics between the multidisciplinary team and the students influenced the students' experience and decisions regarding specializing in the clinical environment.

Positive experiences

- When personnel took an interest in the students and utilized training opportunities it often resulted in a positive impact on the attitude of the students regarding theatre.

'...experience was positive...personnel were eager to share their knowledge.'

Some of the students related, during the focus groups, that they had enjoyed a positive experience because the professional nurses had helped them to accomplish their set tasks. This validated the findings of the reflective essays. The research by Levett-Jones and Lathlean (2008:108) reinforces this view

- Some students experienced the doctors as more helpful than the nursing personnel and that contributed to a more positive experience of the clinical environment.

'The doctors were very friendly and helpful but the sisters made me feel that I was in the way and that I wasted their time.'

The students validated this view during the focus group discussion when they described how some doctors went out of their way to explain the procedure to them. No supporting literature could be found.

- The students who preferred a strong routine and a predictable environment acknowledged that they would consider theatre as a specialization area.

'I will work in theatre, because I like routine.'

- These views were validated during the focus group discussions when certain students commented that they liked the routine and that they would consider specializing in operating theatre. This finding correlates with the general findings of Fenush & Hupcey (2008:91) who maintain that students have personal preferences that influence their decisions to work in a specific clinical environment.

Negative experiences

- The impact of rude and inflexible nursing personnel had a decidedly negative impact on students' attitudes towards the theatre as a clinical environment.

'The nurses were mean and were not willing to help when questions were asked...It's just not for me.'

The rudeness of personnel was one of the subjects discussed by the focus groups. Students felt that some of the personnel were unapproachable. This correlates with the findings of Andrews *et al.* (2005:150), Brown *et al.* (2008:1223) and Hall

(2006:628). These authors believe that this negative experience as a result of personnel's attitude creates a negative perception of the clinical environment.

- Some students experienced personnel as disrespectful and unprofessional towards patients, especially when the latter were on operating tables. This experience had a negative impact on those students.

'Another thing that didn't quite strike my fancy is the conversations in the operating room while the patients were on the table.'

During the focus group sessions, the students shared stories of how personnel were disrespectful towards patients and that they discussed unsuitable topics in the patients' presence.

- Students who valued relationships and interaction with patients acknowledged that they would not consider the theatre as an area of specialization after the completion of their studies. This interaction with patients was limited in the theatre because of its very nature; most patients need anaesthesia for procedures to be completed in the theatre.

'I am more of a patient contact person and personal contact isn't possible in the theatre.'

During the focus group sessions, many students explained that the time spent with patients was too limited and that personal interaction was missed.

Ethical considerations

In this study, the researcher followed the ethical principles that Brink *et al.* (2012:34) describe. The three fundamental ethical principles are respect for persons, beneficence and justice. These principles are based on human rights that need to be protected during any research procedure: namely, self-determination, privacy, anonymity and confidentiality, fair treatment and the protection from discomfort and harm.

This research project was approved by the North-West University Ethics Committee and the Head of the Department of the School of Nursing Science. This permission guaranteed that this study was ethically justified.

Potential benefits and hazards

One may argue that qualitative research is non-invasive, but a researcher becomes part of participants' lives. This may be very unsettling for participants and there is the risk that the exploration of unresolved issues may harm them (Brink *et al.*, 2012:36). The researcher ensured that the participants were comfortable during the data collection sessions and was

aware of the participants' feelings when they were confronted with the issues explored during the data collection phases.

Recruitment procedures

Participation in this study was completely voluntary and the participants were reassured that there would be no discrimination against anyone who did not want to participate. Participants were accessed via a mediator from the School of Nursing Science and the participating students had no academic connection with the researcher or supervisor.

Informed consent

The researcher provided clear information about the study's objectives and data collection method. This information was provided verbally and in writing. Students were assured that they would be able to withdraw at any stage if they felt threatened or for some reason did not want to participate any longer. Written permission was obtained from the participants, based on informed consent.

Data protection

Participants have the right to privacy, anonymity and confidentiality. This implies that the researcher must protect the information that participants choose to share and that their names must not be used in the report of the findings (Brink *et al.*, 2012:35). The researcher assigned numbers to the reflective essays and the transcripts of the focus group sessions to ensure the anonymity of the participants. The documents were kept safe and no unauthorized persons were allowed access to the data. The essays were kept apart from the written consent forms to avoid handwriting recognition and the shared information of the participants was kept confidential. The researcher has the ethical responsibility to adhere to the procedures, to keep the participants safe and maintain scholarly integrity and honesty when transcribing, interpreting and reporting the findings of this study.

Trustworthiness

Burns and Grove (2009:54) correlate rigour in qualitative research with openness, truthfulness and thoroughness from the researcher. Owing to the interactive process of qualitative research, the researcher's perceptions must not influence the way data is interpreted. Thus to be rigorous in this study, the researcher tried to avoid prejudice and described the views of the participants as clearly as possible without tarnishing the data (Botma *et al.*, 2010:292). The criteria and strategies of Guba (Krefting, 1991:214) were followed in this study to ensure trustworthiness.

Table 3.2 Strategies to establish trustworthiness

Strategy	Criteria	Practical application	Relevance to study
Credibility	Prolonged engagement	Researcher had prolonged exposure to the clinical environment and the mediator had a relationship with the students.	Knowledge that the researcher had was beneficial to study. Mediator had a trusted relationship with students.
	Triangulation	Data collection was executed in two phases: reflective essays and focus groups with field notes.	Data from the reflective essays were validated with data from focus groups.
	Member checking	During the focus groups students had the opportunity to confirm their experiences.	Experiences were validated and clarified.
	Peer examination	The researcher discussed the findings with the co-coder, who was an expert in qualitative research.	The findings were confirmed and discussed.
	Structural congruence	Findings were discussed with examples to verify the	These clear descriptions add to the credibility of the study.

		conclusions.	
	Referential adequacy	Results were compared to existing literature.	The relating of results to existing literature validated findings.
Transferability	Dense description	Method and findings were intensely described to enable understanding of the findings.	Readers would be able to make their own transferability judgements.
	Selected sample	The population and sample criteria were described.	Researchers are aware of the sampling criteria for future studies.
Dependability	Description of research method	The methodology that was followed were densely described.	The ability to reduplicate this study add to the dependability.
	Code-recode procedure	The researcher went back to the data to recode after a time period to compare results	Revisiting of data validate the results.
	Peer examination	A methodological expert was ask to review the study.	This peer examination of the study adds to the dependability.

Conformability	Objectivity	The researcher had the ability to be objective in the data analysis process.	Findings reflected students perceptions and not the researcher's views.
----------------	-------------	--	---

Discussion

Outline of the results

The researcher aimed to explore and describe the experience of the nursing students of the clinical environment and how it influences their choice of specialization.

Overall the students had both negative and positive experiences in the operating theatre as a clinical environment. The training specific factor most highlighted was that the students had not received any formal preparation from the training institution regarding what to expect in the theatre. This added to heightened anxiety levels and unscientific pre-conceptions. Elliott (2002:36) maintains that one way to lessen anxiety levels is to prepare students before they are introduced to new clinical environments.

An organizational factor that contributes to the clinical experience of students is the orientation of students that is mostly facilitated by the unit manager of the operating theatre. Many students emphasized the significance of unit managers in their reflective essays and again during the focus group sessions. That unit managers are influential in students' experiences of clinical environments is supported by the findings of researchers such as Andrews *et al.* (2005:149), Chesser-Smyth (2005:325), and Fenush and Hupcey (2008:94).

Other organizational factors specified by some of the students were that routine procedures in the theatre were monotonous and boring and that the professional nurses only handled instrumentation and reacted to doctors' requests. This finding confirmed the idea that students were not properly informed about all the responsibilities of advanced registered nurses in the operating theatre.

Some students also experienced nursing in operating theatre as enslavement and described the dynamics of the doctor professional nurse relationship as degrading to the autonomy of nurses. This negative portrayal of nursing led to many students' decisions not to consider operating theatre as a specialization area.

Personnel have a major influence on the experiences of students and this influence may be positive or negative. Fenush and Hupcey (2008:94) confirm that this influence on the experiences of students strongly affects students' decisions to specialize in a specific unit. When personnel take an interest in the training of students it has a decidedly positive impact. Unfortunately the opposite is also true. This finding is supported by the study conducted by Levett-Jones and Lathlean (2008:109).

Personal preferences were discovered to be one of the deciding factors that influence students to accept or reject the theatre as a specialization area. Those who enjoyed routine and a predictable environment were positive about future specialization. Other students preferred a closer interaction and relationship with their patients and so rejected specializing in theatre.

The experience of the clinical environment has a clear influence on students and their decisions to avoid or embrace the theatre as a future area of specialization.

Practical implications

Nursing students' experiences when they are exposed to a specialized clinical environment have an impact on their decisions to specialize in that area. This study explored that statement and added to the understanding of the effect of a clinical environment on students.

In an effort to make the clinical environment more student-friendly, certain attributes could be changed or added to the dynamics of the operating theatre by the organization. Students could also be better prepared for this specialized area.

Limitations of the study

This study was conducted and limited to a specific group of students that were undergraduates in an educational program at an university and the results could therefore not be generalised to other students.

Recommendations

Exposure to clinical environments is part of the curriculum of nursing education and to achieve the outcomes of the SANC, students have to be exposed to all the nursing disciplines (SANC, 2008). This exposure of students to the clinical environment could be very stressful for students and could contribute to the anxiety levels of students (Elliott, 2002:35). It was found that the students experienced anxiety when they were exposed to the operating theatre, and that they were not at all prepared for the clinical environment before their placement.

According to Windsor (in Elliott, 2002:36), adequate preparation before placement is beneficial for students. It is recommended that the tertiary institutions institute a preparation session before students are sent to this specialized clinical environment. It could include both theoretical and practical information regarding operating theatre nursing. This would

then provide students with scientific knowledge and would discard any misconceptions they have.

According to Elliott (2002:36), preceptors are useful in reducing anxiety. The provision of preceptors in this specialized area would be valuable in the attaining of students' objectives (Warren, 2010:10). It is recommended that a preceptor facilitate the students in the operating theatre.

Further studies to explore the social interactions of the multidisciplinary team may result in an improvement in the way that the nursing profession is portrayed in this environment.

Conclusion

The clinical environment did have an impact on nursing students. Some students that were exposed to a more positive experience did consider specializing in the theatre. In contrast some students who experienced a negative environment were more inclined to avoid specialization in that area. Thus organizations should strive to provide clinical environments that may be perceived as positive in order to recruit future theatre personnel.

Although some students had a negative experience, they stated that they would still consider specializing in the theatre. These students enjoyed the routine of the theatre. This was also the finding of students who had a positive experience but who would not choose to specialize in theatre because they valued interaction with the patients.

Acknowledgements

I would like to thank my supervisor, E. Bornman, my co-coder, Dr P. Bester and my language editor, L. Voigt.

Competing interest

The authors declare that they have no financial or personal relationships which may have inappropriately influenced them in writing this article.

Authors' contributions

E.F. Du Toit (The North-West University) was responsible for the review of the literature, conducting the study and writing of the text. E. Bornman (The North-West University) was the supervisor and reviewer of this study.

References

Acts see South Africa

Andrews, G.J., Brodie, D.A., Andrews, J.P. & Wong, J. 2005. Placement matters: students' clinical experiences and their preferences for first employers. *International Nursing Review*, 52:142-153.

Atkinson, L.J. & Fortunato, N.H. 1996. Berry & Kohn's operating room technique. 8th ed. Missouri: Mosby

Baxter, P. 2006. The care model of clinical supervision: bridging the theory-practice gap. *Nurse Education in Practice*, 7(2):103-111.

Beck, C.T. 1993. Nursing students initial clinical experience: a phenomenological study. *International journal of nursing science*, 30(6):489-497.

Botma, Y., Greeff, M., Mulaudzi, F.M. & Wright, S.C.D. 2010. Research in health science. Cape Town: Heineman.

Brink, H., Van der Walt, C. & Van Rensburg, G. 2012. Fundamentals of research methodology for healthcare professionals. 3rd ed. Cape Town: Juta.

Brown, J., Nolan, M., Davies, S., Nolan, J. & Keady, J. 2008. Transforming students' views of gerontological nursing: realising the potential of 'enriched' environments of learning and care: a multi-method longitudinal study. *International journal of nursing studies*, 45:1214-1232.

Burns, N. & Grove, S.K. 2009. The practice of nursing research. 6th ed. Missouri: Saunders.

Chesser-Smyth, P.A. 2005. The lived experiences of general student nurses on their first clinical placement: a phenomenological study. *Nurse education in practice*, 5:320-327.

Clarke, C.L., Gibb, C.E. & Ramprogus, V. 2003. Clinical learning environments: an evaluation of an innovative role to support preregistration nursing placements. *Learning in health and social care*, 2(2):105-115.

Creswell, J.W. 1994. Research design. Qualitative and quantitative approaches. London: Sage.

Edwards, H., Smith, S., Courtney, M., Finlayson, K. & Chapman, H. 2004. The impact of clinical placement location on nursing students' competence and preparedness for practice. *Nurse education today*, 24:248-255.

Elliott, M. 2002. The clinical environment: a source of stress for undergraduate nurses. *Australian journal of advanced nursing*, 20(1):34-38.

Fenush, J.K. & Hupcey, J. E. 2008. An investigation of clinical unit choices by graduating baccalaureate nursing students. *Journal of professional nursing*, 24(2):90-95.

Hall, W.A. 2006. Developing clinical placements in times of scarcity. *Nurse education today*, 26:627-633.

Happell, B. & Gaskin, C.J. 2012. The attitudes of undergraduate nursing students towards mental health nursing: a systematic review. *Journal of clinical nursing*, 22:148-158.

Krefting, L. 1991. Rigor in qualitative research: the assessment of trustworthiness. *The American journal of occupational therapy*, 45(3):214-222.

Levett-Jones, T. & Lathlean, J. 2008. Belongingness: a prerequisite for nursing students' clinical learning. *Nurse education in practice*, 8:103-111.

McGarry, J., Aubeeluck, A., Simpson, C. & Williams, G. 2009. Nursing students' experiences of care. *Nursing older people*, 21(7):16-22.

McKenna, L., McCall, L. & Wray, N. 2010. Clinical placement and nursing students' career planning: a qualitative exploration. *International journal of nursing practice*, 16:176-182.

Midgley, K. 2006. Pre-registration student nurses perception of the hospital-learning environment during clinical placements. *Nurse education today*, 26:338-345.

Mothiba, T.M., Lekhuleni, M.E., Maputle, M.S. & Nemathaga, L.H. 2012. University of Limpopo student nurses' clinical learning experiences in a public hospital at the Capricorn

district, Limpopo province, South Africa. *African journal for physical, health education, recreation and dance*, 2:195-204.

Oxford advanced learner's dictionary. 2010. 8th edition. New York: Oxford University Press.

Papp, I., Markkanen, M. & Von Bonsdorff, M. 2003. Clinical environment as a learning environment: student nurses' perceptions concerning clinical learning experiences. *Nurse Education Today*, 23:262-268.

Poldner, E., Simons, P. R. J., Wijngaards, M. F., Van der Schaaf, M. F. 2012. Quantitative content analysis procedures to analyse students' reflective essays: a methodological review of psychometric and edumetric aspects. *Educational Research Review*, 7:19-37...72

Pretorius, R. & Klopper, H. C. 2012. Positive practice environments in critical care units in South Africa. *International nursing review*, 59:66-72.

Saarikoski, M. & Leino-Klipi, H. 2002. The clinical learning environment and supervision by staff nurses: developing the instrument. *International journal of nursing studies*, 39:259-267.

SANC (South Africa Nursing Council). 2008. Nursing education and training standards. <http://www.sanc.co.za/pdf/Nursing%20and%20Training%Standards.pdf> Date of access: 27 Jun 2013.

SANC (South Africa Nursing Council). 2012b. Registration of additional qualifications. <http://www.sanc.co.za/stats/stat2011/SANCStats2011AddQualsRegistered.pdf> Date of access: 26 Jun 2012.

SANC (South African Nursing Council). 2012c. Advanced practice nursing. <http://www.sanc.co.za/sanc%20regulations/SANC%20Advanced%20Practice%20Nursing%20-%20DRAFT%20Position%20Paper.htm> Date of access: 28 Jun 2013.

South Africa. 1978. Nursing act 50 of 1978 as amended.

Thompson, D.R. & Steward, S. 2007. Handmaiden or right-hand man: is the relationship between doctors and nurses still therapeutic? *International journal of cardiology*, 118(2):139-140.

Warren, A.L. & Denham, S.A. 2010. Relationships between formalized preceptor orientation and student outcomes. *Teaching and learning in nursing*, 5:4-11.

Watkins, K.D., Roos, V. & Van Der Walt, E. 2011. An exploration of personal, relational and collective well-being in nursing students during their training at a tertiary education institution. *Health SA Gesondheid*, 16(1):1-10.

SECTION 4: CONCLUSIONS, LIMITATIONS AND RECOMMENDATIONS

This section comprises a discussion of the conclusions, limitations and recommendations of this study.

4.1 Conclusions of this study

This qualitative descriptive enquiry supported the findings of existing research (Andrews *et al.*, 2005:151; Brown *et al.*, 2008:1230) that clinical environments have a more extensive influence on students than only the shaping of their professional development. It was found that clinical environments do influence students' decisions to work in a clinical environment, the operating theatre, when they complete their studies. A positive experience encourages specialization in that area while a negative experience has the opposite effect. These results were consistent with the findings of Fenush and Hupcey (2008:94) who conclude that an experience of the clinical environment may influence the decision of students to work in different nursing disciplines.

An interesting discovery was that some students, who preferred a rigorous routine and predictable environment, considered specializing in operating theatre although they had had a negative experience. The opposite was also true. Some students who did enjoy a positive experience explained that they would not consider specialization in the operating theatre as they valued relationships and interaction with their patients too much to have limited contact with them. The majority of the students stipulated that they would not consider operating theatre because they experience a negative portrayal of nursing.

Chesser-Smyth (2005:324) and Elliott (2002:37) assert that the clinical environment tends to contribute to the anxiety levels of students, especially when they are not used to this environment. This was true as many students described their anxiety before their theatre experience. They felt that they were not properly prepared and that the information they possessed was exaggerated and irrelevant. It was apparent that students needed to be supplied with scientific theoretical and practical information about operating theatre nursing before exposure to the operating theatre.

Another strategy proposed to lessen anxiety in the clinical environment is the appointment of preceptors (Elliott, 2002:37). Preceptors are discussed in many studies and their importance in the clinical environment has been established (Kim, 2007:395; Midgley, 2006:343; Saarikoski & Leino-Klipi, 2002:265). Some students mentioned that there were no preceptors in the operating theatre to assist them and that they were dependent on unapproachable personnel. The absence of preceptors clearly contributed to their negative operating theatre experience. Mothiba *et al.* (2012:199) confirm that if there is no preceptor in the clinical environment, students experience difficulties.

Some students felt that they could not make an informed choice about specializing in operating theatre because their time in this unit was too limited. They felt that they needed more time to accustom themselves to the routine and dynamics of the operating theatre. This finding is supported by Happell and Gaskin (2012:155) who suggest that a longer allocation time in the clinical environment may change students' perceptions of this setting.

Some students maintained that they received no orientation in the operating theatre and that this contributed to a negative experience. Other students valued their orientation time as informative and sufficient. The reason for this contradictory finding might be that the students came from different facilities with different student orientation policies.

Many students described the theatre as an area in which the nursing profession was degraded. They used the term 'slavery' as nursing personnel seemed inferior to the rest of the multidisciplinary team. It appeared to them that nurses in theatre lost their autonomy and were totally dependent on doctors. A submissive and sometimes even abusive relationship seemed to exist between doctors and nurses on occasion. They also felt that nursing personnel accepted abusive treatment from doctors. This submissive relationship between doctors and nursing personnel is described by Thompson and Steward (2007:139).

It is clear from previous studies that personnel are the most influential aspect of students' experiences in the clinical environment (Andrews *et al.*, 2005:150; Chesser-Smyth, 2005:325; Fenush & Hupcey, 2008:94). The researcher found that when personnel took an interest in students and utilized the learning opportunities, the impact on students was positive. The opposite was, unfortunately, also true. Personnel were sometimes perceived to be rude and unapproachable. Students then had a negative experience of the clinical environment and decided that operating theatre would not be their future area of specialization.

Another dimension of this negative portrayal of nursing was the unprofessional behaviour of some nursing personnel. Students felt that patients were not always treated respectfully and humanely during procedures. This negative experience of the nursing profession in that clinical environment was influential in the students' decisions to avoid specialization in operating theatre.

Other factors like personal preferences were also interesting concepts to discover. Clearly, the various components of the clinical environment that students were exposed to had a significant influence on their specialization decisions.

4.2 Limitations of this study

This study was conducted and limited to a specific group of students that were undergraduates in an educational program at an university and the results could therefore not be generalised to other students. Other groups of students from different year groups and other nursing institutions might have different experiences of the operating theatre as a clinical environment.

4.3 Recommendations

The study's aim was to explore and describe students' experiences when exposed to the operating theatre and determine the effect that these experiences had on their decisions to specialize in the operating theatre. The following recommendations were made to improve these experiences and, therefore, result in more students deciding to specialize in operating theatre.

4.3.1 Nursing education

A nursing student's exposure to clinical environments is essential in order to achieve the SANC requirements for registration as a professional nurse (SANC, 2008). This exposure may be stressful for the students when confronted with new clinical environments (Elliott, 2002:36). According to Windsor (in Elliott, 2002:36), sufficient preparation before exposure to the clinical environment lessens the anxiety of students. The researcher found that students were anxious when they had to start working in the operating theatre and that the preconceptions that they had were based on information that was fictional and irrelevant to the setting in South Africa.

It is recommended that tertiary institutions have a preparation session before the students are exposed to this specialized clinical environment. This should include both theoretical and practical information regarding operating theatre nursing. This would then provide students with a scientific knowledge base and would help to prevent misconceptions acquired from unscientific sources. It would be beneficial to students if they could be introduced to the operating theatre, by faculty, before their placement.

According to Elliott (2002:36) and Warren (2010:10) preceptors are useful for reducing anxiety and providing support in the attainment of student objectives. Some students claimed that a preceptor in the operating theatre would be advantageous. The researcher suggests that it would be beneficial to appoint a preceptor to assist students in operating theatre.

4.3.2 Nursing practice

The negative portrayal of nurses in the practical setting needs to be acknowledged by the relevant organizations. Students observed practices that were apparently overlooked by the management of the facilities. The researcher believes that policies that safeguard nurses from 'bullying' by doctors should be revisited and reinstated to ensure a friendly workplace for the whole multidisciplinary team.

It is recommended that the unprofessionalism of personnel regarding patients be addressed by the management of the various institutions. Policies need to be reinstated, revisited and personnel should be reprimanded when unprofessional behaviour is noted.

Some students stated that it would be beneficial if there was an operating theatre orientation programme in place. A comprehensive orientation programme monitored by the management of the facilities should be set in place and executed. Dedicated, interested personnel should be identified for student training.

4.3.3. Nursing research

Comparative studies may explore whether nursing students from other tertiary institutions have the same needs and experiences of theatre units as this group.

Studies that explore the social interaction of multidisciplinary teams may be beneficial to improve the way that the nursing profession is portrayed in this clinical environment.

Finally, studies may be undertaken to describe the influence that students' different personalities and preferences have on their decisions about where to specialize.

4.4 SUMMARY

The aim of this study was to explore and describe the influence that the clinical environment had on nursing students' decisions to specialize in a specific area. The unit chosen for this study was the operating theatre. The aim of this study was achieved as it was proved that the clinical environment did have an influence on students' decisions to choose specialization in the theatre. Students' experience of the clinical environment had an impact on their decision to specialize in the theatre.

Students shared their experiences of their exposure to the operating theatre in their reflective essays. The researcher felt that the rich, descriptive and truthful data was an effective method of data collection. The analysis of the data resulted in the identification of five categories, two themes and twenty-six subthemes that assisted the researcher in the exploration and description of the findings. Focus group sessions were effective in validating the data from the reflective essays and added to the veracity of the study. When literature

control was executed, the data proved consistent with current literature on this topic. The recommendations suggested by the researcher were according to the three areas of the nursing profession: namely, education, practice and research.

REFERENCES

- Andrews, G.J., Brodie, D.A., Andrews, J.P. & Wong, J. 2005. Placement matters: students' clinical experiences and their preferences for first employers. *International Nursing Review*, 52:142-153.
- Brown, J., Nolan, M., Davies, S., Nolan, J. & Keady, J. 2008. Transforming students' views of gerontological nursing: realising the potential of 'enriched' environments of learning and care: a multi-method longitudinal study. *International journal of nursing studies*, 45:1214-1232.
- Chesser-Smyth, P.A. 2005. The lived experiences of general student nurses on their first clinical placement: a phenomenological study. *Nurse education in practice*, 5:320-327.
- Elliott, M. 2002. The clinical environment: a source of stress for undergraduate nurses. *Australian journal of advanced nursing*, 20(1):34-38.
- Fenush, J.K. & Hupcey, J.E. 2008. An investigation of clinical unit choices by graduating baccalaureate nursing students. *Journal of professional nursing*, 24(2):90-95.
- Happell, B. & Gaskin, C.J. 2012. The attitudes of undergraduate nursing students towards mental health nursing: a systematic review. *Journal of clinical nursing*, 22:148-158.
- Kim, K.H. 2007. Clinical competence among senior nursing students after their preceptor experiences. *Journal of professional nursing*, 23(6):369-375.
- Midgley, K. 2006. Pre-registration student nurses perception of the hospital-learning environment during clinical placements. *Nurse education today*, 26:338-345.
- Mothiba, T.M., Lekhuleni, M.E., Maputle, M.S. & Nemathaga, L.H. 2012. University of Limpopo student nurses' clinical learning experiences in a public hospital at the Capricorn district, Limpopo province, South Africa. *African journal for physical, health education, recreation and dance*, 2:195-204.
- Saarikoski, M. & Leino-Klipi, H. 2002. The clinical learning environment and supervision by staff nurses: developing the instrument. *International journal of nursing studies*, 39:259-267.

SANC (South Africa Nursing Council). 2008. Nursing education and training standards. <http://www.sanc.co.za/pdf/Nursing%20and%20Training%Standards.pdf> Date of access: 27 Jun 2013.

Thompson, D.R. & Steward, S. 2007. Handmaiden or right hand man: is the relationship between doctors and nurses still therapeutic? *International journal of cardiology*, 118(2):139-140.

Warren, A.L. & Denham, S.A. 2010. Relationships between formalized preceptor orientation and student outcomes. *Teaching and learning in nursing*, 5:4-11.

APPENDIX A: ETHICAL APPROVAL



NORTH-WEST UNIVERSITY
YUNIBESITHI YA BOKONE-BOPHIRIMA
NOORDWES-UNIVERSITEIT
POTCHEFSTROOM CAMPUS

Private Bag X6001, Potchefstroom
South Africa 2520

Tel: 018 299-1111/2222
Web: <http://www.nwu.ac.za>

To whom it may concern

Faculty of Health Sciences
Tel: 018 2992092
Fax: 018 2992088
Email: Minrie.Greeff@nwu.ac.za

17 September 2013

Dear Mrs. Bornman

**Additional Request - Ethics Application: NWU-00010-11-S1
"Experiences of student nurses regarding mentoring in the clinical
practice"**

Thank you for the amendments made to your application. Your request to include the study, entitled "Nursing students' exposure to the clinical practice environment and its influences on their specialization choice" under the above mentioned umbrella project has been approved.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Minrie Greeff'.

Prof. Minrie Greeff
Ethics Sub-committee Vice Chairperson

Original details: Prof. Minrie Greeff(10187308) C:\Users\13210572\Documents\ETIEK\2011 ETHICS\NWU-00010-11-S1 Addisionele Versoek 1.docm
17 September 2013

File reference: NWU-00010-11-A1

APPENDIX B: PERMISSION TO INVOLVE STUDENTS IN RESEARCH

98 Panorama Drive
Northcliff x4
2195



PERMISSION TO INVOLVE THE NURSING STUDENTS IN A RESEARCH STUDY

I am currently busy with a master's degree in nursing education at the North West University. My proposed qualitative study will be on the influence that the theatre (as a clinical environment) has, on the decision making process of a nursing student to either choose or discard theatre as specialisation area. I can confirm that the ethical committee of the University, has approved this study. (NUW-00010-11-51).

The purpose of my research is to explore and describe the experience of the nursing students at the time that they are exposed to the theatre as a clinical environment. This experience might have a significant influence on a student's decision making process when deciding to either choose or discard the theatre as a permanent career direction.

The third and fourth year nursing students at your university, would be the ideal group for the data collection phase of my study, for the reason that they have experienced the theatre as a clinical environment during the practical stages of their studies. Being at this crossroads of experience and having to choose a specialisation direction in nursing, their opinion would be invaluable to my study.

With your permission, I firstly plan to approach the third and fourth year students and get a consenting group together that are willing to participate in this study. Taking into account that I will be performing a qualitative study, I plan to ask the nursing students to write a reflective essay on the subject of their experience in the theatre. To round of the essay I would ask them to elaborate on whether or not they would consider theatre as an area of specialization. I will then select out of these participating students three focus groups to explore the given information further and add some more depth to the study. It seems that I would need three to four contact sessions with the students.

Only students that participate in the essay phase of the study will be chosen to take part in the second phase of focus group sessions. They will be asked to give their consent to participate in the focus group sessions. I will insure the students of their anonymity when partaking in this study, and will safeguard their privacy at all stages of the study.

Thank you for considering my request to involve the faculty's students in my study.

Yours sincerely

Esther du Toit

APPENDIX C: CONSENT TO PARTICIPATE IN STUDY

98 Panorama Drive
Northcliff x4
2195



Dear Nursing student

Invitation to participate in research

I am currently conducting a research on the influence that the clinical environment has on your decision to work in a specialisation area when you finish your studies. I have obtained ethical clearance from the North-West University's Ethics Committee for this research. (Ref no. NUW-00010-11-5).

The purpose of this research is to explore and describe the experience that you the nursing student had in the clinical environment, specifically the operating theatre. This research will have two data gathering phases and consent will be asked for each phase.

The first phase will entail the writing of a reflective essay; where you will be asked to write anonymously how did you experience the theatre. The focus of the reflective essay will be your feelings about your exposure to the theatre as clinical environment and will you consider that environment as a future place of work.

The second phase of data gathering will consist of two focus groups where you may give more insight in your experience of the theatre.

Participation of the research is voluntary and you may withdraw from this research at any stage without any penalty. Data will be kept anonymous and no identifying information will be included in the report of the study.

The data from this study will help to explain the importance of a clinical environment experience and may influence the way that nursing students are perceive in a clinical environment.

If you agree to participate in this research study and that the data may be used for this purpose of this study, please complete the attached consent form.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Esther du Toit'.

Esther du Toit

I, _____

agree to participate in the research project on the 'Nursing students' exposure to the clinical learning environment and its influences on their specialization choice' (Ethical clearance Ref no. NUW-00010-11-51) and give permission that the information that I provide (focus group) may be used as data in this research project. I understand that participation is voluntary and that I may withdraw from this research at any stage without penalty. I also understand that this data will be included in a research report and that anonymity and confidentiality of this data will be guaranteed by the researcher.

Participant signature: _____ Date: _____

Witness signature: _____ Date: _____

APPENDIX D: EXAMPLE OF REFLECTIVE ESSAYS

REFLECTIVE ESSAY RESPONDENT 22

Ek as bcur 3 het teater baie negatief en koud ervaar. Dit het vir my voorgekom of die susters, die dokters se slawe is en hulle moet spring wanneer 'n dokter 'n opdrag gee. Die manier waarop die pasiënte voor tydens en na sjirurgie hanteer was vir my disrespekvol. Dis asof net die fraktuur hanteer word en daar nie holisties gesien word na al die pasiënt se behoeftes nie.

Dit was ook vir my sleg omdat ons nie goed geointeër was nie, tydens ons tyd in teater was ek baie onseker oor my rol as student en wat my verpligtinge was. Die beleid en protokol was ook verwarrend omdat (vb. Die plasenta na die keiser nie geweeg en geondersoek was nie), dit was ook sleg om te sien dat 'kangaroo mother care' nie toegepas word nie alhoewel die moeder en baba stabiel was. Daar was ook 'n pasiënt wat se been moes geamputeer word en toe word die geamputeerde been sommer in 'n asblik gegooi. Die personeel handhaaf nie steriliteit ook soos dit hulle pas (van die dokters het in teater geëet) terwyl die pasiënt narkose ontvang.

Ek wil nooit in teater werk nie, die staf is onpersoonlik, die dokters is ongeskik en die pasiënte word gesien as 'n objek nie 'n mens met gevoelens nie.

Die steke is baie verwarrend en ek voel verward wanneer die dokter vir steke vra en ek kry dit nie.

Ek voel 'incompetent' alhoewel ek weet ek kan 'n drip kan op sit en vitale data neem, maar die staf kyk 'n mens aan asof ons "stupid" is. Teater susters is belangrik, maar ek gaan beslis nie daar werk nie.

REFLECTIVE ESSAY RESPONDENT 31

Teater ervarings in beide die staat en privaat was van 'n positiewe aard. Personeel het die studente met ope arms verwelkom en was meer as bereid om hul kennis oor te dra. Oriëntering was nooit moeite nie en enige vrae was nooit onnodig nie.

Voorons jaargroep in teater geplaas was, was daar baie gesê hoe mislik en kwaai personeel is. Met uitsondering van 1 / 2 (nes in enige ander spesialisasie) was teater steeds vir my die vriendelikste en georganiseerdste.

Enigste plek waar ek gesien het 'n dokter was onderdanig aan die suster!

Beslis 'n spesialisasie oorweging.

APPENDIX E: FOCUS GROUP SESSIONS QUESTIONS

Focus group sessions

The aim of this focus group sessions are to validate the finding of the reflective essays

Questions

1. What stood out as the best part of your time in the theatre?
Wat het vir jou uitgestaan as die beste deel van jou tyd in teater?
2. What were the worst part of your time in the theatre?
Wat was vir jou die slegste deel van jou tyd in die teater?
3. What is your perception of the role and responsibilities of the theatre sister?
Hoe sal jy die rol en verantwoordelikheid van die teater suster beskryf?
4. What could have prepared your better for the time in the theatre?
Wat sou jou beter voorberei het vir die tyd in die teater?
5. Who did you rely on for guidance in the theatre?
Wie het jy vertrou vir leiding in die teater?
6. How would you describe the learning experiences that you had in the theatre?
Hoe sou jy die leergeleenthede wat jy in die teater geondervind het beskryf?
7. What would you describe as the biggest difference between other nursing disciplines and the theatre?
Wat sou jy beskryf as die grootste verskil tussen ander verpleegdisiplines en die teater?
8. If you had a different experience in the theatre, would that change your opinion of the theatre?
Indien jy 'n ander ondervinding in die teater gehad het, sou dit jou opinie van teater verander?

APPENDIX F: PART OF TRANSCRIBED FOCUS GROUP SESSIONS

FOCUS GROUP 1

Respondent (R)

Interviewer (I)

I Daarsy, nou maar goed, goeiemôre almal dankie dat julle belangstel om in hierdie fokusgroep sessie deel te neem uhm die navorsing uhm het doen navorsing in wat vir julle uitstaan in teater en wat het julle as sterk belewe en wat was dalk vir julle te kortkominge ons wil seker goedjies net uitvind, nou die eerste vragie wat ons het is, wat het vir jou uitgestaan as die beste deel van die tyd wat jy in teater gewerk het, wie wil eerste antwoord?

R Ek sal.

I Okay.

R Deelnemer een,

I Deelnemer een.

R Wat vir my interessant was is die doktors het moeite gedoen om vir jou goed te wys hulle het jou nader geroep dan kan jy oor hulle skouer loer en hulle het fisies vir jou gesê hierdie is hierdie spiere en dit was baie interessant en ons het baie geleer.

I So as ek met jou kan klank sal jy kan sê dit het die anatomi e vir jou better verduidelik jy het beter verstaan van die anatomie?

R Ja.

I En as jy vir ons enkele prosedures kan uitwys waarby jy betrokke was, of wat jy gesien het.

R Okay die een doktor het 'n prostraat verwyder en die ander 'n klier vewyder ja en dan het ek nou net soos jou vaginale ja vaginale historektomies gesien en goed.

I En hulle het vir jou mooi daardie strukture verduidelik.

R Ja alles.

I Goed nog iemand wat wil antwoord, deelnemer nommer ses.

- R Ja uhm ons was deel gewees, aktief deel gewees was 'n resussitasie so ons het daai ondervinding gekry in die teater, die suster het ons deel gemaak daarvan wat groot ondervinding was.
- I Hmm, so as jy moet uitbrei wat was jou rol jou deel in die resussitasie afdeling of deel.
- R Uhm meer om goeters aan te gee en by te staan waar hulle nodig het vir ons om te weet, ons was nie daar was genoeg mense om die borskaskompressies te doen maar ons het uhm die noodtrollie gaan haal of die gebring daai tipe van dinge.
- I Okay en die uitkoms van die resussitasie?
- R Dit was suksesvol.
- I Dit was suksesvol. Nommer drie sou jy iets wou bylas?
- R Vir my was die algehele ondervinding of die beste ondervinding was uhm die geleentheid toe ek kry om self te kan inskrop en van naby af die operasie te kon sien en die ervaring te kon gehad het van jy gee nou die instrument die tyd aan en jy gee daai instrument daai tyd aan so daai begeleiding onder die suster was vir my was vir my lekker gewees.
- I Sou jy belangstel, sou daai blootstelling jou laat belangstel in 'n loopbaan in teater later in jou lewe?
- R Uhm ja na daai blootstelling, voor daai blootstelling het ek dit nie oorweeg nie maar na die blootstelling het ek beter gevoel daaroor.
- I Goed kan ek maar oorgaan na ons volgende vragie toe. Ons volgende vragie is wat was vir jou die slegste deel van jou tyd in die teater, wat was nou nie lekker as jy nou ingedeel was in teater nie? Deelnemer ses.
- R Uhm die herstelkamer, uhm dis net dis verveligeobservasies en wat nie interessant was nie.
- I Het jy dit as nodig beskou?
- R Ek besef die nodigheid daarvan dat daar 'n herstelkamer moet wees maar dit was nie vir my, die ervaring ja dit was nie vir my vervullend of lekker gewees nie.

FOCUS GROUP 2

- R Wat vir my sleg was, was dit taalgebruik, die taalgebruik van die doktors en die susters. Van die pasiënte, oor hulle eie sake, oor die pasient, geen professionaliteit nie.
- I Het hulle die pasiënt bespreek, verstaan ek nou reg?
- R Ja die pasiënt en dan persoonlike sake oor die pasiënt, nie oor die pasiënt nie oor hulle eie lewens wat ek nou kan sê kras.
- I Kras, en jy deelnemer nommer vyf?
- R Nee ek stem saam met wat die ander deelnemers so ver gesê het.
- I Deelnemer nommer sewe, jy is so stil.
- R Ek luister, ek stem saam met wat hulle alles gesê het uhm vir my was die koue en die lang staan 'n bietjie 'n probleem gewees uhm en veral ook wanneer die pasiënt die oomblik wat sy onder sedering is begin hulle praat asof die pasiënt nie so belangrik was nie en dit was nogal erg want al die susters het omgestaan.
- I Deelnemer nommer een?
- R I felt the malpractice was bad uhm like in a cesarian section they would perforate the bladder and that would just come from trying to do the procedure to quickly and trying to get the patient in and out as fast as possible instead of actually just looking at what they should be doing properly.
- I Okay so jy het gesien dat hulle die keiser volgens jou te vinnig gedoen en die blaas is daardeur raakgesny.
- R And the woman had to get blood transfusions and she had to be sedated and she actually had to get a hysterectomy because she started bleeding too much all over.
- I En hierdie het in teater gebeur?
- R Yeah.
- I So dit is 'n baie slegte ervaring, goed deelnemer nommer twee.

R Een ding wat my ook geskok het was die uhm die doktors eet binne die teater terwyl die prosedure aan die gang is, die uhm, die narkotiseurs sit en eet fisies terwyl die prosedure aan die gang is en wat gebeur is uhm ons is een dag daar gewees, onthou julle dit, ons is een dag daar gewees toe uhm wat gebeur het toe, toe niemand doen iets daaraan nie die doktor sit en eet en toe die pasiënt, toe was die pasiënt besig om by te kom gedurende die prosedure en niemand het dit agtergekom nie. Dit was vir my, ek weet nie dit was vir my onprofessioneel gewees.

R Ek het ook al,

I Deelnemer nommer vyf.

R Ek het ook al in 'n teater gewerk en dan het die narkotiseur konstant uitgeloopt en op sy foon gepraat so dan het die doktor en haar assistent en hulle sou net 'n histerektomie gedoen het deur laporoskopie dit is nou 'n nuwe ding en toe sien hulle dat hulle gaan haar moet oopsny en toe hulle nou die dwelm moes toepas toe sien hulle dat hulle die middel moet aanpas volgens die lengte van die prosedure dan was hy nie daar nie dan het hy net uitgeloopt die hele tyd die narkotiseur en dan moes die doktor later ook die masjiene dop hou om seker te maak die pasiënt bly gesedeer.

I Deelnemer nommer ses.

R Ek het uhm in 'n privaat hospitaal gewerk waar daar heeltemal te min staf is selfs as dit op roep is selfs deur die dag vir die uhm die herstelkamer en dan is daar te min susters en uhm ook iets wat ek agter gekom het wanneer personeel uhm pasiënte terug vat saal toe daai deel waar hulle soos moet jasse, die regte jasse aantrek, skoene uittrek, die skoentjies wat ookal, hulle gaan sommer met dieselfde booties uit en in jy weet daar is nie 'n vaste reël van ek moet elke keer skones aantrek ek moet dit uittrek as ek uitgaan.

R Die skoon skoon en die vuil uit.

R Ja iets in daai lyn en iets wat ek agter gekom in teater self, soos die narkotiseurs veral privaat en staat het ek al gesien dra nie hulle maskers nie, maskers word nie ordentlik vasgemaak nie dit hang los hieronder gedra uhm ek weet nie of ek dit reg het nie maar keps vir die hare is daarvoor sodat al jou hare toegemaak word nie sodat 'n bietjie kan uitsteek nie want daai bietjie kan uitval en in die pasient se wond ingaan.