

**STRATEGIES TO ENHANCE GRADUATE THROUGHPUT OF STUDENT
NURSES IN LIMPOPO COLLEGE OF NURSING, SOUTH AFRICA**

By

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DISSERTATION

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DECLARATION

I Ntshengedzeni Dorothy Neshunzhi declare that the dissertation “**Strategies to enhance graduate throughput of student nurses in Limpopo College of Nursing, South Africa**” is my own work. It has never been submitted for any degree at this or any other university, and that all the sources are indicated and acknowledged.

Ntshengedzeni Dorothy Neshunzhi:

Signature:

Date signed: 2018/01/15

DEDICATION

I dedicate this study to:

My late father Nndwamato Lazarus Neshunzhi who would have been very proud of my work. My late mother Musandiwa Elizabeth Neshunzhi for believing in me and instilling the spirit of patience and perseverance at my tender age. My beloved daughter Rotondwa (Sessie) for understanding when I dedicate more time on my study and patience she had during this study. My siblings and all family members for all the support and encouragement they gave during the study. My friends who believed in me and encouraged me during the study.

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ABSTRACT

Graduate throughput of student nurses is one of the priorities of the National Department of Health in Republic of South Africa. New nurse graduates are expected to curb the obvious shortage of nurses in the nursing profession.

The purpose of the study was to design the strategies to enhance graduate throughput of student nurses. The study design was quantitative, cross-sectional descriptive, research design. The study population included all student nurses who have repeated a level of study. Probability cluster random sampling was employed to select the respondents based on the examination results for both levels.

Data were collected through a self-developed questionnaire. Questionnaires were distributed to 239 respondents (167 student nurses and 72 nurse-educators were completed and returned and questionnaires were analysed) Ethical clearance was obtained from Turfloop Research Ethics Committee, Limpopo Province Department of Health Ethics Committee and Limpopo College Campuses management. The researcher ensured that measures of reliability and validity are adhered to and ethical principle for conducting research that involves human-beings was considered.

Data were analysed using Statistical Package for Social Sciences (SPSS) version 23 for Windows. Descriptive statistics were used to analyse, describe and summarize data in which the findings were presented in the form of distribution tables, graphs and inferential statistics. The study revealed that poor academic performance and achievement of student nurses was caused by work overload, academic stress, anxiety, low morale, lack of dedication, prioritizing social activities and ill health.

Strategies to overcome the causes of poor academic performance and achievement of student nurses were developed. The strategies are-; selection criteria, adequate resources and equipment, conducive-learning environment, student nurses counselling, student nurses discipline, academic curriculum, strategies and programs, innovative teaching strategies, expertise placement, in-service trainings, mutual student-nurse, nurse-educator relationship, adequate resources and equipment as well as awards and incentives.

Key words: Strategies, enhance, graduate throughput, student nurse.

ABBREVIATIONS

HEFCE	: Higher Education Funding Council for England
LICON	: Limpopo College of Nursing
NMC	: Nursing and Midwifery Council
NACNEP	: National Advisory Council on Nurse Education and Practice
NSFAS	: National Student Financial Aid Scheme
OSCE	: Objective Structured Clinical Examination
PMDS	: Performance Management Development System
SANC	: South African Nursing Council
SPSS	: Statistical Package for Social Sciences

DEFINITIONS OF CONCEPT

Strategy

Strategy refers to a plan of action or policy in business or politics (Stevenson & Waite, 2011). In this study, strategies refer to ways that will improve academic achievement of student nurses at Limpopo College of Nursing.

Enhance

Enhance means to heighten or intensify or improve something to be of good quality, (Stevenson & Waite, 2011). In this study, to enhance is to improve academic performance of student nurses at Limpopo College of Nursing.

Graduate throughput

Graduate refers to a person who has been awarded an academic degree or a person who has completed a school course (Stevenson & Waite, 2011). In this study, graduate means student who will have completed 4–year basic R425 training programme. Throughput is the amount of material put through a process especially in manufacturing or computing (Stevenson & Waite, 2011). In this study, throughput is the production of student nurses who have successfully completed R425 four-year Basic Programme.

Student Nurse

According to South African Nursing Council Regulation 2005 32(1) A person undergoing education and training in nursing must apply to the Council to be registered as a learner nurse or a learner midwife. In this study, student nurse will mean all student nurses registered with the South African Nursing Council under Nursing Act no 33 of 2005 and training at the nursing college as a student nurses.

Nursing College

Nursing College refers to a post-secondary educational institution, which offers professional nursing education at a basic and post-basic levels where such nursing education has been approved in terms of section 15(2) of the Government Notice No R425 (South African Nursing Council, 1985). In this study, a nursing college refers to Limpopo College of Nursing institution located in Limpopo Province which provides basic nursing education and training R425, nurse (General, Psychiatric and Community) and Midwife.

Academic Failure

Academic failure is defined as lack of academic success or academic non-performance in a scholarly institution like a college or university (Stevenson & Waite, 2011). In this study, academic failure refers to repeating a level of study by a student nurse in the both theoretical and practical examinations.

Regulation R 425 of February 1985

South African Nursing Council.1985 (a). Regulation relating to the approval of and minimum requirements for education and training of a nurse (General, Psychiatry, Community) and Midwife leading to registration. Regulation R 425 of February 1985. Pretoria: Government Printers. In this study, R425 is a training course of South African Nursing Council that regulates training of four-year Basic Programme that allows student nurses training to register and at the end of training they become professional nurses.

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CHAPTER 1

OVERVIEW OF THE STUDY

1.1 Introduction and Background

Del Plato, Bankert, Grust and Joseph (2011) stated that strategies to enhance graduate throughput of student nurses needed to be formulated so that student nurses were assisted and supported to succeed throughout their academic years. It was expected that every academic tertiary institution should produce the best results in the academic performance and achievement of students to enhance graduate throughput. The strategies to improve and sustain academic performance were ensured by the institutions. Furthermore, nurse-educators ensured all efforts that the institution achieved maximum results through dispersing quality facilitation of learning, guidance and support directed to the student nurses.

Internationally, student nurses and nurse-educators gained skills to promote collaborative and collegial environment centred on caring partnerships that meant that stress became manageable. New ways of teaching and learning were integrated and nurtured into practice. The call for change was imperative as nurse educators were challenged to create student-centred learning environments that would afford educational spaces and teaching moments as a forum for learning to promote persistence and success and model professional expectations. There were strategies which faculty had implemented to enhance learning. Student-centred learning environments that focused on caring, within the academic and clinical settings supported the student nurses' ability to cope with the challenges and stressors inherent to their practice discipline and educational experience (Del Plato et al., 2011).

In educational institutions, success was measured by academic performance or how well students met the standards set out by the government and rules and regulations of the institution. Unsuccessful academic achievement was taken as stemming from poor capacity or a marked decrease in academic success that was once present. Every year more than 380,000 students drop out of college in the United States of

America and the impact of college failure caused lasting damage to self-esteem and influence the entire lifetime (Del Plato et al., 2011).

South Africa has adopted a nursing education system where a student nurse at the end of nursing training should have developed in the following learning areas: critical thinking; creative thinking; reflective thinking; analytical skill; problem-solving skill and clinical judgement. The student nurses operated to their optimum best when they carried out their learning duties both in theoretical and clinical practice, they were taught cognitive domain i.e. knowing and knowledge; psychomotor domain i.e. skills possessed; and affective domain i.e. beliefs, values, customs, traditions (Orem, 2012). Challenges for student nurses in South Africa were observed and experiential learning was found to be the most effective strategy to enhance graduate throughput. Teaching that promoted critical thinking and self-reflection, such as case studies and other experiential exercises played an important role.

In Limpopo province, it was reported that there was worst nurse shortage of more than 60% in 2010. Nursing colleges are supposed to produce high number of student nurses to curb the shortage of nurses at the health care settings in the province. That was a challenge since student nurses were faced with academic challenges or poor academic performance. Furthermore, there were aspects which impacted negatively on student nurses like lack of self-esteem, lack of understanding of the amount of work required and absenteeism in both theory learning and practice. Furthermore, some students showed lack of commitment. Due to teenage-hood, some student nurses did not appear as having self-discipline and that was evident by prioritizing social activities for example partying, boozing and peer pressure during theoretical learning and practice more than their studies (Tshitangano, 2013).

According to Gurbinder, Hamidah, Blackman, Wotton and Belan (2011) stress had a negative effect on student nurses' well-being and was impeding learning or demotivating them. Some of the student nurses were encountering endless stress while pursuing their undergraduate programme. The inability to overcome stress during their nursing education forced many to leave nurse-training by either failing or termination of training. Gillis (2007) reported that student nurses dropped out of programs often times and their space remained unoccupied for the duration of the

program which meant that when the program was completed there were fewer graduate professionals entering the workforce. Academic failure was related to various factors of stressors that nursing students encounter during their examinations and writing of assignments. Most of those students were those having poor language skills and poor understanding of medium of instruction. Academic performance appeared to be a problem at the nursing colleges (Duffy & Hardicre, 2007). Personal problems and workload were purported to be the main issues of concern among the learners (Gurbinder et al., 2011). Some student nurses with attitude problems and lack of interest in clinical practice needed to be identified and counselled so that they were assisted at those colleges so that they are able to be competent professionals.

The transition from high school to college and workload impacted on student nurses' studies. Freedom at the college and lack of strict supervision from parents might be some of the factors that contributed to academic failure of student nurses (Duffy & Hardicre, 2007). According to the researcher's observation, workload of nursing education and fear of failing the R425 basic 4-year programme might be significant causes of academic failure amongst student nurses. The fear of repeating a level while studying was reported as commonly causing stress to student nurses.

1.2 Research Problem

According to the researcher's observation, graduate throughput seemed to be reduced at Limpopo College of Nursing where students ended up repeating levels of study. Student failure led to termination of training as well as, dropping-out of the college. It resulted in poor academic performance in theory and clinical practice. The student nurses learned the following modules in the different levels. BNS = Biological & Natural Sciences, CNS = Community Nursing Science, GNS = General Nursing Science, MID = Midwifery Science, SSC = Social Sciences, PNS = Psychiatric Nursing Science. The high failure rate in theoretical assessments raised concern about whether students' underpinning knowledge was considered. Practical performance would be informed by theoretical knowledge since they are integral components of courses. The researcher observed that some students who did not perform well in theory were found to have performed well in clinical practice.

Table 1.1: Academic Performance of student nurses in one of the campuses

ACADEMIC YEAR	LEVEL OF STUDY	NO OF STUDENTS IN CLASS	PASS F (%)	FAIL F (%)
2014	I	60	51 (85%)	9 (15%)
	II	99	86 (87%)	13 (13%)
	III	78	55 (71%)	23 (29%)
	IV	52	42 (81%)	10 (19%)
2013	I	107	96 (90%)	11 (10%)
	II	74	67 (91%)	7 (9%)
	III	71	44 (62%)	27 (38%)
	IV	55	55 (100%)	0 (0%)
2012	I	76	66 (87%)	10 (13%)
	II	75	56 (75%)	19 (25%)
	III	78	45 (58%)	33(42%)
	IV	36	36 (100%)	0 (0%)
2011	I	79	71 (90%)	8 (10%)
	II	66	58 (88%)	8 (12%)
	III	85	34 (40%)	51 (60%)
	IV	59	56 (95%)	3 (5%)

Table 1.1 shows analysis of the statistics from one of the campuses for four consecutive academic years from 2011-2014. Level I most student nurses repeated BNS, level II GNS, in level III Psychiatric Nursing Science and Midwifery Science, level IV Psychiatric Nursing Science.

1.3 THEORETICAL FRAMEWORK

Burns and Grove (2013) indicated that theoretical framework summarized and integrated what was known about the phenomenon and allowed us to grasp the bigger picture of the phenomenon. A theoretical framework was based on propositional statements which resulted from an existing theory. Orem`s Self-Care Deficit Nursing Theory was adopted in this study.

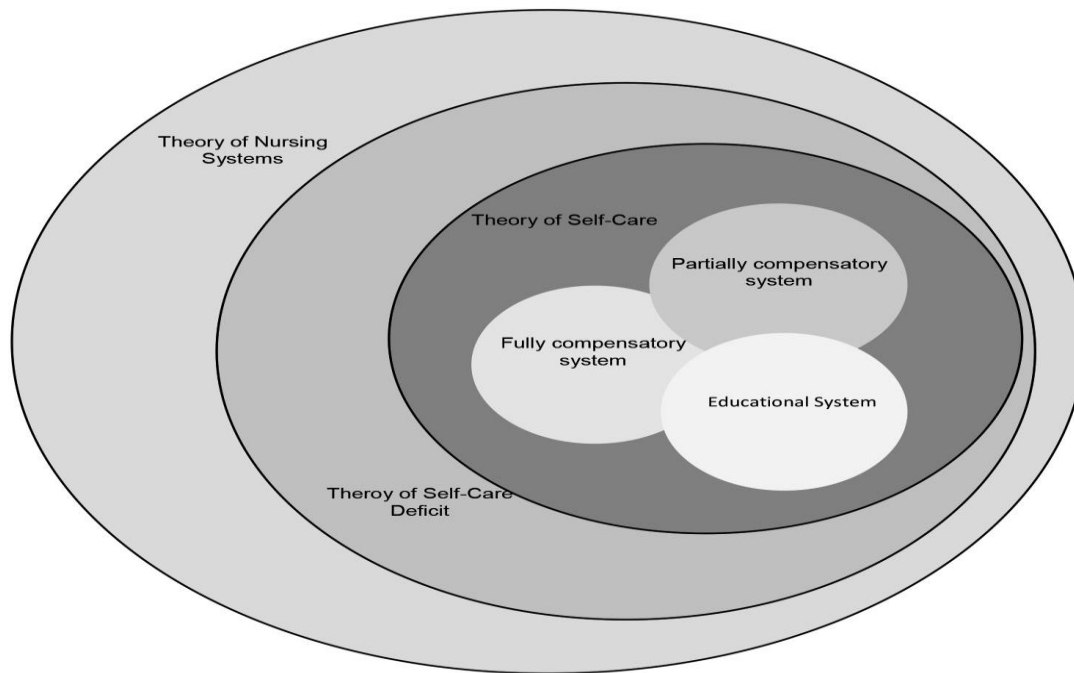


Figure 1.1: Orem`s Self-Care Deficit Theory adapted from Orem (Orem, 2001)

1.3.1 Orem`s Self-Care Deficit Nursing Theory

Orem`s theory comprises of three related theoretical constructs and nursing systems. The theory of nursing systems is relevant in the study because it is based on the assessment of individual self-care needs and on assessment of the abilities of the students. Orem (2012) identified three classifications namely, fully compensatory system, partially compensatory system and educational system.

The three classifications provided the student nurses with the blueprint for the structure of systems of Orem`s Self-Care Deficit Nursing Theory. The development of the theory was influenced by collaboration among clinicians, scholars and educators. Orem`s theory of nursing provided comprehensive base for nursing practice. It had utility for professional nursing in the areas of education, clinical practice, administration, research and nursing information systems.

Orem`s theory is widely known to be a nursing practice theory, and it was applied to nurse education Orem identified the three types of practice of nursing science in nursing systems:

- **Fully compensatory system**

Nursing replaced individuals in self-care. It is when an individual self-care was so limited that he or she depended on others for well-being. When student nurses are in their first level of learning they are fully dependent on the nurse educators, clinical instructors, preceptors and professional nurses for anything related to their nursing field (Alligood & Tomey, 2010). For example, student nurses are taught basic nursing skills such as monitoring of blood pressure with a baunomanometer, counting pulse and respiration. Student nurses in fully compensatory system need attention because they have self-care deficit.

- **Partially compensatory system**

Individuals need nursing to help them carry out what they are not able to do on their own to meet self-care requisites. When student nurses are in their second and third level of study they are partially dependent on the preceptors, mentors and professional nurses, because they can execute some of the clinical skills and care to the patients on their own though they need partial supervision from their mentors (Alligood & Tomey, 2010). For example, student nurses can give oral and injectable medication and assist in clinical skills such as incision and drainage. Student nurses need accompaniment and remedial teaching.

- **Educational system**

Student nurses are able to perform self-care, although they need nurse-educators to teach and supervise them during experiential learning. An integrated human functioning includes physical, psychological, interpersonal and social aspects, as human beings are believed to distinguish themselves from others by their potential for learning and developing (McEwen & Wills, 2009).

The theory of supportive-educative system was adapted to student nurses, as they started their programme they are dependent on the nurse-educators and preceptors. When student nurses are in their fourth level of study they become more confident and independent and can work with very minimal supervision from nurse educators, preceptors and professional nurses. In theoretical areas they are able to present the case studies given. Level IV student nurses can do self-directed learning, in the

practical area they are able to do audit on patients' files, can do ward rounds with medical practitioners and carry out prescriptions. Student nurses are now fully independent and are able to do self-care.

The application of supportive-educative system of the self-care theory on this study is that, when student nurses enter the nursing profession as neophytes they are dependent on the nurse educators, clinical facilitators and professional nurses but as they gather knowledge by being taught theory and practice they become independent. At the end of their learning programme they become skilled with regard to the cognitive, affective and psychomotor skills. The skills include critical thinking, creative thinking, reflective thinking, analytical thinking, problem-solving and clinical judgement. They become skilful and capable individuals in the nursing profession when they carry out their nursing duties, hence education and culture influence individuals (Queiros, Vidinha & de Almeida Filho, 2014).

1.4 Aim of the study

The aim of the study was to design the strategies to enhance graduate throughput of student nurses in Limpopo College of Nursing.

1.5 Research question

Which strategies can be developed to enhance graduate throughput of student nurses in Limpopo College of Nursing?

1.6 Objectives of the study

The objectives of the study were to:

- Identify contributory factors to academic failure of student nurses in Limpopo College of Nursing.
- Develop strategies to enhance graduate throughput of student nurses in Limpopo College of Nursing.

1.7 Overview of the Research Methodology

Research methodology used in the study is quantitative method. The quantitative method was adopted in order to describe the development of strategies that would enhance graduate throughput of student nurses in Limpopo College of Nursing. The cross-sectional descriptive research design was used in the study in which the variables were described and the relationships between variable examined. In this study population were all student nurses who were doing R425, who failed in their academic years of training. Probability sampling approach was employed. Probability sampling approach referred to the fact that every member of the population had a probability higher than zero of being selected in a sample and it reduced the sampling error (Burns & Grove, 2013). The sampling technique employed in the study was cluster random sampling and a questionnaire was the instrument used to collect data.

1.8 Significance of the study

The results of the study might provide an opportunity for student nurses who repeated any level of study to improve their academic performance and increase pass rate. This research study could benefit the Department of Health by increasing graduate throughput that could improve the increase of qualified nurses thus counteracting the existing decreased graduate throughput of student nurses.

1.9 Outline of Subsequent Chapters

Chapter 2: Literature Review

Covers the literature review on strategies to enhance graduate throughput of student nurses.

Chapter 3: Research Methodology

Presents the research methodology, research design, study site, population and sampling, data collection method, data analysis, validity and reliability and ethical considerations.

Chapter 4: Discussion of Results

Deals with reports on the research findings in the context of the aim and objectives of the study.

Chapter 5: Summary, Conclusion, Limitations and Recommendations

Discusses the summary, conclusion, limitations and recommendation.

Recommendations are based on the findings of the study in relation to strategies to enhance graduate throughput.

1.10 Conclusion

This chapter presented an overview of the research study: Introduction and background, research problem, theoretical framework, aim of the study, research question, and objectives of the study, research methodology and significance of the study. The next chapter 2 will focus on literature review.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

The previous chapter gave an orientation of the study. Chapter 2 reviewed literature on failure of academic achievement of student nurses, factors that contribute to stress and overload of work, strategies to improve graduate throughput of student nurses and improvement of nursing education. Literature review is a critical summary of research on a topic of interest, often prepared to put research problem in context (Polit & Beck, 2008).

2.2 Purpose of literature review

The purpose of literature review is for experiential description of the phenomenon being studied and to expand the researcher's understanding of the phenomenon from multiple perspectives (Polit & Beck, 2008).

According to De Vos et al (2013) literature review creates a foundation based on existing related knowledge. It determines what is already known about the topic in order that the researcher might obtain a comprehensive picture of the state of knowledge.

The purpose of literature review in this study was to cover variables that might influence the academic failure of student nurses; student attitudes, failure rate, wrong career choice, absenteeism, attitudes of clinical staff, student support and other factors related to skills acquisition.

2.3 Scope of Literature Review

Scope of literature review is the extent of the area or range of view, its application, operation, or subject matter guide on how the investigation or discussion will unfold. The subheadings of the literature review are as follows:

2.3.1 Students` attitudes

Nurse educators in the United Kingdom identified that weak students often had a history of problems and attitude especially in clinical practice. That was the reason why in the United Kingdom, Nursing and Midwifery Council (NMC) determined fitness for practice involving nursing students fulfilling theoretical, clinical and professional criteria laid down by the NMC and interpreted by each individual educational institution. It was argued that signs of failure were apparent earlier on. It was important for facilitators to identify and document concerns to students at the earliest opportunity and not later than midway assessments. A concrete example of attitude was evident from some of the students (Duffy & Hardicre, 2007).

2.3.2 Failure rate

DiBartolo and Seldomridge (2008) argued that despite efforts by nurse educators to predict success of student nurses, addressing the needs of students at risk of failure was an on-going problem. Failure rate varied between academic years but there was discrepancy between failure in theoretical and practical assessments on nursing courses in England. Failure rates for theoretical assessment outstripped failure rates for practical assessment by 5:1 ratio (Hunt, McGee, Gutteridge & Hughes, 2011).

Luhanga, Yonge and Myrick (2008) cited that assessors of practice often found it difficult to fail student nurses, and the number of factors appeared to be contributing to the situation including the question whether the preparation and support practice based assessors encouraged them to test the evidence base of student nurses practice. A number of influencing factors might be contributing to the situation. Academic staff played a significant role in supporting student nurses in their training. In Queensland, a study was done on perception regarding factors that enabled student nurses' successful completion of training (West, Usher, Foster & Stewart, 2014).

There were aspects which impacted negatively on student nurses during their clinical learning experiences such as lack of teaching and learning support, lack of opportunities for learning, poor theory-practice integration, poor interpersonal relationships between the students, college tutors and ward staff. Student nurses

needed coaching, guidance, mentoring and support during their training so that they achieve their academic performance to prevent failure (Mabuda, Alberts & Potgieter, 2008).

There had been concerns expressed about the capacity of clinical assessments to promote student development and ensure safe practice. Quality assessment utilizes assessment practices that require contextualized and complex challenges, not fragmented task. It was determined to create an authentic, meaningful assessment process that not only measured students' clinical competence but also caused them to critically reflect on their practice and to learn from that experience. Good assessment was that in which the process of assessment had a directly beneficial influence on the learning processes (Levett-Jones & Bourgeois, 2007).

Furthermore, Levett-Jones, Gersbarch, Arthur and Roche (2011) stated that student nurses experienced a theory-practice gap when they found themselves caught between the demands of their nurse educators to implement what they have learned in theory, and pressure from practicing nurses to conform to the constraints of the real clinical environment. There was a problem in integration of theory and practice.

Simulation laboratories augment traditional methods of teaching practical skills. Clinical simulators allowed student nurses to practice procedures and receive immediate feedback. They also promoted competency-based learning and develop critical thinking. Simulation laboratories reduced the demand for clinical placements and complement the use of health-care facilities for training (Canadian Nurses Association & Canadian Association of Schools of Nursing, 2007).

The low throughput rate was partially ascribed to the fact that students did not prepare well enough for tests and examinations. Some students seemed to agree with that perception believing that other students did not study enough though some other students were hard working on their academic work with much effort that aided their success. Other students had poor class attendance (Steenkamp, Baard & Frick 2009).

2.3.3 Wrong career choice

Other factors that influenced decreased graduate throughput were identified as wrong career choice, clinical difficulties and personal problems, and that suggested that students were not fully informed regarding what the nursing profession entailed (O'Holloran, 2009). Furthermore, Wright and Maree (2007) stated that once student nurses entered the nursing profession especially clinical setting they become disillusioned and were not able to handle the demands of what they encountered.

Usually students with good academic performances were used as an indication for future academic achievements (Pitt, Powis, Levett-Jones & Hunter, 2012). Included in aspects of educational failure and great financial implications were an increasing pressure to produce a highly educated workforce to sustain the global economy (Bradley, 2011).

2.3.4 Absenteeism of student nurses

Absenteeism results in an increased workload for nurses who stand in for colleagues and can lead to situations in which lack of motivation among nurses and a lowering of the quality of patient care may occur. The researcher observed that certain conditions such as inflexible working schedules and poor working conditions may contribute to absenteeism of nurses in the workplace. Repetitive tasks cause boredom which contributes to absenteeism. Lack of incentives demoralize nurses and contributes to absenteeism. Since nurses are overworked and under paid, physical exhaustion due to work pressure could also lead to absenteeism (Nyathi & Jooste, 2008).

The culture of sickness and absenteeism becomes a norm in the nursing profession. When student nurses observe the culture the ward staff (nurses) end up copying and these result in high absenteeism of student nurse during clinical placement and hence incompetent in clinical work. Individuals experience social pressure to lower their absence to a group norm or the culture of the group Furthermore, absenteeism results in an increased workload for nurses who stand in for colleagues and can lead to situations in which a lack of motivation among nurses and a lowering of the quality

of patient care may occur. The researchers observed that certain conditions, such as inflexible working schedules, were given as reasons for the absenteeism (Zungu & Manyisa, 2009).

2.3.5 Peer group pressure

Schools and tertiary education institutions are ideal settings for youth (students) to adopt healthy lifestyle behaviours. The South African government ensures that life orientation and life sciences subjects are included in curricula in the departments of Education, Health and Social Development offer and teach the youth. Like any other students at tertiary institutions student nurses also engage in self-destructive behaviours such as alcohol abuse, drug abuse, multiple sexual partners and unprotected sexual intercourse, which might lead to sexually transmitted infections, HIV and unplanned pregnancies (Integrated School Health Policy, 2012).

These might be due to copycat and peer group pressure so that they must feel wanted and a sense of being part of the group. Sexual risk taking has many non-sexual consequences such as poor academic performance and early school-leaving, while unplanned pregnancy is strongly associated with low socio-economic status. Student nurses have adopted peer group pressure culture from colleagues (Zungu & Manyisa, 2009).

2.3.6 Attitudes of clinical staff

A well-trained and culturally competent working force was paramount in reducing the poor health care and ensuring that care was delivered in culturally appropriate ways. Stress affects problem-solving coping ability and it also leads to a decrease in learning, academic performance and retention. It was established that critical nursing shortage was a major concern affecting health care world-wide (Goff, 2009).

Student nurses are expected to be competent workforce on completion of their nursing training, but due to negative attitude of clinical staff towards student nurses it impacted negatively on their clinical learning experiences. Student nurses' negative

experiences were characterised by negative emotions such as embarrassment, unhappiness, fear, frustration and anger while in the clinical learning environment.

Student nurses were used as a pair of hands or working force in the wards. That might be due to the fact that student nurses were used as workforce without recognition of their student nurse status and learning needs. Their scope of practice was not considered when delegating tasks and that compromised the integration of theory and practice which contributes to the formation of a competent workforce. Qualified staff/nurses should treat students with kindness and understanding, because if student nurses were not supported it becomes difficult for them to be a competent workforce at the end of their academic training. Established caring relationships was the key to creating caring learning environments which was conducive to student learning. Student nurses may experience more meaningful learning from mentors in practice where insights into previously poorly understood aspects of nursing can be found (Higher Education Funding Council for England, 2010).

2.3.7 Academic stress and anxiety due to workload

Higher Education Funding Council for England (2010) reported that due to academic stress and the pressure or workload, student nurses could not finish their work on time. Some students did not have proper management or plan in their studies and could not cope with the problems. The majority of the studies comparing clinical and academic related stress revealed that the academic component was the greatest source of stress for nursing students.

Lack of formative feedback was identified as an area of weakness in theoretical assessments and may mean that failure rates for theory are unduly high. It was also possible that theoretical assessments may not test what is required of the contemporary nurse as appropriately as practical assessments (Bradbury-Jones, Irvine & Sambrook, 2010). Lack of free time, school responsiveness to student needs and peer competition were found to be aggravating factors contributing to

distress among student nurses. Stress had a negative effect on student nurses well-being and can impede learning (Gurbinder et al., 2011).

Student nurses stress was also related to personal problems such as adaptation to new environment, financial burden and problems related to family matters. Personal problems, workload of nursing education, fear of failure were the major stressors among student nurses. Academic stress was related to various factors such as assignments, assessments and examination. Student stress in clinical setting was associated with the complexity and acuity of patient care. Interacting with members of multi-disciplinary team, colleagues, patients it was found out that student nurses underwent ambiguities which led to attrition and clinical environment (Prymachuk & Richards, 2007).

Furthermore, they went to new clinical settings and therefore needed support. It has been evident that they experienced anxiety and fear during clinical placement and that in turn it affected their responses to the clinical learning environment. There have been increased levels of student nurses stress associated with the burden of covering shifts and limited time to care for patients in understaffed wards and caring for complex patients (Prymachuk & Richards, 2007).

Gibbons, Dempster and Moutray (2008) argued that student nurses stress' was related to various academic, clinical and personal aspects encountered throughout their tertiary education. Demographic factors which contribute to academic stress were age and gender. Clinical environment coupled with the use of complex equipment, heavy workload, interpretation and implementation of lengthy and complex nursing care plans and working with patients were constant sources of student nurses stress. It meant that working in an understaffed environment also predisposed them to stress due to shortage of staff and work overload.

Student nurses also experienced stress in clinical area. Long-time stress among student nurses and prolonged stress could cause memory problems and inability to concentrate in their studies. Student nurses faced a lot of interpersonal and environmental stresses. Stress could not be eliminated in daily life but student nurses could be able to manage and control how stress affected them. Stress promoted personal growth and self-improvement (Sharma, Sharma & Singh, 2011).

Neuman Systems Model provided comprehensive framework for clinical nursing faculty to try and attempt to address the problem of stress and anxiety among undergraduate nursing students in the clinical learning environment, literature indicated that stress in clinical environment broke students' normal line of defence resulting in symptoms of anxiety. Undergraduate nursing students identified the clinical learning environment as one of the most anxiety-provoking components of nursing education. Anxiety acted as a motivator and performance enhancer but high levels debilitated and jeopardized student success in the nursing program if performance was negatively influenced. Different stressors such as time management, financial problems, sleep deprivation, social activities, and for some students even having children, can all pose their own threat to a student's academic performance (Moscaritolo, 2009).

Transition from school to university of students in their first year of study might have an influence on student performance. Research in nursing education suggested that student nurses needed to engage in thinking processes that promote reflective thinking where they build practical knowledge (knowledge from experience). Student nurses could expect learning experiences where nurse educators use strategies to develop student nurses' critical thinking practices (Schekel, 2008).

2.3.8 Development of skills needed

In the United States of America there was a gap in workforce supply and demand over the past fifteen years and that had led to increased demand for more knowledgeable health care practitioners and to address that challenge, employers seek out nurses who had skills, and worked effectively in the health multi-disciplinary teams. Nursing education kept pace with practice innovations, student nurses needed to develop strategies for coping with workload and skills expected (National Advisory Council on Nurse Education and Practice, 2010). Student nurses are equipped with appropriate skills during their theoretical learning and practice, which are the cognitive domain, psychomotor domain and affective domain during their training so that when they qualified they become competent professionals. Variety of coping strategies used optimism and problem-solving skills. Self-reliance and being humorous has been used to overcome academic stress. In order for student nurses

to be a competent workforce they need to have developed and equipped with skills needed to execute their nursing duties (National Advisory Council on Nurse Education and Practice, 2010).

2.3.9 Improvement of nursing education

Klein-Collins (2011) argued that paving the way to greater innovation in nursing education needed to be a priority of nursing educators as they looked to future healthcare needs and the imminent shortages of registered nurses. National leaders have pointed to the need to improve nursing education, creating opportunities for progression to higher levels of nursing education, technology for more efficient and effective instruction and focusing on learning outcomes. The department needed to support an educational approach for nursing that did not merely sustain the current structures, but rather disrupted those structures in order to achieve greater learning, greater capacity and greater access to the profession (Klein-Collins, 2011). The strategies were effective in increasing the engagement, achievement and school completion among students. The institution culture and leadership that acknowledged and supported students were almost important. That included provision of professional development to staff to raise awareness. Strategies provided a broad curriculum, attendance programs helped maintained engagement of students and improved learning outcome. Those strategies enabled the institution to identify student nurses at risk of low achievement which led to termination of the course (Helme & Lamb, 2011).

2.3.10 Student-centred learning

Carrick (2011) clarified that there were innovations on student-centred learning environments that proved effective in resolving the problem of student achievement. Further research was necessary to better understand student learning to validate the benefits of new teaching strategies to identify best practices. Establishment of relationship facilitated their engagement in services of the core element of practice and the facilitators displayed attributes such as empathy, honesty, humility, care, flexibility and practicality together with the skills of a professional helper such as being a good listener, being non-judgemental and being straight forward and accountable towards students (Schmied & Tully, 2009). Student-centred learning

needed students who had self-determination and self-motivation to learn. It was affirmed that student nurses developed intrinsic motivation because it represented the most self-determination to learn. Some of the student nurses had a motivation which referred to the absence of motivation to learn (Allen, Gatch, Maurer, Shankar & Sturges, 2012).

2.3.11 Sub-standard attributes and skills

Nurse educators evaluated and revised education curricula, approaches and programs used to educate new and practicing nurses to address the challenges facing nursing education, nurses who had knowledge, skills and attitude aligned with requirements of their practice environment who worked effectively in inter-professional teams across variety of health care settings. Nursing training played a crucial role in shaping health professional practice (National Advisory Council of Nurse Education and Practice, 2010).

London and Baldwin-Ragaven (2008) stated that after completion of training, student nurses had gained knowledge and skills for them to function as independent individuals and have developed in all the learning areas namely: critical thinking, creative thinking, reflective thinking, analytical skill, problem-solving skill and clinical judgement skill. Students had to develop all three domains which were cognitive domain, affective and psychomotor domain. For skills development the psychomotor domain was needed, that was skills and arts, as it was known that in nursing, skills should have been developed for nurses to carry out the nursing duties with competency according to the researcher`s perspective.

2.3.12 Students counselling and support

Student counselling and support services were available to assist and ease student nurses from the academic stressors they were faced with, on daily life (Redmond, Quinn, Devitt & Archbold, 2011).

2.3.13 Clinical competency assessment model

Competency remained a complex concept that was difficult to define and more difficult to measure. The assessment of student nurses' clinical competence confronted nurse educationalists with problems of validity and reliability over an extended period of time. Although most students had good content knowledge and adequate procedural skills, they frequently lacked the clinical judgement and decision making skills needed to respond appropriately in unpredictable or complex situations (Levett-Jones et al., 2011).

Hoffman's (2007) research indicated that nurses with effective clinical reasoning skills had a positive impact on patient outcomes, conversely, those with poor clinical reasoning skills often failed to detect impending patient deterioration resulting in that those with poor clinical reasoning skills often fail to detect impending patient deterioration resulting in a failure-to-rescue. Assessors often gave student nurses remedial teaching. The tertiary institutions which trained student nurses aimed at preparing nurses to work in complex, dynamic and unpredictable clinical environments (Hoffman, 2007).

Levett-Jones et al. (2011) cited that too often clinical assessments were focused on psychomotor skills and failed to take into account the multidimensional nature of competence and the range of attributes required for professional practice in order to address those educational and professional concerns. An innovative clinical assessment model had been implemented into their nursing training programme. The comprehensive and practice-driven clinical assessment that motivated student learning, promoted clinical reflection and confirmed graduate throughput readiness from professional practice (Levett-Jones & Bourgeois, 2007).

2.3.14 Formative and summative feedback

The student nurses' clinical strengths and areas that required further development were clearly identified during formative and summative feedback provided by the clinical assessors, preceptors and nurse educators to the student nurses. That approach provided a mechanism to give students individualised detailed and non-threatening feedback which promoted critical self-reflection and enabled them to

respond in a positive way when the need for improvement was identified. For each identified limitation or need for improvement one or more explicit strategies of improvement were identified. Student nurses were required to reflect on the feedback provided. Strategies for improvement were negotiated with the concerned students and their mentor and learning contracts were developed (Levett-Jones et al., 2011).

Furthermore, targeted remediation was designed to address clinical performance limitations. Remediation included additional practice in a particular nursing set of skills, writing a reflective narrative critical incident, searching for the evidence that underpinned a particular aspect of practice, additional supervised clinical placement hours. Student nurses were offered one opportunity for reassessment following remediation (Levett-Jones et al., 2011).

2.3.15 Simulation in health-care education

Simulation was used in health care education for nearly 40 years. The use of simulation allowed for repeated and reflected practice, and was particularly useful for complex conditions that perhaps occur infrequently in their real world (Shepherd, Kelly, Skene & White, 2007).

Simulated experiences are effective learning opportunities. Assessments such as objective structured clinical examination (OSCE) have advantages such as objectivity, the capacity for video analysis and the ability to recreate the same or similar scenarios for multiple assessments. Scenario-based simulation provides an opportunity to identify and reason through a clinical problem and make a clinical decision in a safe and controlled environment without the risk of harming an actual patient (Levett-Jones, 2007).

Simulated laboratories augmented traditional methods of teaching practical skills. Clinical preceptors and nurse educators allowed student nurses to practice procedures and receive immediate feedback. They also promote competency-based learning and develop critical thinking. Simulation laboratories reduce the demand for clinical placements and complement the use of health-care facilities for training. From a broader perspective, the combination of an appropriate patient simulator and a relevant educational framework offered a significant alternative to more traditional

educational models in the preparation and subsequent professional support of graduate student nurses and nurse educators (Canadian Association of Schools of Nursing, 2007).

2.3.16 Student nurses and new information technologies

Several nursing colleges, nursing schools and universities offered baccalaureate programs which allowed student nurses to obtain all competencies to practice safely and effectively. Innovative education programmes addressed the limitation by assessing and recognizing prior learning and by connecting student nurses directly with the content and experiences they needed. Many nursing schools and nursing colleges adopted new technologies and new approaches to learning when redesigning their programme delivery for example projectors, computers and laptop (Canadian Association of Schools of Nursing, 2007).

Regardless of the practice setting in which students learn nursing care, various technologies and informatics to assist with patient care is included. The technologies include medical devices that will be used to provide self-care, information retrieval, clinical information management, documentation technologies. Many schools of nursing are incorporating the use of personal digital assistants (PDAs) into the curriculum to help students immediately access information on medical terminology, laboratory values, and evidence based-information. Student nurses use of these devices has implications for improving their clinical judgement. There are computerized physician order entry systems, telemedicine systems and patient surveillance systems and many of which have implications for ensuring patient quality and safety. The use of technology and training was recommended as a way forward to address the shortcomings in the nursing practice. The use of technology included online-learning, electronic mail, bulletin boards, downloading information from internet, intranet, informatics, websites and library catalogues (Newman & Howse, 2007).

2.3.17 Alleviate the transition phenomenon

Nurses found the transition from student nurse to health care professional difficult and stressful. The nursing education system was criticized for producing graduates

who were incompetent and with no expertise especially in clinical training. Research suggest that the newly graduated nurses often feel overwhelmed and ill prepared for the reality of working in a clinical setting. Evidence supported the contention that there was a level of knowledge and skill decay leading to reduced levels of competence and confidence. Tensions aroused when overworked senior nurses felt that they had to carry the extra burden of their inexperienced new colleagues (Shepherd, et al., 2007).

2.3.18 Student nurses' retention and graduate throughput

The Ministry of Education stated that the long-term goal for increasing the overall participating rate in colleges and universities in South Africa were completed by the strategies to increase graduate outputs in the short to middle-term. The reason behind was to ensure that the current demand for higher level managerial and professional skills was satisfied (National and institutional framework for Higher Education system in South Africa, 2012). Student retention and enhancing graduate throughput was a critical issue not only in South Africa but also in other parts of the world. The central role in that regard was to provide the number and range of student nurse graduates of the Department of Health in particular in the fields and levels required (National Advisory Council on Nurse Education and Practice, 2010).

Tinto (2007) stated that the focus was on increasing the student nurses' graduate rate, especially student nurses who were directly related to education methodologies and teaching practices whereby teaching and learning was teacher-centred. Nurse educators were not equipped with skills to educate learners to become critical thinkers, hence the high failure rate. The areas of professional development of nurse educators and resources in the theoretical and clinical settings needed revisiting to strengthen those critical areas. According to Ogude, Kilfoil and du Plessis (2012) effective learning happens in conducive-learning environments. To improve student nurse retention, improve and enhance graduate throughput success, the nurse education need to focus attention on improving the learning environment (Ogude et al., 2012).

Holistic long-term professional development of teachers included lifelong learning, reflective practice, programmes to develop teacher content knowledge and content knowledge of learning areas, collaborating with peers, supportive structures for nurse educators, capacity building of nurse educators (Kriek & Grayson, 2009). Several inter-related factors accounted for the discontinuity of student nurses in higher education, some which were beyond the institution control: poor preparation for higher education, lack of commitment, unsatisfactory academic performance and experience, lack of social integration, financial issues and personal circumstances (Crosling, Thomas & Heagney, 2008).

Strategies instituted included increasing funding, outcome-based education, problem-based and evidenced-based learning, boosting student support systems, ensuring pre-entry information and preparation, proper induction and transition support, curriculum development and social engagement through established communities of learning, student support, data and monitoring (Weisseman, Cerna, Geckler, Schneider & Price et al, 2010).

Development of unique models and framework for building a sustainable retention strategy to tackle challenges associated with students' attrition were to be instituted. Formulation and implementation of retention strategies to improve and enhance the graduate throughput is not an option but a need if academic progress is to be achieved (Roos, Fichardt, MacKenzie & Raubenheimer, 2016).

2.4 Conclusion

Chapter 2 discussed the causes of poor academic performance and strategies to enhance graduate throughput ; students attitude, attitudes of ward staff, academic stress and anxiety due to workload, development of skills needed, improvement of nursing education, student-centred learning, substandard attributes and skills, student counselling and support, clinical competency assessment model, formative and summative feedback, simulation in health-care education, student nurses and new information technologies, alleviating the transition phenomenon, nursing graduates' readiness for professional practice. Chapter 3 will discuss research methodology.

CHAPTER 3

RESEARCH METHODOLOGY

3.1 Introduction

In the previous chapter the literature focused on factors that hinders graduate throughput of student nurses as well as factors that promote enhancement of graduate throughput of student nurses. This Chapter describes the research methodology that was used in the study. The study site, the research design, population and sampling are described. The researcher reports on the instrument that was used for data collection, including the methods implemented to maintain validity and reliability of the instrument.

3.2 Study site

The study site was the Limpopo College of Nursing which is comprised of the five campuses: Giyani, Sovenga and Thohoyandou which are the fully functional old campuses and Sekhukhune and Waterberg which are the new campuses functioning as satellites and hosting only first year level of student nurses. All campuses are widely distributed throughout the five districts of Limpopo province. The main central college is situated at Hans Van Rensburg Street in Polokwane city and does not have students as it is the governance college where the Principal of the college is stationed with the human resource personnel.



Figure 3.1: Map of Limpopo province showing Limpopo College of Nursing College Campuses

Figure 3.1 shows the map of Limpopo province indicating Limpopo College of Nursing College Campuses. The study was conducted in Capricorn district-Sovenga campus, Mopani District-Giyani campus, Sekhukhune district -Sekhukhune campus Vhembe district–Thohoyandou campus and Waterberg District-Waterberg campus.

3.3 Quantitative Research methodology

Quantitative study refers to a formal, objective, systematic, study process to describe and test relationships to examine cause and effect interactions among variables (Burns, Gray & Grove, 2013). In this study quantitative method was adopted in order to describe the development of strategies to enhance graduate throughput of student nurses in Limpopo College of Nursing.

3.4 Research design

Burns et al. (2013) defined a research design as a blue print for conducting a study to maximize control over factors that interfered with the validity of the findings. Research design is a set of guidelines and instruction that should be monitored in addressing research problem. The cross-sectional descriptive research design was used in the study in which the variables were described and the relationships between variable examined. Variables of students were age, gender, level of training, level repeated, subject failed. Variables of nurse educators were age, gender, qualifications, level of facilitation, years of teaching experience, subject currently facilitating.

- **Descriptive design**

The descriptive research design was used in this study. In descriptive research design, the researcher does not manipulate any variables, and to determine the relationship between variables, the researcher searched for accurate information about the characteristics of a single subject clusters (Brink, Van Der Walt & Van Rensburg, 2012). Non-experimental design was used as the researcher wanted to describe the variable of interest as it naturally occurs. Descriptive design was used to describe the contributory factors to academic failure of student nurses in Limpopo College of Nursing. Furthermore, describe the strategies for enhancement of graduate throughput of student nurses in Limpopo College of Nursing.

- **Cross-sectional design**

Cross-sectional design is a study design in which data collected is sometimes used to infer change over time when data were collected from different age groups (Polit & Beck, 2008). Data were collected on different occasions with different respondents, rather than on the same respondents at several points in time. Cross-sectional design was used because four levels of student nurses training were sampled at the same time.

3.5 POPULATION AND SAMPLING

- **Population**

Population is the entire set of individuals or objects with the same common characteristics from which a sample can be drawn (Polit & Beck, 2008). In this study, population comprised of 200 student nurses who were pursuing R425 who have repeated any level of study in their academic years of training from level I, II, III and IV. Sampling was done from each campus. The target population was selected because each met the criteria of this study, which were student nurses who were pursuing Diploma R425 and have failed in their academic years of training from level I, I, III and IV and those who gave consent to participate in the study. Tables 3.1 and 3.2 show the population of student nurses and nurse educators respectively.

Table 3.1: Population of student nurses

DISTRICTS	CLUSTERS CAMPUSES	POPULATION SIZE	SAMPLE SIZE
Mopani district	Giyani	54	48
Vhembe district	Thohoyandou	58	48
Capricorn district	Sovenga	85	70
Sekhukhune district	Sekhukhune	1	-
Waterberg district	Waterberg	2	1
	Total	200	167

Table 3.2: Population of nurse educators

DISTRICTS	COLLEGE CAMPUSES	POPULATION SIZE	SAMPLE SIZE
Mopani district	Giyani	28	22
Vhembe district	Thohoyandou	18	14
Capricorn district	Sovenga	32	24
Sekhukhune district	Sekhukhune	12	10
Waterberg district	Waterberg	10	10
	Total	100	80

- **Sampling**

Sampling is a process whereby the researcher selects a portion of population to represent the entire population (Polit & Beck, 2008). Probability sampling approach was employed. Probability sampling approach refers to the fact that every member of the population has a probability higher than zero of being selected in a sample and it reduces the sampling error (Burns, Gray & Grove, 2013). The sampling technique that was employed in this study was cluster random sampling.

Cluster random sampling involves two or more stages and is also called area or multistage sampling. The population was first listed by clusters and then the sample elements were selected from those clusters (Brink et al., 2013). The procedure was that sampling started with the largest group of most inclusive sampling unit, and progressed to the next most inclusive sampling unit until it reached the final stage, which was the selection of the respondents in the study. Cluster random sampling technique enabled grouping of student nurses according to the geographical area where they are undertaking their training. There are five districts within Limpopo Province. The clusters of Limpopo Nursing College are five campuses namely, Giyani, Thohoyandou, Sovenga, Sekhukhune and Waterberg in each district. Capricorn district-Sovenga campus, Mopani District-Giyani campus, Sekhukhune District-Sekhukhune campus Vhembe district–Thohoyandou campus and Waterberg District-Waterberg campus.

The sample in this study is student nurses undertaking training in Limpopo College of Nursing campuses who have repeated a year of study during their training. The student nurses from Sovenga campus were the largest group with 85 respondents, second largest was Thohoyandou with 58 populations, Giyani followed with 54 and Waterberg with 2 and the least was Sekhukhune with only 1. The nurse educators from Sovenga campus was the largest group with 32, second largest was Giyani with 28, Thohoyandou with a population of 18, Sekhukhune with 12 respondents and the least was Waterberg with 10.

- **Advantage of cluster sampling**

The advantage of cluster sampling is that it is considerably more economical in terms of time and costs than other techniques especially when the population is large and geographically dispersed.

- **Disadvantage of cluster sampling**

The disadvantage of cluster sampling is that handling of statistical data is extremely complex and more sampling errors tend to occur than with simple and stratified random samplings.

Formula for determining sample size

Krejcie and Morgan's Formula for determining sample size was used to determine population size in the study:

$$\text{Sampling interval (K)} = \frac{\text{size of population}}{\text{size of the sample}} = \frac{N}{S}$$

s = required sample size

X² = the table value of Chi-square for 1 degree of freedom at the desired confidential level (3.841)

N = population size

P= population proportion (assumed to be 0.5 to provide the maximum sample size)

D = the degree of accuracy expressed as a proportion (0.05)

Sample size of student nurses

$$s = \frac{X^2 NP (1-p)}{d^2 (N-1) + X^2 P (1-p)}$$

$$= \frac{3.841 \cdot (289 \cdot 0.5 \cdot (1-0.5))}{(0.05)^2 (200-1) + 3.841 \cdot 0.5 \cdot (0.05)}$$

$$\frac{3.841 \cdot 50 \cdot 0.5}{0.0025(99) + 384(0.25)}$$

$$\frac{3.841(25)}{0.2475 + 0.96025}$$

$$\frac{200.025}{1.19775}$$

167

Student nurses sample size (n= 167)

The sample of student nurses was 167 respondents, plus 10 respondents who participated in the pilot study. Thus, the sample was 177 respondents derived from the total number of student nurses who repeated the level of study. The completed and returned questionnaires from student nurses were 167 (100%).

Sample size of nurse educators

$$s = \frac{X^2 NP (1-p)}{d^2 (N-1) + X^2 P (1-p)}$$

$$= \frac{3.841 \cdot (100 \cdot 0.5 (1-0.5))}{(0.05)^2 (100-1) + 3.841 \cdot 0.5 (0.05)}$$

$$\frac{3.841 \cdot 50 \cdot 0.5}{0.0025(99) + 384(0.25)}$$

$$\frac{3.841(25)}{0.2475 + 0.96025}$$

$$\frac{96.025}{1.20775}$$

79.5

Nurse educators sample size (n= 80)

The sample of nurse educators was 80 respondents, plus 10 respondents who participated in the pilot study. Thus, the sample was 90 respondents derived from the total number of nurse educators who repeated the level of study. The completed and returned questionnaires from student nurses were 72 and eight were incomplete and were classified as missing systems.

- **Inclusion criteria**

Inclusion criteria were Government Notice R425 of 1985 student nurses who repeated a year of study during their training and learning in any level at Giyani, Sekhukhune, Sovenga, Thohoyandou and Waterberg campuses in Limpopo College of Nursing. Nurse educators for the R425 basic programme from each campus were included in the study.

- **Exclusion criteria**

Exclusion criteria were all R425 basic programme student nurses who never repeated or failed any year of study during their training and all nurse educators who are facilitating learning to Government Notice R212 and R48 post-basic programme as amended.

3.6 DATA COLLECTION

Data collection is defined as a precise, systematic gathering of information relevant to the research purpose or the specific objectives, questions or hypothesis of a study (Burns et al., 2013). A self-developed 4-point Likert scale questionnaires was used for data collection. Barbie (2007) defines a questionnaire as a document containing questions and other types of items designed to solicit information appropriate for analysis. The researcher divided the questionnaire into different sections in order to facilitate the processing of data. Possible problems due to the numerical format of the questionnaire were best anticipated and resolved before data collection (De Vos, Strydom, Fouche & Delport, 2013).

Close-ended type questions were used as a data collection instrument in the study and respondents were given questionnaires to complete. There were two questionnaires, one for student nurses and the other one for nurse educators. The questionnaires for student nurses comprise of three sections with 65 close-ended questions. Section A: demographic data consisting of 5 items, section B: factors contributing to academic failure related to student nurses consisting of 51 items and section C: Factors contributing to academic failure related to resources and equipment consisting of 9 items. The duration for completion of the questionnaire ranged between 30-60 minutes.

The questionnaire for nurse educators comprises three sections with 49 closed ended questions: Section A: demographic data consisting of 6 items, section B: factors related to nurse educators' empowerment and support consisting of 33 items and section C: Factors contributing to academic failure related to material resources and equipment used in class rooms and demonstration rooms consisting of 10 items. The questionnaire consists of four-point Likert scale. The duration for completion of

the questionnaire ranged between 30-60 minutes.

Maree and Pieterse (2007) argued that the closed-ended questions are advantageous when a substantial amount of information about a subject existed and the response options were relatively well known.

Pilot study

Pilot study refers to a smaller version of a proposed study conducted to develop or refine methodology such as treatment, instrument or data collection process (Burns et al., 2013). A pilot study was conducted among the small population that possessed similar characteristics to the target population. De Vos et al. (2013) state that the purpose of the pilot study is to improve the success and effectiveness of the investigation. Furthermore, the pilot study's main purpose was to ensure that the main investigation will be worthwhile.

A pilot study also gave an indication of which errors could be avoided and in what ways and of aspects for which no provision had been made. It assisted in identifying most problems, although new or unidentified ones may emerge at a later stage. The pilot study was the last opportunity to avoid possible problems or to make certain modifications. The purpose of a pre-test was to enable the researcher to modify or adjust the research instrument should that be necessary prior to embarking on the actual data collection process. The selected respondents for pilot study were asked about ways of improving the questionnaire and to provide as much feedback as possible (De Vos et al., 2013). The questionnaires were pre-tested before being utilized in the main study. Only ten level IV senior students with experience in their training programme who have repeated any level of study and 10 senior nurse educators with more than five years teaching experience were given questionnaire to complete experience because they both have experience unlike the junior student nurses of level I and level II and junior nurse educators with less than five years teaching experience. All the respondents who were included in the pilot study were not included in the main study.

- **Results of pilot study**

There ten (10) student nurses at Thohoyandou campus of Limpopo College of Nursing who participated in the pilot study were the most senior students and they

were all in level IV. All of them have repeated a level of study during their training. The highest percentage of 80% amongst the student nurses who participated as respondents in the study were between the ages 23-25; for the ages groups of 22-25 and 26-28 they were both at 10%. The levels repeated by student nurses were; level I with 60%, level III with 50%, level II with 30% and level IV with 0%. The most repeated subjects were Psychiatric Nursing Science with 50%, General Nursing Science with 40% and Social Science 20%. Some few respondents did not answer all the questions; it could be that the instructions were not explicit. The questions and instructions were revised and were rephrased. The corrections were refined prior being distributed for the major study.

Nurse educators who participated in the pilot study were most senior nurse educators with more than ten years lecturing experience at Thohoyandou campus of Limpopo College of Nursing. The most percentage amongst the nurse educators that participated as respondents in the study were between the ages 61-65 with 50%, 55-60 years was 20%, 51-55 years was 10%, and 46-50 years was 20%. Nurse educators who were sampled for the pilot study, who facilitated learning in level I and level II were 50%, whereas nurse educators who facilitated learning in level III and level IV were 50%. Most of nurse educators for pilot study were having 4 and more years of teaching experience at 80%, 3 years and 1 year both at 10%. Few nurse educators did not answer all the questions.

The ambiguity and vague questions could be rectified before the main study. On the questionnaire for nurse educators the variable of age, age 41-45 was omitted and variable number 3 of qualifications it was just qualification without specifying the highest qualification passed.

- **Modification of the instruments for pilot study**

The instrument was modified after the pilot study was conducted. The changes were the following; the consent form was modified, initially the contacts for the researcher were not included but were included thereafter. The questionnaire for nurse educator was rectified on section A demographic data variable number 1 Age as age 41-45 was omitted and variable number 3 Qualifications was modified to the Highest Qualification Passed.

Data collection of the main study

The compiled self-developed questionnaires were first delivered to the student nurses. One nurse educator from each campus assisted as a mediator with arranging the venue for respondents and distribution of questionnaires after permission to conduct the study was granted by the campuses vice-principals. The respondents were given the consent forms to read before they gave consent to participate in the study. The respondents returned the completed questionnaire freely without incentives. The student nurses from five campuses completed questionnaires on different dates. Time taken for completion of questionnaires was 30-60 minutes.

The nurse educators and student nurses completed questionnaires on separate occasions four weeks apart. Student nurses from level II and level IV completed questionnaires in April 2016 and level I and level III in May 2016. Data from nurse educators were collected during April 2016. All the completed questionnaires from the student nurses and nurse educators were submitted to the statistician for analysis. Questionnaires from the student nurses and nurse educators were coded and analysed separately.

3.7 DATA ANALYSIS

Data analysis involves the procedure of decreasing, and unfolding data, illustrating conclusion or interpretation from the data, and justifying these interpretations. Quantitative data analysis is regarded as the techniques by which researchers convert data to a numerical form and subject it to statistical analysis. The purpose of analysis is to reduce data to an intelligible form so that the relations of research problems are studied and tested and conclusions drawn (De Vos et al, 2013).

Montte, Sullivan and De Jong (2008) cited that data analysis does not in itself provide answers to research questions but answers are found by way of interpreting the data and the results. The Statistical Package for Social Sciences (SPSS) version 23 for Windows was used to analyse data. Statistical software packages such as SPSS have a special procedure for estimating the value of missing data.

These procedures were used to examine the relationship between the missing values and other variables in the data set (Burns & Grove, 2013).

Descriptive statistic was used to obtain frequency, percentages, standard deviation and measures of central tendency such as the mean. Descriptive statistics displayed the distribution of responses for example percentages. It also displayed the distribution of responses using bar chart and pie chart. Descriptive statistics is useful in describing and summarizing data in an organized and meaningful manner. Descriptive statistics were used to organize the data in a way that provides meaning and facilitate insight, such as frequency distribution. The results were analysed in frequencies, percentages, tables and graphs.

Non-parametric tests were used to analyse data e.g. Chi-Square Test or Kruskal-Wallis Test because parametric tests were not used to analyse Likert type data due to the ordinal nature of the data. Inferential statistics is an area of data collection concerned with drawing conclusion from the characteristics of population (Creswell, 2013). Data were used to make inferences about the population and includes statistical significance. Chi- Square is a statistical test commonly used to compare observed data and can only be used on actual numbers that are in a form of frequencies, percentages, proportions, and means. It is a statistical test used to examine differences with categorical variables.

There were features of the social world that characterize through categorical variables religion, political preference to examine hypotheses using such variables, use the chi-square test. For example, Chi-Square test can be used on the scoring categories of people with different post-school education level. The Chi-square test used in two similar but distinct circumstances, estimated how closely an observed distribution matched an expected distribution and referred to as the goodness-of-fit-test and for estimating whether two random variables were independent.

Age and gender were the variables used for both student nurses and nurse educators. Descriptive statistic was used to analyse the data collected from the socio demographic part of the questionnaires. Brink et al. (2012) refer to variables as factors that can be operationally defined, categorised and measured and can be distinguished according to whether they are discrete or continuous. Quantitative variables were measured on the ordinal or interval level of measurement. There were two types of variables namely, dependent and independent variable.

A dependent variable was the resultant effect of an independent variable which may be manipulated by the researcher. An independent variable was the one that was believed to cause or influence a dependent variable. Kruskal-Wallis test was used for a difference in scoring tendencies of people with different post-school degree achievements. Its advantage is that it is used even if the distribution is skewed or abnormal. Although there was no evidence to reject null hypothesis but there was likelihood to believe that there was no difference in scoring tendency between people with post-school levels of education. Different qualifications of nurse educators and years of experience were variables for nurse educators.

3.8 VALIDITY

Validity is the degree to which an instrument measures what it was intended to measure or the degree to which inferences made in a study were accurate and well-founded. Validity is also concerned with the integrity whether the instrument was measuring what was intended to measure (Creswell, 2013).

- **Face validity**

Face validity is concerned with the appearance of the instrument to the respondents and whether it measures what it is supposed to measure (Polit & Beck, 2008). The instrument was tested by conducting pilot study. The aim was to identify any problems and to test the validity and reliability of questions. After the pre-testing of the questionnaire, the respondents who met the criteria selection and were willing to participate were selected. Ten senior student nurses from level IV of study

participated in the pilot study. The questionnaires of both student nurses and nurse educators were submitted to the supervisors and statistician to be checked for the ability to measure what is expected to measure. Face validity was ensured by submitting the questionnaire to the statistician and supervisors to be assessed for its ability to measure what it was expected to measure.

- **Content validity**

Content validity was ensured by presenting the questionnaire to experts in the field of study for evaluation. Content validity is concerned with the representativeness of the content of an instrument. Validity reflected the authenticity of a test (Polit & Beck, 2008). To indicate the validity of the questionnaires a pilot study was conducted among a small population that possessed similar characteristics to the target population. The questionnaires were pretested before being utilized in the main study. Only ten student nurses and ten nurse educators were given questionnaires to complete. All the respondents who were included in the pilot study were excluded from the main study.

3.9 RELIABILITY

Reliability is the degree of consistency or dependability with which an instrument measured a variable (Brink et al., 2012). It is concerned with consistency, stability and repeatability. Reliability is concerned with stability of an instrument while measuring something to prove its appropriateness and consistency of what was being measured. Questionnaires provide more uniformity, easily coded and processed. The Cronbach's alpha coefficient is the test most frequently used to establish internal consistency or reliability in highly structured quantitative data-collection instrument (Polit & Beck, 2008). In this study reliability was enhanced by checking and testing the questionnaires on respondents during the pilot study. Its main purpose was to enable the researcher to modify or adjust the research instrument should that be necessary prior to embarking on the actual data collection process as well as to ensure that the main investigation will be worthwhile.

3.10 BIAS

Burns and Grove (2013) referred to bias as to slant away from the truth or expected. Bias was of great concern in research because of the potential effect on the meaning of the study findings, because any component of the study that deviated or caused a deviation from true measure led to error and distorted findings. Factors that needed to be considered as bias could affect the quality of evidence in a study were lack of openness and honesty; researcher subjectivity; sample imbalance; faulty method of data collection; inadequate study design; flawed implementation.

Several sources of bias in a study include researcher, design, measuring tools, individual respondent, samples, data and statistics. It was important to identify possible causes of bias and prevent bias when designing a study. It was not always possible to eliminate bias, but all efforts were made to minimise the bias (Botma et al., 2010).

If bias in planning a study was unavoidable researcher would have adopted a variety of strategies and methods to eliminate or minimize bias. Botma et al. (2010) explained that several sources of bias in a study includes researcher, design, measuring tools, individual respondent, samples, data and statistics. In this study elimination or minimising bias and strengthening the rigor of the study was ensured by that researcher ideas did not influence the results of the study.

3.11 ETHICAL CONSIDERATIONS

According to Creswell (2013) ethics implies preferences that influenced behaviour in human relations conforming to a code of principles. In order to obey ethics in research the researcher got permission to conduct the study. The purpose of obtaining informed consent was for protecting the rights of respondents, balancing the benefits and the risk in the study.

- **Ethical clearance and permission to conduct the study**

The researcher obtained ethical clearance from the (University of Limpopo) Turfloop

Research Ethics Committee (TREC). Permission letter was obtained from Department of Health in Limpopo Provincial office for permission to conduct the study and Limpopo College of Nursing and Limpopo College Nursing Campuses for permission to conduct the study.

- **Informed consent**

Creswell (2013) stated that obtained informed consent denoted evidence in the goal of the study process monitored, that meant that the advantages, disadvantages and danger to which the respondents were exposed to, as well as the credibility of the researcher, be rendered to the respondents or their legal representatives. The researcher obtained permission from the respondents after they were thoroughly and truthfully informed about the purpose of the study. Respondents were issued with a consent form to read, allowed to ask for clarity and sign when they agreed with the terms and conditions of participating in the study voluntarily.

- **Privacy**

De Vos et al. (2013) defined privacy as the element of personal privacy and the most basic meaning, was to keep to oneself that which was normally not intended for others to observe or analyse. Every individual has the right to privacy and to decide to what extent his or her attitudes and beliefs and behaviour were revealed. The principle could be violated in a variety of ways, and it was imperative that researcher be reminded the importance of safe guarding the privacy and identity of respondents. Privacy was ensured by not divulging the names of the respondents to anybody even during the publishing of the findings.

- **Confidentiality**

Confidentiality refers to agreements between persons that limited others access to private information or protection of study respondents so that data provided was never publicly divulged. It indicated the handling of information in a confidential manner and was viewed as a continuation of privacy. Confidentiality was ensured because no information about the respondents was made available to anyone (De Vos et al., 2013).

- **Anonymity**

De Vos et al. (2013) cited that protection of the respondents' confidentiality that their identity did not link individuals with information provided must be ensured. The respondents were requested not to indicate their names on the questionnaire, in order to maintain anonymity so that no one including the researcher was able to identify any respondents after the study. The respondents did not indicate their names on the questionnaire so that their identity would not be linked them with the information provided.

- **Avoidance of harm**

According to De Vos et al. (2013) the researcher has an ethical obligation to protect the respondents within all possible reasonable limits from any form of physical or emotional harm that might emerge from the research project. The fundamental ethical rule of social research is that it should bring no harm to the respondents. The respondents were well informed beforehand about the potential impact of the investigation. Such information offered the respondents the opportunity to withdraw from the investigation if they so wished. Respondents were made aware of the study prior the conduction as the study was explained to them.

3.12 CONCLUSION

Chapter 3 dealt with research methodology, population and sampling, data collection, data analysis, reliability, validity, bias and ethical considerations. Chapter 4 will discuss results of the study and the strategies to enhance graduate throughput of student nurses.

CHAPTER 4

DISCUSSION OF RESULTS AND STRATEGIES

4.1 Introduction

In the previous chapter the research design and methodology of the study was discussed. The processing of the collected data was described. In chapter 4 the researcher addresses data analysis and interpretation of the findings, discussion of the statistical analysis processes, findings and strategies.

4.2 Results

4.2.1 Response rate

The researcher and mediators handed out one hundred and sixty-seven (n=167) questionnaires to the nursing students, eighty (n=80) questionnaires to the nurse educators. One hundred and sixty-seven (n=167) student nurses' respondents completed and while seventy-two (n=72) nurse educators' respondents returned the questionnaires. The response rate was outlined in frequencies and percentages tables and graphs.

4.2.2 Campuses response rate

The student nurses' highest response rate was in Sovenga campus with 41.9%, Giyani 48 (28.7%), Thohoyandou 48 (28.7%), Waterberg 1 (0.6%), Sekhukhune with 0 (0%). The percentages of the nurse educators from the five campuses who responded to the questionnaire, Giyani 21 (29.2%), Sekhukhune 7 (9.7%), Waterberg 10 (13.9%), Sovenga 15 (20.8%), Thohoyandou 19 (26.4%).

4.3 SECTION A: DEMOGRAPHIC DATA FOR STUDENT NURSES AND NURSE EDUCATORS

4.3.1: Age and gender

Table 4.1: Age and gender of student nurses and nurse educators

VARIABLE	STUDENT NURSES (N=167) FREQUENCY (%)	VARIABLE	NURSE EDUCATORS (N= 72)) FREQUENCY (%)
1.Age	<i>f</i> %	Age	<i>f</i> %
17-19	1 (0.6)	20-25	0 (0)
20-22	46 (27.5)	26-30	6 (8.3)
23-25	104 (62.3)	31-35	8 (11.1)
26-28	13 (7.8)	36-40	9 (12.4)
29-30	1 (0.6)	41-45	13 (18.1)
31-35	2 (1.2)	46-50	18 (25.0)
		51-55	15 (20.8)
		56-60	2 (2.8)
		61-65	1 (1.2)
2. Gender	<i>f</i> %	2. Gender	<i>f</i> %
Females	135 (80.8)	Females	63 (87.5)
Males	32 (19.2)	Males	9 (12.5)

Table 4.1 depicts age and gender of student nurses and nurse educators. The least percentage of age for student nurses from age 17-19 with 1 (0.6%), 20-22 with 46 (27.55%), most of the student nurses are of the age 23-25 with the highest percentage of 104 (62.3%), age 26-28 with 13 (7.8%), 29-30 with 1 (0.6% and age 31-35 with 2 (1.2%). Age 20-25 0 (0%), age 26-30 with 6 (8.3 %), ages 31-35 with 8 (11.1%), age 36-40 with 9 (12.5%), age 41-45 with 13 (18.1%), most of the nurse educators were of the ages between 46-50 with the highest percentage of 18 (25.0%), 51-55 with 15 (22.8%), 56-60 with 2 (2.8%) and 60-65 at 1 (1.4%). Pertaining to gender, student nurses composed more females 135 (80.8%) than male student nurses 32 (19.2%). Furthermore, there were more female nurse educators 63 (87.5%) than male nurse educators with 9 (12.5%). This might be due to a myth that nursing is a female and not a male profession.

4.3.2 Level of training of student nurses

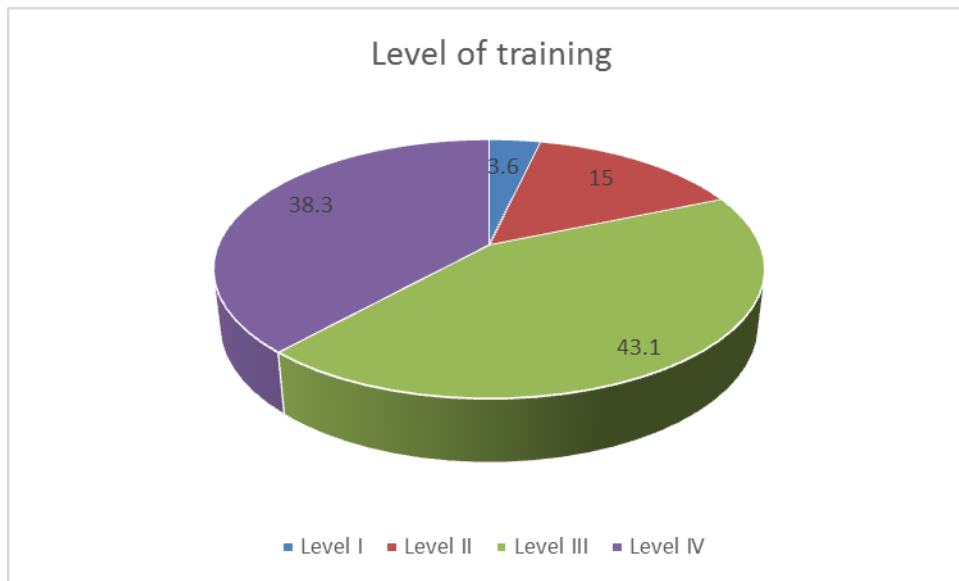


Figure 4.1: Level of training student nurses

Figure 4.1 indicates the training levels of student nurses. Most of the highest number of student nurses showed that they were in level III with 72 (43.1%), followed by level IV with 64 (38.3%), level II with 25 (15%) and lowest in level I with 6 (3.6%).

4.3.3 Levels repeated by student nurses

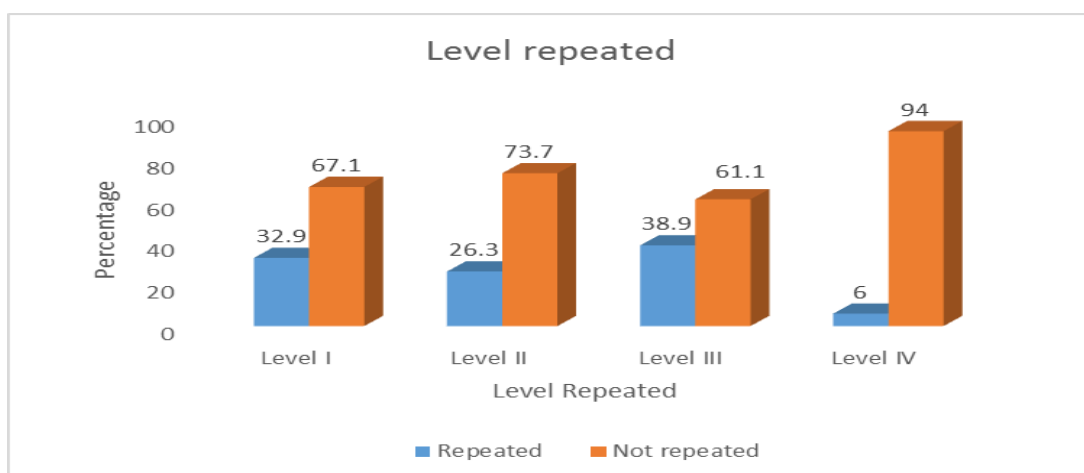


Figure 4.2: Levels repeated by student nurses

Fig 4.2 shows that Level III was the highest repeated level with 65 (38.9%) followed

by level I with 55 (32.9%), level II with 44 (26.3%) and the least repeated was level IV with 10 (6%). It is evident from the findings shown in figure 4.2 that neophyte student nurses failure rate is more or less equal to failure rate of senior student nurses in level 3 followed by level 2.

4.3.4 Subjects repeated by student nurses

Table 4.2: Subjects repeated by student nurses

VARIABLES	REPEATED <i>f %</i>	PASSED <i>f %</i>
Biological & Natural Sciences	59 (35.3)	108 (64.7)
Community Nursing Science	19 (11.4)	148 (88.6)
General Nursing Science	68 (40.7)	99 (59.3)
Midwifery Science	18 (10.8)	149 (89.2)
Psychiatry Nursing Science	40 (24.0)	127 (76.0)
Social Sciences	28 (16.8)	139 (83.2)

Table: 4.2 indicate subjects repeated. General Nursing Science was the most repeated subject with 68 (40.7%), Biological and Natural Sciences 9 (35.3%), Psychiatry Nursing Science 40 (24.0%) and Social Sciences 28 (16.8%) and Community Nursing Science 19 (11.4%) and Midwifery Science was the least failed subject 18 (10.8%). Student nurses concurred that certain subjects were notoriously difficult and possibly contributed to the high level of poor academic achievement hence termination of training.

4.3.5 Highest Qualifications for nurse educators

Table 4:3 Highest Qualifications for nurse educators

VARIABLES	<i>f</i> %
Diploma in Nursing Education	11 (15.3)
BA Cur Degree	26 (36.1)
BA Cur Honours Degree	15 (20.8)
MA Cur Degree	19 (26.4)
PHD Degree	0(0)
Total	71(98.6)
Missing system	1 (1.4)

Table 4.3 is on the highest qualification passed and it indicates the following: the highest percentage is of nurse educators who hold BA Cur degree with 26 (36.1), MA Cur Degree with 19 (26.4%), BA Cur Honours Degree with 15 (20.8%), Diploma in Nursing Education with 11 (15.3%). There is no one with PHD Degree (0%). It is evident based on the table 4.3 that more nurse educators must be motivated in terms of pursuing, Masters and PHD degrees in order to capacitate them for future supervision of postgraduate candidates.

4.3.6 Level of facilitation

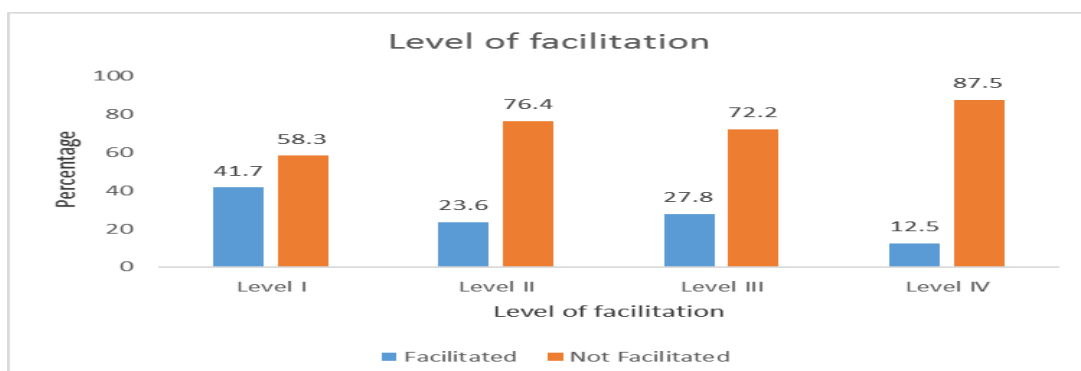


Figure 4.3: Level of facilitation by nurse educators

Figure 4.3 indicates the different levels the nurse educators facilitated. Based on the

findings, nurse educators in Level I were 30 (41.7%), in Level II nurse educators were 17 (23.6%), whereas in Level III nurse educators were 20 (27.8%). However, in Level IV nurse educators were 9 (12.5%). Therefore, there were few nurse educators facilitating the level IV in comparison with other levels.

4.3.7 Years of teaching experience

Table 4.4: Years of nurse educators' lecturing experience

YEARS OF LECTURING EXPERIENCE	f %
0-5	40 (15.3)
6-10	18 (36.1)
11-20	6 (20.8)
20 and more	7 (26.4)
Total	71 (98.6)
Missing System	1 (1.4)

Table 4.4 indicates years of teaching experience of nurse educators. There are 40(55.6%) educators with 0-5 years' experience, 18 with 6-10 years (25.0 %), 6 with 11-20 years 6(8.3%) and 7(9.7 %) with 20 and more years of teaching experience. Based on the findings, more nurse educators from 0 to 5 years teaching experience still need some support in teaching of student nurses.

4.3.8. Subject currently facilitated

Table 4.5: Subject facilitated by nurse educators

SUBJECT FACILITATED	NURSE EDUCATOR (N=72) F %
Biological & Natural Sciences	15 (20.8)
Community Nursing Science	7 (9.7)
General Nursing Science	20 (27.8)
Midwifery Science	8 (11.1)
Psychiatry Nursing Science	8 (11.1)
Social Sciences	13 (8.1)

Table 4.5 indicates subject facilitated by nurse educators which are as follows: General Nursing Science 20 (27.8%), Biological and Natural Sciences 15 (20.8%), Social Sciences 13(19.5%). These are the subjects who have more facilitators than in Midwifery, Psychiatry and Community. How the ratio of these nurse educators was designed is not explicitly stated.

4.4 STUDENT NURSES RESULTS

SECTION B: FACTORS CONTRIBUTING TO ACADEMIC FAILURE RELATED TO STUDENTS

- **Discussion of the descriptive statistics**

The researcher presents the descriptive statistics related to the items of the sub scales of the questionnaires: mentoring and guidance by nurse educators, accompaniment in clinical area, mentoring and guidance, supervision, student counselling and support.

4.4.1 Mentoring and guidance

Table 4.6: Mentoring and guidance by nurse educators

STATEMENTS	STUDENT NURSES (N=167)	
	AGREE <i>f %</i>	DISAGREE <i>f %</i>
6.Work overload	150 (89.8)	17 (10.2)
7.Low self-esteem and low morale	84 (50.9)	81 (49.1)
8.Academic stress	135 (81.8)	30 (18.2)
9.Understanding the amount of work required	121 (74.2)	42 (25.7)
10.Different teaching strategies are used by nurse educators	104 (62.7)	62 (37.3)
11.Poor facilitation of learning to student nurses in theoretical area	69 (41.3)	98 (58.7)
12.Poor interpersonal relationships between nurse educators and students	68 (48.8)	99 (59.3)
13.Inability to impart knowledge	73 (48.2)	94 (56.3)
14.Lack of dedication	51 (30.5)	116 (69.4)

15.Poor understanding of medium of instruction	48 (28.9)	118 (71.1)
16.Putting social activities upfront	48 (29.1)	117 (70.9)
17.Poor language skills	45 (26.9)	122 (73.1)
18.Lack of support from nurse educators	72 (47.4)	95 (52.6)
19.Lack of personal standards of quality	44 (26.6)	121(73.4)
20.Interference from psychological problems	69 (41.3)	98 (58.7)

Table 4.6 indicates mentoring and guidance by nurse educator included thirty-six items. Items 6-20 provided a description of the items as well as the percentage and frequency of each item. With regard to item 6 of work overload, the largest proportion of the respondents 150 (89.9%) agreed and 17 (10.2%) disagreed, for item 7 of low self-esteem and low morale 84 (50.9%) disagreed and 81 (49.1%) agreed, for item 8 of academic stress 73 (73.2%) agreed and 24 (24.8%) disagreed, for item 9 of understanding the amount of work required 121(74.2%) agreed and 42 (25.7%) disagreed. For item 10 of different teaching strategies were used by nurse educators 104 (62.7%) agreed and 41 (37.3%) disagreed. In relation to item 11 of poor facilitation of learning to student nurses in theoretical area 69 (41.3%) disagreed and 98 (58.7%) agreed, for item 12 of poor interpersonal relationships between nurse educators and students 68 (48.8%) disagreed and 99 (59.3%) agreed, for item 13 of inability to impart knowledge 73 (48.2%) agreed and 94 (56.3) disagreed that the above are causes which result in poor academic performance leading decreased graduate throughput.

According to the findings in item 14 (on lack of dedication) 51 (30.5%) of the respondents agreed 116 (69.4%) disagreed and, for item 15, 48 (28.9%) agreed and 118 (71.1%) that student nurses had poor understanding of medium of instruction. In relation to Item 16 of putting social activities upfront 48 (29.1%) agreed and 117 (70.9%) disagreed, for item 17 of poor language skills 45 (26.9%) 122 (73.1%) disagreed 46(47.4%) agreed, for item 18 of lack of support from nurse educators 72 (43.1%) agreed 95 (56.9%) disagreed, in relation to item 19 of lack of personal standards of quality 44 (26.6%) agreed and 121 (73.4%) disagreed, for item 20 of

interference from psychological problems 98 (58.7%) disagreed and 69 (41.3 %) agreed.

Continuation of Table 4.6: Mentoring and guidance by nurse educators

STATEMENTS	AGREE	DISAGREE
	<i>f</i> %	<i>f</i> %
21.Failure to assume responsibility	53 (31.7)	114 (68.3)
22.Selection of the wrong college or tertiary institution	52 (31.2)	115 (68.8)
23.Chronic illnesses	66 (39.7)	100 (59.8)
24. Attitude of nurse educators to students	74 (44.3)	93 (55.7)
25.Poor relationship between students and nurse educators	75 (44.9)	92 (55.1)
26.Unapproachable and unfriendly nurse educators	68 (40.8)	99 (59.2)
27.Overcrowded classes due to large number of students	84 (50.3)	83 (49.7)
28.Lack of adequate time for filling of registers and workbook	114 (68.6)	52 (31.3)
29.Large group of students in class where individualised learning is limited	96 (57.8)	70 (42.1)
30.Inability to concentrate in the studies	81 (49.4)	83 (50.7)
31.Use of different teaching strategies	88 (53.0)	78 (47.0)
32.Transition from high school to tertiary institution	69 (42.1)	95 (57.9)
33.Lack of integration of theory to practice	83 (40.3)	99 (59.7)
34.Not studying and preparing enough for tests, formative assessment and examination	67 (49.7)	84 (50.3)
35.Appalling living conditions at nurses' home	99 (72.3)	46 (27.7)
36.Unbearable noise levels	120 (59.6)	67 (40.3)

Table 4.6 illustrates the continuation of mentoring and guidance of student nurses by nurse educators as aligned with the theoretical framework of respondents (student nurses) showed that indeed there was too much work overload. With regard to Item 21 of failure to assume responsibility 53 (31.7%) agreed and 114 (68.3%) disagreed,

for item 22 of selection of the wrong college or tertiary institution 52 (31.2%) agreed and 115 (68.8%) disagreed, for item 23 of chronic illnesses 66 (39.7%) agreed and 100 (59.8%) disagreed that those statements above were the main contributory factors of poor academic performances amongst student nurses.

In relation to item 24 of attitude of nurse educators to students, 74 (44.3%) disagreed and 93 (55.7%) agreed, for item 25 of poor relationship between students and nurse educators 75 (44.9 %) agreed and 92 (55.1%) disagreed, for item 26 of unapproachable and unfriendly nurse educators 68 (40.8%) agreed and 99 (59.2%) disagreed, item 27 of overcrowded classes due to large number of students 84(50.3%) disagreed and 83 (49.7%) agreed, for item 28 of lack of adequate time for filling of registers and workbook 114 (68.6%) agreed and 52 (31.3%) disagreed, for item 29 of large group of students in class where individualised learning was limited 96(57.8%) disagreed and 70 (42.2%) agreed.

With regard to Item 30 of inability to concentrate in the studies 81 (49.4%) agreed and 83 (50.3%) disagreed, for item 31 of the use of different teaching strategies 88 (53.0%) agreed and 78 (47.0%) disagreed. In relation to Item 32 of transition from high school to tertiary institution 69 (42.1%) agreed and 95 (57.9%) disagreed, for item 33 of lack of integration of theory to practice 67 (40.3%) agreed and 99 (59.7%) agreed, for item 34 of lot studying and preparing enough for tests, formative assessment and examination 83 (49.7%) agreed and 84 (50.3%) disagreed, for item 35 of appalling living conditions at nurses home 120 (72.3%) agreed 46 (27.7%) disagreed, for item 36 99 (59.6%) agreed and 67(40.4%) disagreed that there was unbearable noise levels.

4.4.2 Accompaniment in clinical areas

Table 4.7: Accompaniment in clinical areas

STATEMENTS	AGREE	DISAGREE
	<i>f</i> %	<i>f</i> %
37. Effective accompaniment by nurse educators in clinical area	102 (62.1)	3 (37.9)
38. Less accompaniment by nurse educators in clinical area	90 (54.6)	75 (45.5)
39. Lack of enough exposure in clinical settings	93 (56.4)	72 (43.6)
40. Lack of adequate accompaniment to clinical areas by nurse educators	100 (60.2)	66 (39.7)
41. Overcrowding in one unit in clinical area due to large numbers of student nurses	(106 (63.9)	60 (36.1)
42. Lack of adequate time for filling of registers and workbooks	(114 (68.6)	52 (31.3)

According to the findings, 100 (60.2 %) of the respondents agreed and 66 (39.7%) disagreed that lack of adequate accompaniment to clinical areas by nurse educators made nurses to be incompetent and unskilled in psycho-motor domain i.e. (skills and arts) development of student nurses for item 40. With regard to item 41, the largest proportion of the respondents 106 (63.9%) agreed and 60 (36.1%) disagreed that their academic performance in practical setting was poor due to overcrowding in a unit in practical area due to large numbers of student nurses. For item 42 where there was lack of adequate time for filling of registers and workbooks 114 (68.6%) agreed and 52 (31.3%) disagreed that this contributed to poor academic performance and achievement leading to failure that would result in decreased graduate throughput of student nurses.

4.4.3 Guidance and coaching

Table 4.8: Guidance and coaching

STATEMENTS	AGREE <i>f %</i>	DISAGREE <i>f %</i>
43. There is not enough guidance and coaching of student nurses by nurse educators	98 (58.7)	6 (41.3)
44. There is not enough guidance and coaching of student nurses by nurse educators due to large numbers of student nurses	108 (64.4)	59 (35.3)
45. There is no adequate individualised care of student nurses due to large group in classrooms	118 (70.6)	49 (29.4)
46. Lack of access to computers	112 (67.5)	54 (32.5)
47. Lack of data projectors	70 (41.9)	97 (58.1)
48. Lack of adequate library	100 (64.7)	65 (39.4)
49. Lack of adequate study centre	108 (65.6)	59 (35.3)
50. Lack of models to practice procedures	83 (49.7)	84 (50.3)

Guidance and coaching consists of 8 items. In Table 4.8 above a description of the items as well as the percentage and frequency of each item were provided. With regard to item 43, the largest proportion of the respondents 98 (58.7%) agreed and 66 (41.3%) disagreed that not enough mentoring of student nurses by nurse educators decreased graduate throughput. With regard to not enough mentoring of student nurses by nurse educators due to large number of student nurses item 44, 108 (64.4%) agreed and 59 (35.3%) that they were no enhanced graduate throughput due to limited nurse educators. With regard to item 45, the largest proportion of the respondents 118 (70.6%) and 49 (29.4%) disagreed that they experience no adequate individualized care of student nurses due to large groups in classrooms.

The largest proportion of the respondents 112 (67.5%) agreed and 54 (32.5%) disagreed that lack of access to computers contributed to poor academic performance as new curricula need the students to be keep abreast with latest

information through new technological gadgets like computers and laptops. The use of technology included online-learning, electronic mail, bulletin boards, downloading information from internet, intranet, informatics, websites and library catalogues for item 46. In terms of lack of data projectors largest proportion of the respondents (58.1%) 97 disagreed and 70 (41.9%) agreed that lack of projectors there is no enhanced graduate throughput of student nurses which hinders good academic performance in item 47. The largest proportion of the respondents 100 (64.7) agreed and 65 (39.4%) disagreed that library contribute to poor academic performance which hinders enhanced graduate throughput in relation to item 49, the largest proportion of the respondents 108 (65.6%) agreed and 59 (35.3%) disagreed that lack of adequate and conducive study center predisposed student nurses to perform poorly, for item 50, 83 (49.7%) agreed and 84 (50.3%) disagreed that lack of models to practice procedures made student nurses to perform poorly in clinical practice.

4.4.4 Supervision

Table 4.9: Supervision

STATEMENTS	AGREE	DISAGREE
	f %	f %
51.Lack of adequate supervision from nurse educators in theoretical area	67 (40.3)	99 (59.6)
52.Lack of adequate supervision from nurse educators in practical area	108 (65.4)	57 (34.6)

Supervision consisted of two items. Tables 4.9 indicate the reasons for poor performance under supervision and include the frequency and percentage of each item. The largest proportion of the respondents 99(59.6%) disagreed that lack of adequate supervision from nurse educators in theoretical area is one of the main causes of decreased graduate of student nurses 67(40.3%) agreed for item 51. With regard to lack of adequate supervision from nurse educators in practical area item 52, 108 (65.4%) of the respondent agreed and 57 (34.6%) disagreed with this item.

4.4.5 Student counselling and support

Table 4.10: Student counselling and support

STATEMENTS	AGREE <i>f</i> %	DISAGREE <i>f</i>%
53. There is support services for student nurses	49 (29.4)	118 (70.7)
54. Remedial teaching to student nurses who are not performing well in their studies	111(66.5)	56 (33.6)
55. Counselling to student nurses with learning difficulties	104 (62.3)	63 (37.8)
56. Counselling of student nurses with psychosocial and physical problems	106 (63.9)	60 (36.2)

Table 4.10 indicates student counseling and support included four items. According to the findings, 49 (29.4%) of the respondents 118 (70.7%) disagreed and 37 (35.1) agreed that there were support services for student nurses in the campuses that can enhance graduate throughput with regard to item 53. With regard to item 54, the largest proportion of the respondents 111 (66.5%) agreed and 56 (33.6%) disagreed that remedial teaching was done to student nurses who were not performing well in their studies. In relation to item 55, largest proportion of respondents 104 (62.3) disagreed and 63 (37.8%) agreed that counseling was done to student nurses with learning difficulties. With regard to item 56, 106 (63.9%) agreed and 60 (36.2 %) disagreed that counseling of student nurses with psychosocial and physical problems contributed to poor academic progress of student nurses in academic performance.

4.5 SECTION C: FACTORS CONTRIBUTING TO ACADEMIC FAILURE

4.5.1 Factors contributing to academic failure related to resources and equipment

Table 4.11: Factors contributing to academic failure related to resources and equipment

STATEMENTS	AGREE	DISAGREE
	<i>f</i> %	<i>f</i> %
57. Lack of access to internet	109 (66.0)	56 (33.9)
58. Lack of books in library	99 (59.2)	68 (40.7)
59. Lack of facility equipment	112 (67.1)	55 (32.9)
60. Lack of access to computers	109 (65.2)	58 (34.7)
61. Lack of data projectors	50 (49.7)	43 (43.6)
62. Lack of adequate library	112 (74.7)	54 (32.5)
63. Lack of adequate study centre	117 (70.0)	30 (30.0)
64. Lack of models to practice procedures	95 (57.5)	70 (42.4)
65. Availability of computer lab	84 (50.9)	81 (49.1)

Table 4.11, shows the findings on factors contributing to academic failure related resources and equipment. Most students agreed with most of the statements. For item 57; lack of access to internet, 109 (66.0%) agreed and 56 (33.9%)disagreed, for item 58 lack of books in the library 99 (59.2%) agreed and 68 (40.7%),with regard to item 59 of lack of facility equipment, 112 (67.1%) agreed and 55 (32.9%) disagreed, in relation to item 60 of lack of access to computers 109 (65.2%)agreed and 54 (34.7) disagreed, in relation to item 61 of lack of data projectors 50(49.7%) agreed and 43 (43.6%) strongly disagreed,for item 62 of lack of adequate library 112 (74.7%) agreed and 54 (32.5%) disagreed, for item 63 of lack of adequate study center 117 (70.0%) agreed and 30 (30%) disagreed, with regard to item 64 of lack of models to practice procedures 95(57.5%) agreed and 70 (42.4%) disagreed, for item 65 of availability of computer lab is 84 (50.9%) agreed and 81 (49.1%) disagreed.

4.5.2 Chi-Square test results

Table 4.12: Chi-Square test results

STATEMENTS	Asymptomatic significance
Gender versus Work overload	.258
Gender versus Academic stress	.300
Gender versus Effective accompaniment by nurse educators in practical area	.910
Gender versus Lack of enough exposure in clinical setting	.038
Gender versus There is not enough mentoring of student nurses by nurses educators	.665
Gender versus There is not enough mentoring of student nurses by nurse educators due to large number of student nurses	.038
Gender versus Lack of access to computers	.681
Gender versus Lack of access to internet	.116
Gender versus Lack of adequate study centre	.914
Gender versus Availability of computer lab	.282

Table 4.12 shows that the null hypothesis is that there is no association between the two variables if the p value is less than 0.05, then reject the null hypothesis. In table 4:12 the results were that there was an association between the variables.

4.5.3 Kruskal-Wallis test results

Non-parametric test that can be used even when the distribution is skewed or abnormal and does not assume normality assumption. It can be used to determine if there are statistically significant differences between two or more groups of an independent variable on a continuous or ordinal dependent variable. If the p-value is less than 0.05 we conclude that there are significance differences between the campuses.

Table 4.13: Kruskal-Wallis test

GROUPING VARIABLE: CAMPUS	ASYMPTOMATIC SIGNIFICANCE
1. There is no significance difference of work overload versus campus	.751
2. Academic stress versus campus	.082
3. Lack of dedication versus campus	.396
4. Lack of enough exposure in clinical setting versus campus	.665
5. There is not enough mentoring of student nurse by nurse educators versus campus	.082
6. There is not enough mentoring of student nurse by nurse educators to large number of student nurses versus campus	.440
7. Lack of access to internet versus campus	.038
8. Lack of adequate study centre versus campus	.005

In the table 4.13 the p-value was less than 0.05 and it was concluded that there was a significance differences between the variables, except the last variable where there were no significance differences meaning that there was a relationship between the dependable variables.

In the student nurses' questionnaire above, discussion of the descriptive statistics used were frequencies and percentages as well as the tables and graphs. Inferential statistics non-parametric tests used were Chi-square and Kruskal-Wallis tests.

4.6 NURSE EDUCATORS RESULTS

4.6.1 SECTION B: FACTORS RELATED TO NURSE EDUCATORS EMPOWERMENT AND SUPPORT BY MANAGEMENT

Table 4.14: Empowerment and support by management

STATEMENTS	Agree		Disagree	
	<i>f</i>	%	<i>f</i>	%
7.Increase failure rate of student nurses has a negative image of the college	63	(87.7)	8	(11.1)
8.Overcrowded classes due to large number of students making it difficult to facilitate effective learning	57	(79.1)	15	(20.8)
9.Poor interpersonal relationships between students and nurse educators	28	(38.9)	40	(45.5)
10.There is lack or minimal support from college management	40	(55.6)	26	(36.1)
11.Shortage of nurse educators	63	(87.5)	9	(12.5)
12.Lack of incentives to motivation	58	(80.6)	13	(18.1)
13.Open communication exists in the management and nurse educators	46	(63.9)	26	(36.1)
14.Information is shared up and down according to the hierarchical line in the organization	47	(65.3)	25	(34.7)
15.Nurse educators are conversant with curricula and orientated to new policies	47	(63.9)	25	(34.6)
16.Team meetings are efficiently conducted	40	(55.6)	30	(41.6)
17.The college adopts coaching, guiding and mentoring leadership style	31	(48.5)	40	(55.6)
18.College management provides the support needed	43	(59.7)	25	(34.7)
19.College management acknowledges autonomy of nurse educators	40	(55.6)	38	(43)
20.College management promotes good cooperation	42	(58.3)	27	(37.5)
21.Top Management supports the academic of nurse educators	52	(72.2)	19	(26.4)
22.Management provides in-service educational training programmes	34	(47.3)	37	(51.4)
23.Innovative proposals are welcomed by the college management	40	(55.6)	32	(44.4)

24.Nurse educators are able to handle work overload	34 (47.3)	38 (52.8)
25.Nurse educators are satisfied and fulfilled with their work	27 (37.5)	45 (62.5)
26.Nurse educators are free to voice out their frustrations without being afraid of victimization by the management	30 (41.7)	42 (58.3)

According to item 7 of Table 4.14 below, 63 (87.7%) agreed and 8 (11.1%) disagreed that there was increase failure rate of student nurses that had a negative image of the college. For Item 8, 57 (79.1%) agreed and 15 (20.8%) disagreed that overcrowded classes due to large number of students made it difficult to facilitate effective learning. In relation to item 9, 40 (45.5%) disagreed and 28 (38.9%) agreed that there were poor interpersonal relationships between students and nurse educators. Item 10, 40 (55.6%) agreed and 26 (36.1%) disagreed that there was lack or minimal support from college management. For item 11, 63 (87.5%) agreed and 9 (12.5%) disagreed that that shortage of nurses was a serious problem in the college campuses.

In relation to item 12, 58 (80.6%) agreed and 13 (18.1%) agreed that there was lack of incentives to motivation. For item 13, 46 (63.9%) agreed and 26 (36.1%) disagreed that open communication existed in the management and nurse educators. For item 14, 47 (65.3%) agreed and 25 (34.7%) disagreed that information was shared up and down according to the hierarchical line in the organization. For item 15, 47 (63.9%) agreed and 25(34.6%) disagreed that nurse educators were conversant with curricula and orientated to new policies. With regards to item 16, 40 (55.6 %) agreed and 30 (41.6) disagreed that team meetings were efficiently conducted.

In relation to item 15, 40(55.6%) disagreed and 31(48.5%) agreed the college adopted coaching, guiding, mentoring and leadership style. In relation to item 18, 43(59.7%) agreed and 25(34.7%) disagreed that college management provided the support needed. With regards to Item 19, 40(55.6%) and agreed and 38(43 %) disagreed that college management acknowledged autonomy of nurse educators.

For Item 20, 42 (58.3%) agreed and (37.5%) 27 disagreed college management promoted good cooperation. For Item 21, 52 (72.2%) agreed and 19(26.4%) disagreed top management supported the academic advancement of nurse educators.

In relation to Item 22, 37 (51.4%) agreed and 34 (47.3%) management provided in-service educational training programmes. For item 23, 40 (55.6%) agreed and 32 (44.4%) disagreed innovative proposals were welcomed by the college management. Item 24, 38 (52.8%) agreed and 34 (47.3) disagreed nurse educators were able to handle work overload. With regard to Item 25, 45 (62, 5%) disagreed and 27 (37.5 %) agreed nurse educators were satisfied and fulfilled with their work. In relation to Item 26, 42 (58.3%) disagreed and 30 (41.7) agreed nurse educators were free to voice out their frustrations without being afraid of victimization by the management.

4.6.2 Student co-operation in clinical area

Table 4.15: Student co-operation and accompaniment in practical area

STATEMENTS	Agree <i>f</i> %	Disagree <i>f</i> %
27.Effective time management	38 (52.7)	34 (47.2)
28.Lack of commitment in student studies	44 (61.1)	28 (38.9)
29.Purchasing of prescribed books	43 (59.7)	44 (66.7)
30.Absenteeism in both theory and practice	21 (63.9)	25 (34.7)
31.Lack of adequate time for accompaniment of students in clinical setting	65 (63.9)	26 (36.1)
32.There is time to do accompaniment of student nurses in clinical area	29 (40.2)	43 (59.7)
33.There are no clinicians and preceptors currently	62 (86.1)	15 (12.5)
34.There is shortage of nurse educators in the campuses of the college	61 (84.4)	11(15.3)

Table 4.15 shows findings based on the student co-operation in clinical area. With regard to Item 27, 38 (52.7%) agreed and 34 (47.2%) disagreed that there is effective time management. For Item 28, 44 (61.1%) agreed and 28 (38.9%) disagreed to lack of commitment in student studies. In relation to item 29, 28 (38.9%) agreed and 20 (27.8%) disagreed that students purchased prescribed book. For Item 30, 21 (63.9%) agreed and 25 (34.7%) disagreed absenteeism in both theory and practice 65 (63.9%) strongly agreed and 26(36.1%) agreed on lack of adequate time for accompaniment of students in clinical setting. For Item 32, 43 (59.7) disagreed 29 (40.2%) agreed and that there was time to do accompaniment of student nurses in clinical area respondents.

With regard to Item 33, 62 (86.1%) agreed and 15 (15.5) disagreed that there were no clinicians and preceptors currently. In relation to item 34, 61 (84.4%) agreed and 11 (15.3 %) disagreed that there was shortage of nurse educators in the campuses of the college.

4.6.3 Theoretical environment

Table 4.16: Theoretical environment

STATEMENTS	Agree f %	Disagree f %
35. Increase failure rate of student nurses has a negative image of the college	63 (87.5)	10 (16.5)
36. Overcrowded classes due to large number of students	59 (81.9)	10 (13.9)
37. Poor interpersonal relationships between students and nurse educators	23(32)	48 (66.7)
38. There is positive attitude of students to nurse educators	34 (47.2)	40 (48.6)

With the findings of sub-section above item 35, 63 (87.5%) agreed and 10 (16.5) disagreed that there is increase failure rate of student nurses has a negative image of the college. In relation to Item 36, 59 (81.9%) agreed and 10 (13.9%) disagreed that there was overcrowded classes due to large number of students, with regard to item 37 of poor interpersonal relationships between students and nurse educators,

48 (66.7%) disagreed and 23 (32.2%) agreed, for item 38 of attitude of students to nurse educators 40 (48.6%) disagreed and 34 (47.2%) agreed.

4.6.4 Workload and shortages of staff

Table 4.17 Workload and shortage of nurse educators

STATEMENTS	Agree f %	Disagree f %
39. Less quantity of nurse educators' in disciplines	56 (80)	15 (34.1)
40. Due to shortage of nurse educators there is work overload	60 (83.4)	10 (27.8)

Table 4.17 shows that the findings for item number 39, 56 (80%) of the respondents agreed and 15 (34.1%) disagreed that there was less quantity of nurse educators in disciplines. For Item 40, 60 (83.4%) agreed and 10 (27.8%) disagreed that due to shortage of nurse educators there was work overload.

4.7 SECTION C: FACTORS CONTRIBUTING TO ACADEMIC FAILURE RELATED TO MATERIAL RESOURCES

4.7.1 Material resources

Table 4.18: Material resources

STATEMENTS	Agree f %	Disagree f %
41. Inadequate teaching facilities	62 (86.1)	8 (11.1)
42. Lack of access to internet	60 (83.4)	10 (13.9)
43. Lack of books in library	58 (80.6)	12 (16.7)
44. Lack of facility equipment	62 (86.1)	7 (9.8)
45. Lack of laptops	51 (70.8)	19 (26.4)
46. Lack of data projectors	37 (51.3)	32 (44.4)
47. Lack of models to demonstrate procedures	56 (77.7)	14 (19.5)
48. Availability of computer lab	39 (54.2)	31 (43.1)

49. There are no preceptors and clinicians to mentor, guide students on how to perform different procedures and develop skills in practical setting	53 (87.5)	17 (9.8)
50. The college provides materials and equipment sufficient for effective facilitation of learning	16 (22.2)	54 (75)

Table 4.18 shows items 41-50 of section c above, the findings of factors contributing to academic failure related to material resources and equipment used in classrooms and demonstration rooms. Most of the respondents for item 41 of inadequate teaching facilities 62 (86.1%) agreed and 8 (11.1%) disagreed, for item 42 of lack of access to internet 60 (83.4%) agreed and 10 (13.9%) disagreed, in relation to item 43 of lack of books in library 58 (80.6%) agreed and 12 (16.7%) disagreed, in relation with item 44 of lack of facility equipment 62 (86.1%) agreed and 7 (9.8%) disagreed, with regard to item 45 of lack of laptops 51 (70.8%) agreed and 19 (26.4%) disagreed, for item 46 of a lack of data projectors 26 (36.1%) disagreed and 39 (54.2%) agreed.

With regard to item 47 of lack of models to demonstrate procedures 56 (77.7%) agreed and 14 (19.5%) disagreed, for item 48 of availability of computer lab 39 (54.2%) strongly disagreed and 31 (43.1%) disagreed, for item 49 of there were no preceptors and clinicians to mentor, guide students on how to perform different procedures and develop skills in practical setting 63 (87.5%) agreed and 7 (9.8%) disagreed, in relation to item 50 of the college provided materials and equipment sufficient for effective facilitation of learning and 54 (75%) disagreed and 16 (22.2%) agreed. The lack of these items above made it difficult for the nurse educators to execute their work well.

4.7.2 Chi-square test results

Table 4.19: Chi-square test results

STATEMENTS	ASYMPTOMATIC SIGNIFICANCE
1.Gender versus There is lack or minimal support from management	.374
2.Gender versus lack of commitment in student studies	.273
3.Gender versus Purchasing of prescribed book	.285
4.Gender versus Lack of adequate time for accompaniment of students in clinical setting	.578
5.Gender versus There are no clinicians and preceptors presently	.221
6.Gender versus There is shortage of nurse educators in the campuses of the college	.536
7.Gender versus Attitude of students to nurse educators	.686
8.Gender versus Due to shortage of nurse educators there is work overload	.646
9.Gender versus Inadequate teaching facilities	.974
10.Gender versus Lack of access to internet	.771
11.Gender versus There are no preceptors and clinicians to mentor, guide students on how to perform different procedures and develop skills in practical setting	.284

The null hypothesis was that there was no association between the two variables if the p value is less than 0.05, we then reject the null hypothesis. In table 4:14 the results were that there was an association between the variables.

4.7.3 Kruskal-Wallis Chi-square test results

Table 4.20: Kruskal-Wallis test results

GROUPING VARIABLES:CAMPUSES	ASYMPTOMATIC SIGNIFICANCE
1.There is lack or minimal support from management versus campus	.553
2.Lack of commitment in student studies	.170
3.Purchasing of prescribed book versus campus	.923
4.Lack of adequate time for accompaniment of students in clinical setting versus campus	.000
5.There are no clinicians and preceptors presently versus campus	.019
6.There is shortage of nurse educators in the campuses of the college versus campus	.000
7.Attitude of students to nurse educators versus campus	.023
8.Due to shortage of nurse educators there is work overload versus campus	.003
9.Inadequate teaching facilities versus campus	.144
10.Lack of access to internet versus campus	.011

Table 4.20 indicates non-parametric test that can be used even when the distribution is skewed or abnormal and does not assume normality assumption. It can be used to determine if there are statistically significant differences between two or more groups of an independent variable on a continuous or ordinal dependent variable. If the p-value is less than 0.05 we conclude that there are significance differences between the campuses. The p-value was less than 0.05, it was concluded that there were significance differences between the variables, except the variables that did not have significance differences meaning that there was a relationship between the dependable variables.

In the nurse educators' questionnaire above, discussion of the descriptive statistics used were frequencies and percentages tables, graphs and inferential statistics non-parametric tests Chi-square and Kruskal-Wallis tests.

4.8 DISCUSSION OF RESULTS

4.8.1 Factors related to student nurses

- **Subjects repeated by student nurses**

The study revealed that student nurses found General Nursing Science, Biological and Natural Sciences (Anatomy and Physiology) and Psychiatric Nursing Science as challenging subjects. General Nursing Science was the most repeated subject with 68 (40.7%), Biological and Natural Sciences 9 (35.3%), Psychiatry Nursing Science 40 (24.0%) and Social Sciences 28 (16.8%) and Community Nursing Science 19 (11.4%) and Midwifery Science was the least failed subject 18 (10.8%). According to Ramkilowan (2014) students might fail because they found the course too intense to cover in the available time and they may experience difficulty in adjusting to the heavy workload.

- **Mentoring and guidance by nurse educators**

Findings reveal that the largest proportion of the respondents 150 (89.9%) agreed and 17 (10.2) disagree that there was a relationship between anxiety and poor academic performance of student nurses. Physiological anxiety was one of the factors responsible for student nurses' poor performance while there was no significant difference between male and female students regarding the causes of their poor academic performance and this was backed by (Afolayan, Donald, Onasoga, Adeyanju & Agama, 2013). Student nurses needed to be aware of the workload involved in their course of training meaning that they had to study constantly (Dante, Valoppi, Saiani & Palese, 2011).

Therefore, a poorly trained nurse become a threat to the lives of the patients he/she might be responsible for, which could result to loss of lives and compound the poor state of the health sector. Remuneration of nurse educators, poor reading habits of

students, social activities and lack of dedication were some of the factors contributing to poor academic performance. However, in a situation where that was lacking as a result of poor academic performance, there were likely to be problems at subsequent levels outside the four walls of the institution, especially when the student nurses did not possess adequate knowledge needed to enhance professional skills required in executing basic nursing procedures for health profession (Ajila & Olutola, 2007).

Previous research asserts that poor academic performance could be a result of nurse educators' low salaries and poor remuneration. The role of the nursing education was to prepare student nurses for professional competence in the field. Nursing education was described as a planned educational program which provided broad and sound foundation for effective practice of nursing (Adeoye & Popoola, 2011). Low retention, association with peers, an educator's non-use of verbal reinforcement strategies and laziness of students predisposed the student nurses to poor academic performance. Nurse educators were expected to mentor and offer guidance to student nurses (Rowe, Stewart & Patterson, 2007).

Clinical work in nursing education is an important component of the nursing curriculum aimed at actively engaging student nurses with the necessary skills needed for the nursing profession. The attitude of nursing students toward clinical work was becoming a topic of interest for nursing researchers. Student nurses are observed to have burnout and demotivated. This may be due to the feeling that managers are not supportive enough. Lack of resource materials, staff turnover and shortage of staff might be the other contributory factors towards the negative attitude of nurses in the workplace. The objectives of the study were to determine the perspective of practicing nurses on student nurses' attitude toward clinical work (Awuah-Peasah, Sarfo & Asamoah, 2013).

Findings were that student nurses were absent from clinical work without seeking permission and nursing students did not show commitment to clinical work, 106 (63.9%) agreed and 25 (34.7%) disagreed that there was absenteeism in both theory learning and clinical practice. Also, the attitude portrayed by students had an

influence on the way the medical and nursing staffs relate to them. It was recommended that students should do demonstration prior assessing, monitoring and managing patients so that they are familiar with what is expected of them during clinical placement. This was affirmed by (McKenna, McCall & Wray, 2010) who argued that there should be preceptors in the ward to monitor and mentor student nurses. According to Orem's theory (Pearson, Vaughan & Fitzgerald, 1998) self-care deficit of student of student nurses is seen since they are still pursuing their training. However, support should be given in order to capacitate them.

Mentoring under-graduates' student nurses is distinct from the process of mentoring graduate student nurses. Unique challenges stem from, for example, differences in the students' general level of experience and stage of career development. Given the marked benefits of undergraduate and the importance of effective mentor-student interactions, it is worth exploring the interpersonal strategies that mentors can employ to facilitate the best possible learning outcomes for their undergraduate student nurses (Pita, Ramirez, Joacin, Prentice & Clarke, 2013).

According to Mikkonen, Elo, Tuomikoski and Kääriäinen (2016) student nurses' experiences of the clinical learning environment and mentoring differed when language skills were at the beginner or intermediate level. A strong emphasis on language education and language assessment is recommended prior to the clinical placements of student nurses. However, nurse educators' involvement in the clinical placements of student nurses is seen as essential for providing support to the students and their mentors.

Visovsky, McGhee, Jordan, Dominic and Morrison-Beedy (2016) reported that the process of clinical learning involves several relevant parties, faculty nurse educators teaching theoretical knowledge and the practicing of clinical skills by clinical facilitators and preceptors responsible for the integration of the student nurses clinical competence, with clinical practice healthcare staff supervising and mentoring students within the clinical practice. The role of nurse educators as collaborator between the clinical placement and the University of Applied Sciences played a more significant role to student nurses at beginner or intermediate levels of their training.

Mentor's roles include facilitation of students' learning creating an open and safe learning environment for the students guiding students through their learning process and thus strengthening the student nurses' professionalism. Therefore, practice experience is widely acknowledged as being one of the most important aspects of a student nurse educational preparation to become a health care professional (Mikkonen et al., 2016).

There are some constituents of good mentorship, providing insight into how mentorship is valued and highlighting the need for further investment in this important role. The constituents are the importance of good mentorship, investment in mentorship and mentors, relationships to enable and support mentorship, the context within which mentorship occurs, different approaches to mentorship (RCN Mentoring Report, 2015). However, continued guidance, coaching and mentoring should be given as supportive measure.

- **Accompaniment in clinical area**

Clinical accompaniment in nursing education is an important component of the nursing curriculum aimed at actively engaging student nurses with the necessary skills needed for the nursing profession. Also, nursing was essentially a practice discipline, informed by a theoretical base. It was crucial that students had a rigorous preparation in both theoretical and practical elements during their program. The results indicated that the largest proportion of the respondents 106 (63.9%) agreed and 60 (36.1%) disagreed that their academic performance in practical setting was poor due to overcrowding in a unit in practical area due to large numbers of student nurses. Thus, clinical accompaniment provides the necessary practical skills that the students needed and it is also an environment where students among others socialize, into the profession as confirmed by (Mabuda, Potgieter, & Alberts, 2008).

A clinical environment included everything that surrounded the nursing work, including the clinical settings, the staff and the patients. The clinical learning environment was shown. It was noted that there was a rise in the negative attitude displayed by nursing students as well as nurses toward the nursing profession due to

unpleasant hard work in the hospital, working on holidays, lack of respect for work, and low salary. Loss of nurses' interest in what they did, not only negatively affected the quality of work, but also demoralized the profession (Levett-Jones, & Bourgeois, 2007). Pearson et al. (1998) stated that self-care as a positive practical decision making influences student nurses to be responsible in performance of skills despite the fact that they are dependent on the registered nurses.

Sweet and Broadbent (2017) stated that effective accompaniment of student nurses' in clinical environment, the clinical facilitator, preceptors, nurse educators and registered nurses must possess the following qualities; approachability, ability to help students link nursing theory to practice ability to give students appropriate feedback, ability to help students apply their nursing knowledge and skills, ability to help students develop clinical reasoning skills, motivational skill and communication skills, enthusiasm for student learning. Furthermore, Sweet and Broadbent (2017) highlighted that availability to students, demonstration of clinical expertise and professional role, ability to provide an optimal learning environment for students, ability to be a student advocate, problem-solving skills, rapport with students, negotiation skills to optimize learning opportunities on behalf of students, ability to help students develop self-evaluation skills rapport with clinical service coordinator and members of the healthcare team influence the effective accompaniment of student nurses'.

- **Supervision of student nurses**

The study reveals that student nurses should be supervised and receive orientation about clinical work and what was expected before being placed in the ward. Nursing students should have clinical instructors (preceptors) from the educational institution at all times to supervise whilst on clinical rotation. Findings show that largest proportion of the respondents 99 (59.6%) disagreed that lack of adequate supervision from nurse educators in theoretical area is one of the main causes of decreased graduate of student nurses unlike 67 (40.3%) respondent who agreed. According to Thopola and Lekhuleni (2016) lack of supervision of students' impede learner-midwives from acquiring midwifery skills.

Furthermore, the professional nurses and registered midwives should be trained on how to supervise and mentor students in order to reduce anxiety in nursing students. Professional nurses and registered midwives should periodically receive in-service training concerning how to relate with nursing students. Clinical placements should be planned with the clinical staff and the nurse educators before the student nurses are placed clinical areas. Continuous monitoring is vital in order to avoid overcrowding in the wards, health centres and clinics by encouraging inputs from professional nurses, registered midwives and nurse educators during clinical placement meetings as affirmed by Awuah-Peasah et al. (2013).

Another health-related factor that can influence students` academic performance was class attendance. Attendance itself related to stress factors like insufficient sleep, illness and also having a family or children to care for. Having a class at seven in the morning can be a huge problem for students deprived of sleep. Many colleges and universities asserted the need for new approaches to professional learning that were responsive to the needs of both colleges and nurse educators. Such approaches may take various forms, such as for example, cognitive coaching. The idea of cognitive coaching was based on the idea of the construction of knowledge rather than the transfer of knowledge. Adult learning principles gave major support to cognitive coaching and predict its success. Those approaches to curriculum development and teacher professional development had repeatedly proven to be ineffective (Charner-Laird, 2007).

Intrinsic motivation of student nurses and academic good performance could also be reasons for class attendance. With attendance having a major influence on academic performance, even to the point of some colleges and universities using it as a requirement to pass a course, it was a great indicator of a student nurses overall performance. One major prediction of class attendance was a student`s grade average points prior to enrolling in the class. Students who have done better in previous classes were likely to attend classes more frequently. Other factors in class attendance include the level of courses the students were taking. On average, junior and senior level courses have a higher attendance record.

A clear picture of student nurses identified and view of self, as well as their skills and competencies, needed to be developed in order to shape institutional responsiveness and so improve throughput. Tracking and monitoring systems, that monitor profile and identify at-risk students on entry, could make a significant contribution in that regard (Report from a colloquium held at the University of the Western Cape, 2009).

- **Academic stress and anxiety**

Results show that stress indeed had an impact on a student's academic performance. Stress is part of life no matter how wealthy, powerful, attractive, or happy people might be. However, stress would take different forms depending on the situation. Stress might occur when for example, one was writing a difficult exam, an automobile accident, waiting in a long line, during a day on which everything goes wrong. There was a correlation between a student's amount of perceived stress and academic performance according to the findings, academic stress 73 (73.2%) respondents agreed and 24 (24.8%) disagreed. College students had many obstacles to overcome in order to achieve their optimal academic performance. It took a lot more than just studying to achieve a successful college career. Different stressors such as time-management sleep deprivation, social activities, and for some students even having children, can all pose their own threat to a student's academic performance. Variety of factors such as fraternity sorority activities and social activities take away valuable time for studying and could diminish students' academic performance and this was backed by (Bernstein, Penner, Stewart & Roy, 2008).

Some studies showed that the amount of social support from the universities and colleges and outside contributors like family, friends and mentor made a huge impact on a student's success. Support such as emotional, academic, and financial were tremendous factors in the success of a college students. The years spent at college were stressful and life-changing and therefore students were under a large amount of perceived stress, one would tend to think that the student nurses' performance would suffer. In the review of the literature many studies found that certain factors could greatly influence student nurses' academic performance. Health-related factors

like, nutrition, and amounts of sleep were found to have a great influence on students. Stress did not affect all people equally, but stress could lead to illness and negative experiences. Coping with stress was therefore an important factor, it affected whether and how people search for medical care and social support and how they believe the advice of the professionals as supported by (Passer & Smith, 2007).

Social activities such as, being in a fraternity or sorority, or having problems with boyfriends or girlfriends, parties have shown to also have a negative effect on academic performance. Some students may perceive factors such as nutrition, exercise routines, sleep patterns, social activities, and work as stressors that they need to overcome in order to achieve a higher academic standing. On the other hand, other students may not perceive those life situations as factors of stress at all. Stress itself has been proven to be a factor affecting a college student's academic performance. Moreover, the way the student perceives his or her stress can determine how much stress the student was actually under (Passer & Smith, 2007).

One thing that this study did not take into account was that some past research on sleep suggested that people who sleep fewer hours a night may have psychological maladjustment. Sleeping shorter amounts of time had shown to increased factors such as anxiety and stress, which have been associated with academic performance. Those factors caused students problems by causing shortened attention span and also increasing the number of errors students make on tests. Stress and its manifestations, such as anxiety, depression, and burnout, had always been seen as a common problem among people in different professions and occupations. In the last few decades, alarm had already been provoked by the proliferation of books, research reports, popular articles and the growing number of organized workshops, aiming to teach people how to cope with this phenomenon as confirmed by (Yumba, 2008).

All of the factors that have been reviewed in the literature can contribute to a college student's level of stress. By themselves these constraints may have no effect at all on a student, but when combined, a student could perceive them as stressful, and

the stress factors could have a dramatic effect on a student's academic performance. With too many stress factors present and with limited resources of time and energy, a student could easily become overwhelmed (Thopola & Lekhuleni, 2016). What one student perceived as stressful may not be a factor of stress at all for another student. Stress was viewed as a negative emotional, cognitive, behavioural and physiological process that occurred when a person tried to adjust to or deal with stressors. Stressors were defined as circumstances that disrupt, or threaten to disrupt individuals' daily functioning and caused people to make adjustments (Bernstein, et al., 2008).

For effective accompaniment of student nurses' in clinical environment, the clinical facilitator, preceptors, nurse educators and registered nurses must possess the following qualities; approachability, ability to help students link nursing theory to practice ability to give students appropriate feedback, ability to help students apply their nursing knowledge and skills, ability to help students develop clinical reasoning skills, motivational skill, communication skills, enthusiasm for student learning, availability to students, demonstration of clinical expertise and professional role, ability to provide an optimal learning environment for students, ability to be a student advocate, problem-solving skills, rapport with students, negotiation skills to optimize learning opportunities on behalf of students, ability to help students develop self-evaluation skills rapport with clinical service coordinator and members of the healthcare team, organizational skills (Sweet & Broadbent, 2017) However, one of the basic functions of a registered nurse is teaching.

- **Student counselling and support**

According to the findings, 49 (29.4%) of the respondents 118 (70.7%) disagreed and 37(35.1) agreed that there were support services for student nurses in the campuses that can enhance graduate throughput. The outcome of this study will enable school counsellors to organize a symposium for parents, school administrators, nursing teachers and students themselves. Counselling services should be extended to this group of people because it enabled people to overcome anxieties and worries. Parents for instance would be enlightened by knowing that adequate provisions of student nurses' basic needs were vital to their academic performance. The study is

going to expose school administrators on the need to provide conducive-environment for the student nurses, and the nurse educators would also realize that giving too many assignments was detrimental to student nurses' academic performance.

Oladele (2007) reported that was because the students may not have the time to study. Finally, the students themselves should be orientated into forming study groups and given some tips on effective study habit techniques. This will enable them to realize their individual roles in enhancing good academic performance. Therefore, counsellors should utilize group and individual counselling techniques in bringing this about. More importantly, the students needed academic counselling in helping them develop rational ideas about the nursing profession rather than relating performance to gender differences.

- **Factors Contributing to Academic Failure Related to Resources and Equipment**

Findings show that lack of access to internet, lack of access to computers, unavailability of computer lab and inadequate study center led to most of the respondents 62 (86.1%) agreed and 8 (11.1%) disagreed that indeed. Inadequate teaching facilities contributed to poor academic performance as new curricula needed the students to be kept abreast with latest information through new technological gadgets like computers and laptops. The use of technology includes online-learning, electronic mail, bulletin boards, downloading information and this was confirmed by (Newman & Howse, 2007).

4.8.2 Factors related to nurse educators

- **Empowerment and support by management**

These findings stressed the importance of collaboration between different college departments to ensure that the highest level of integration and key concepts were taught. 40 (55.6%) agreed and 26 (36.1%) disagreed that there was lack or minimal support from college management The findings from the current study raised awareness of the unique factors that predicted student success in their training program, 63 (87.7%) agreed and 8 (11.1%) disagreed that there was increase failure

rate of student nurses that had a negative image of the college. Thereby offering nursing college nurse educators means to better identify students at-risk for academic failure and provided them with additional assistance prior to the beginning of nursing curriculum. Armed with this information, nursing colleges were going to be in a better position to offer students the tutoring, mentoring and support they needed to succeed in the program thereby lowering attrition rates as affirmed by (Abele, Penprase & Ternes, 2013).

Since academic failure contributed most significantly to the loss of student nurses resulting in high termination rates, it was critical that nurse educators confront the reasons behind failure and termination within nursing programs. High attrition and termination rates not only resulted in a loss of many potential nurses and add to concerns of present and future nursing shortages, they also made it difficult to ensure that the nursing workforce was demographically representative of the population as a whole (Mulholland, Anionwu, Atkins, Tappern & Franks, 2008).

For an organization or institution to be successful management has to ensure that there is participatory management by the employees 46 (63.9%) agreed and 26 (36.1%) disagreed that open communication existed in the management and nurse educators. In this case it means that academic staff, administrative and support staff, must be acknowledged and their inputs have to be considered. Team work and cohesion within the organization will result in good academic performance and achievement hence enhanced graduate throughput of student nurses. Group cohesion deals with group dynamics and social relations among group members in the workplace and those are the issues that make the institution to be successful as confirmed by (Nyathi & Jooste, 2008).

Collaboration between all staff members for collective impact through a steering committee comprising of academic staff, that are responsible for teaching and learning and passionate about student success, ensures an academic rather than a support focus underpinned by continuous and foreground development and excellence rather than the predominant deficit approach of retention of students at risk (Weissman, Cerna, Geckler, Schneider, Price & Smith, 2009).

- **Student co-operation and accompaniment in practical area**

Tilley (2008), argued that clinical performance was determined by the assessment of competence, defined by a student's ability to demonstrate the performance of professional skills or behaviours. Rochford, Connolly and Drennan (2009) cited that their current research had investigated student nurses' perceptions of their clinical performance methods of competence assessment and factors which students' perceived to impact on their learning during clinical placement, such as part-time employment gender and supervision. Findings revealed that 65 (63.9%) respondents strongly agreed while 26 (36.1%) disagreed on lack of adequate time for accompaniment of students in clinical setting. However, few studies measured how those factors impact on student nurses' clinical assessment outcomes. Therefore, it was difficult to quantify the extent to which clinical placement experienced impact on the development of students' clinical competence as affirmed by (Stott, 2007).

- **Negative attitude of ward staff**

The study established that ward staff have negative attitudes towards the student nurses during their clinical exposure in clinical settings. Ways of solving this issue need to be found because this ill-feeling makes the student nurses to develop resentful feelings and to dislike the clinical area. The main sources of stress relate to placement. Some of those were common to those reported by practicing nurses, such as working with dying patients; insecurity about clinical competence; interpersonal problems with patients; work overload and conflicts with other staff members. Student status on placement had been reported and aligned to that were the attitudes held by nursing staff towards students on placement (Gibbons, 2008).

There is a rise of negative attitude displayed by nursing students as well as nurses toward the nursing profession due to unpleasant hard work in the hospital, working on holidays, lack of respect for work, and low salary. Loss of nurses' interest in what they do not only negatively affect the quality of work, but also demoralize the profession (Cohen & Golan, 2007).

- **Orientation programme**

The college management should develop an orientation program policy that would address the consequences of academic achievement. After the student nurses have been admitted in the college, orientation program should be conducted so that the newly admitted student nurses are taken on board with the activities in the college. Van Lingen, Douwman and Wanneberg (2011) argued that nursing students who portrayed good physical and mental health performed better academically.

Other factors that influenced decreased graduate throughput were identified as wrong career choice, clinical difficulties and personal problems, and that suggested that students were not fully informed regarding what the nursing profession entailed (O`Holloran,2009). Once student nurses entered the nursing profession especially clinical setting they become disillusioned and were not able to handle the demands of what they encountered ((Wright & Maree, 2007). Usually students past academic performances were used as an indication for future academic achievements (Pitt, Powis, Levett-Jones & Hunter, 2012). Included in aspects of educational failure and great financial implications were an increasing pressure to produce a highly educated workforce to sustain the global economy (Bradley, 2011).

- **Teaching strategies**

Nurse educators must be able to use all types of teaching strategies and not only the traditional teaching strategies for example formal lecture. Findings revealed that 104 (62.7%) respondents agreed and 41 (37.3%) disagreed that different teaching strategies were used by nurse educators. They must be able to use problem-based learning, evidence-based learning, outcome-based learning role play, demonstration and others. This was affirmed by McAllister (2010) who reported that the best way to assist students was to create a harmonious learning environment, and to use teaching methods or strategies that were closely matched to the students' preferred learning styles.

Allen, Ceolin, Ouellette, Plante and Vaillancourt (2007) argued that innovative education programs addressed limitation by assessing and recognizing prior learning and by connecting students directly with the content and experiences they needed.

The challenge was to design an education system that met the needs and the health-care needs of student nurses. Graduates of a modernized education system that was infused with ideas and innovation will be the life blood of a strengthened health sector and a prosperous economy.

Effective professional development experiences were designed to assist teachers in developing a new understanding of teaching and learning. To be effective, professional development must provide nurse educators with a way to apply that which they had learnt directly to their teaching (Zakaria & Daud, 2009). Therefore, lack of innovative teaching strategies may hamper the student nurses' ability to integrate theory and practice.

- **Factors that affect theory-practice integration as viewed by nurse educators**

Nurse educators identified the following as factors that affect theory-practice. Inability to integrate theory and practice, use of different strategies, shortage of resources, overcrowding of student nurses in the clinical area, negative attitude of staff and differences between simulated skills and actual clinical procedure in the wards, health centres and clinics. Supervision continues to be an effective educational strategy that develops and enhances competence among student nurses.

Contemporary clinical practice throughput continued to rise; environments are dynamic and challenging. Universities working in partnership with healthcare organizations, have a responsibility to ensure that graduates are well prepared for the demands and challenges they will encounter in practice. There must be integration of theory-practice if the colleges' and universities' priority is to develop quality competent graduate nurses to enter the nursing professional practice.

Student attributes need to be affirmed and built on in academic programmes, from the first day, to enhance their academic and socio-cultural integration and success. Without the integration of all students and the diverse services that might support them, student success will not be achieved (Report from a colloquium held at the University of the Western Cape, 2009).

- **Shortage of resources and equipment**

Most of student nurses and nurse educators indicated that resources were not adequate during their clinical placement. Shortage of resources and equipment jeopardized the student nurses chance to master the art and skill of nursing profession. 62 (86.1%) agreed and 7 (9.8%) disagreed that there were lack of facilities equipment. Adequate resources at the clinical setting were necessary as they maximize exploitation of all learning opportunities and in the process help students to integrate theory and practice. With recent advances in technology, people now live longer than before, therefore, increasing the aging population who require medical and nursing expertise and attention (Potera, 2009). There is evidence of serious shortage of human resources, material resources and good functioning equipment in clinical setting as affirmed by Thopola and Lekhuleni (2015).

4.9 RESULTS APPLIED TO THEORETICAL FRAMEWORK

According to McEwen and Willis (2009) an integrated human functioning included physical, psychological, interpersonal and social aspects. Human beings are believed to distinguish themselves from others by their potential for learning and developing. Student nurses after being taught were able to perform self-care, although they needed nurse-educators to teach and supervised them during experiential learning (Orem, 2012). That emphasized that student nurses must be taught, mentored, guided, supervised, counselled, supported by nurse educators, clinical facilitators, preceptors, professional nurses for them to perform well and achieve in their academic world.

Meleis (2011) believed that human beings were constantly communicating and exchanging information with one another and their surrounding environment in order to gain knowledge and to survive. The theory of nursing systems was relevant in the study because it was based on the assessment of individual self-care needs and on assessment of the abilities of the students. Although it is a nursing theory it was applied to nurse education, because education and culture influence individuals. Orem (2012) worked to upgrade practical nursing training and that stimulated the

need to address the question of what is the subject matter of nursing curriculum under nursing education. Orem`s theory is not specific to nursing practice only but a general theory which may be appropriate for nurses involved in nursing clinical practice, validation of nurse knowledge, and the teaching and learning of nursing. Student nurses required guidance at both theoretical and clinical settings.

Roy`s adaptation model came into existence in 1960 and it is now used in nursing education, research and practice nursing. This model is applicable and important for nursing practice, nursing education and development. The model is one of the most conceptual frameworks that guides influences nursing education, directs research and guides nursing practice (Roy 2009; Shosha, Kalaldehy & Mahmoud, 2012). The student nurses needed to be accompanied in clinical practice by the nurse educators and clinical preceptors so that the learning areas that needed to be developed for a student to be independent at the end of her/his training programme are totally developed. The six learning areas are critical thinking, creative thinking, reflective thinking, analytical thinking, problem-solving skill and clinical judgement skill. This will enable student nurses to work independently and to work interdependently with other multidisciplinary teams within the health fraternity.

Observing the findings discussed above, they indicate that if there was no good interaction, effective communication, mutual trust and respect between student nurses and nurse educators it was not going to be possible to attain the best maximum results in the college. For student nurses to be able to achieve better there must be good collaboration in the college from management, support staff, administration staff, nurse educators and student nurses. Nurse educators must be able to utilize different teaching strategies and be able to impart knowledge to student nurses.

According to Orem`s theory (2012) one of the three classifications of nursing systems to meet self-care requisites of nursing education system is that students must be counselled and supported so that they refrain from putting social activities upfront instead of prioritizing their studies. Even if they show lack of dedication with all the necessary support they might improve on their academic performance and achievement. Nursing knowledge is a knowledge that is created, structured and

restructured in some dialogical dynamics between conception (theory) and action (caring), in a constant to-and-fro translational movement between the educator and the student (Queirós, 2013).

Management must ensure that they create capabilities for collaboration and team work between all the team members i.e. management, nurse educators and student nurses, support staff and administrative staff, because it will have enhanced graduate throughput of student nurses in the college.

4.10 STRATEGIES TO ENHANCE GRADUATE THROUGHPUT OF STUDENT NURSES

The findings of this study will be the basis to develop the strategies to enhance graduate throughput of student nurses at Limpopo College of Nursing Campuses. and will curb the poor academic performance and achievement. If these strategies are put into action they may prevent attrition and termination of training, will improve academic performance and achievement of student nurses.

STRATEGIES

Student nurses

- Selection criteria
- Adequate resources & equipment
- Conducive learning environment
- Student nurses counselling
- Student nurses discipline

Nurse educators

- Academic curriculum
- Strategies & programs
- Teaching strategies
- Expertise placement
- In-service trainings
- Mutual student-nurse & nurse educator relationship
- Adequate resources & equipment
- Awards & Incentives

- Effective learning of student nurses &
- good facilitation of learning of nurse educators

ENHANCED
GRADUATE
THROUGHPUT
OF STUDENT

Figure 4.4 Strategies to enhance graduate throughput of student nurses

Figure 4.4 summarizes the strategies that could be implemented to better academic performance and achievement of student nurses so that graduate throughput of student nurses is enhanced. All the arrows from the strategy shows that each strategy lead to the effective learning of student nurses and good facilitation of nurse educators. However, the shape and colours have no significance in the strategies. The constructed strategies are to enhance the graduate throughput are discussed as follows:

4.10.1 Strategies that can assist student nurses to enhance their graduate throughput.

- **Selection criteria**

Student selection criteria should include a personal interview and completion of health questionnaires. Personality traits and behavioural skills not portrayed on paper, as well as critical thinking skills could be determined during interviews, as well as the candidate's actual knowledge of what the profession entails. At interview, areas of uncertainty could immediately be rectified (Schmidt & Mac Williams, 2011). Knowledge of the current wellness and health status of a prospective student nurse should assist in the future to refer a student for medical assistance, if necessary.

- **Adequate resources and equipment factor has an influence on improved academic performance and better achievement of student nurses**

Student nurses should purchase prescribed books at the beginning of the academic year before the classes commence to prevent unnecessary inconveniences as per college policy. The libraries in the campuses have adequate recommended books for references for both the students and nurse educators. Student nurses must not wait for the commencement of classes to purchase prescribed books as this affects the smooth running of the college and demotivates educators.

As national government has turned some tertiary education institutions to quintile system, that the government provides free tertiary education through student nurses salary (stipend) and National Student Financial Aid Scheme (NSFAS). The student nurses stipend cover the costs of the student nurses studies at nursing education

public tertiary learning institutions in South Africa and this include; tuition fees, Alberts et al (2008).The department should equip nurse educators with the necessary technological skills so that they could be able to use digital tools in classrooms for example projectors and laptops, laboratories and demonstration rooms.Furthermore, computers and laptops assisted in reducing hardcopy work such as writing reports and schedules, This reduce the nurse educators` workload. Technology makes it easier for people to execute their duties in their working environment (National Advisory Council on Nurse Education & nPractice, 2010).

- **Conducive-learning environment**

The main causes of poor academic performance of student nurses were perceived that the students were given too many assignments, student stipend at the nursing colleges, lack of library and internet facilities and student nurses' inability to understand the science subjects. Others included the belief that nursing was meant for the females only. When student nurses were busy with too many assignments given, it did not give them sufficient time to read their books, which invariably results into poor academic performance. The finding as it was related to the poor living conditions indicated that the unattractive environment of students was capable of demotivating them in achieving good academic results. That was considered as students' environment mismatch. It was observed earlier that campus location and the physical building militated against good academic achievement (Isangedighi, 2008).

There must be improvement of infrastructure to enhance conducive-learning environment. The results indicated that there was a lack of enough classrooms in other campuses, forcing students to be overcrowded in one class making thus difficult for educators to teach effectively and discipline the overcrowded class and some buildings were old. The quality of buildings affected the ability of educators to teach effectively. Poor hostel (nurses` home) environment also contributed to poor learning hence poor academic performance and achievement. That contributed to poor academic performance hence could lead to high student attrition and termination of training (Clark, 2008).

- **Student counselling, support services and motivating programmes**

The college and campus management created posts for college counsellors that assisted and gave support to the student nurses. The college counsellors organized symposiums for parents, college management, nurse educators and students themselves. Counselling services extended to all groups of people because counselling enabled people to overcome anxieties and worries. Parents for instance would be enlightened by knowing that adequate provision of student nurses` basic needs was vital to their academic performance (Dimkpa, Inegbu & Buloubomere, 2013).

The management ensured the need to provide a conducive-environment for the student nurses, and the nurse educators would also realize that giving too many assignments was detrimental to student nurses` academic performance. Student nurses may not have enough the time to study. Finally, the students themselves should be orientated into forming study groups and given some tips on effective study habit techniques. That enabled them to realize their individual roles in enhancing good academic performance. Therefore, counsellors should utilize group and individual counselling techniques in bringing that about. More importantly, the students needed academic counselling in helping them develop rational ideas about the nursing profession rather than relating performance to gender differences.

- **Student nurses discipline**

Discipline was offered according to the offence committed. Student nurses were informed prior to the commencement of their training during orientation phase of the expected behavior during orientation. According to researcher`s observation and experience some student nurses did not take the work seriously and when they were cautioned about their unbecoming behavior they become stubborn. Some student did not have the desire to learn and put social activities upfront and do not prioritize their studies, some came late to class, even though educators tried to instill discipline they did not respond, they continued with their mischievous actions. Students who had no interests in learning did not do to do homework or tasks assigned to them. At time assignments were given or work for presentation and during time for presentation some students did not have execute the task given.

Crosling, Thomas and Heagney (2008) noted that there a mismatch between academic preparedness of an individual and the academic experience. The students were more likely to engage with the program and the more a student was actively engaged the more likely they were to continue and finishing their learning programme. If there was a mismatch between students` expectations and the academic demands of a program, then students are more likely to struggle to achieve the required academic level.

4.10.2 Strategies that can be utilized by nurse educators to enhance graduate throughput

- **The nursing academic curriculum**

Mendezabal (2013) argued that the nursing academic curriculum should be restructured and made flexible to provide adequate space for practical learning and interaction by the students. In that regard, the nurse educators' hours should be reduced to give the students opportunity for personal study as student are expected to do 75% of self-directed learning in tertiary level and nurse educators are expected to do 25% of the work. Student nurses might have adequate time to form their own personal study time table and engage in group studies in order to improve their academic performance. The management should ensure that adequate or conducive environment with library and internet facilities are available to encourage the students to learn (Afolayan & Donald, 2013).

Academic performance is the ability of students to cope with their studies as well as how various tasks assigned to them by their nurse educators, preceptors, clinical facilitators were accomplished. It also included the ability to study and remember facts and to be able to express such knowledge gained either verbally or in writing. The role of the nursing education is to prepare student nurses for professional competence in the field. Nursing education is described as a planned educational programme which provided broad and sound foundation for effective practice of nursing (Adeoye & Popoola, 2011).

Strategies and programs

Ascend Learning, LLC (2012) affirmed that there were several strategies, policies and processes that nurse educators and programs that could be implemented to enhance throughput and prevent attrition and termination in nursing colleges. Nurse educators were able to take steps that program scheduling met the needs of the student nurses as much as possible. Student nurses were provided with high-quality resources to support learning and interactive instructions. Positive relationship between nurse educators and student nurses were ensured and maintained at all times. During enrolment, students were provided with sufficient and realistic information regarding the program and the profession so that expectations were not inconsistent with reality.

Alberts et al (2008) reported that some of strategies to enhance high output amongst student nurses were good accompaniment by college tutors in clinical settings, clinical teaching by ward staff, mentoring and role modelling in clinical setting, clinical preceptor-ship. Furthermore, feedback to student nurses and clinical supervision, good communication between nursing staff, nurse educators and student nurses, curriculum arrangement versus clinical allocation, discrepancies between what was taught at the college by nurse educators and clinical staff practices, recognition of student nurses learning needs, rotation of student nurses and clinical allocation. During their training student nurses were given practical opportunities, proper delegation and involvement of student nurses in teaching and learning activities.

- **Teaching strategies**

Nurse educators are supposed to use different teaching strategies because using the traditional teaching strategies was no longer in line with the new curricula of students. Nurse educators must be trained to utilize different teaching strategies that would stimulate the student nurses interest and zeal for learning. Different teaching strategies for example case studies, projects, demonstrations should be used because of diversity of nursing, competence and difference among student nurses. No one method is sufficient and the teacher must choose depending on the Outcomes and characteristics of the students. Teaching strategies used in nursing education e.g. lecture, demonstration, assignments, projects, simulation,

programmed learning, precept, role play, story-telling that nurse educators were able to use during facilitation of learning (Ngidi, 2007).

- **Nurse educators should be placed according to their expertise**

According to researcher observation nurse educators should be placed according to their field of expertise. For example, if the nurse educators were having post basic qualification of Primary Health Care the educator was supposed to be placed on Community Nursing Science discipline or department. When attending in-service trainings or workshops nurse educators should be developed according to their subjects that they were facilitating most. Nurse educators should not be forced to facilitate learning on the subject that they were not comfortable with, as that was the factor that could also contributed to poor academic performance of student nurses).

- **Capacity building programs for nurse educators**

Nurse educators are supposed to be in-serviced so that they are kept abreast with the latest information that was expected of the new curricula in basic education and higher education institutions. In-service training programs provided by college to increase skills and competence in specific area. The college management should ensure that in-service training programs, courses, workshops, capacity building programs. Nurse educators` forums must be conducted for nurse educators and included topics such as classroom management, promotion of student-lecturer relationship and provision of moral support to the student nurses (Zakaria & Daud, 2009).

- **Mutual Student-nurse educator relationship**

Organization of the school day allows the students time for physical activities and time for intellectual aspect. Clark (2008) indicated that aesthetic quality influence learning especially in students. Peer relations i.e. student to student relations. Teacher-student relations if not a positive one could negatively affect learning. Teacher- teacher relation is important for the smooth running of the school program. Parent-school relations should be positive and there should be an ongoing communication.

- **Adequate resources and equipment factor has an influence on improved academic performance and better achievement of student nurses**

Student nurses should purchase prescribed books at the beginning of the academic year before the classes commence to prevent unnecessary inconveniences as per college policy. The libraries in the campuses school have adequate recommended books for references for both the students and nurse educators. Student nurses must not wait for the commencement of classes to purchase prescribed books as this affect the smooth running of the college and demotivates educators. The hospitals management must ensure that there must be adequate resources, material and equipment in clinical setting as affirmed by (Potera, 2009).

The policy should outline the selection criteria for award giving ceremonies for students who obtain a 100% class pass or distinction in order to motivate student nurses to improve the academic performance. In this study the researcher found that there was still a need to improve.

4.11 CONCLUSION

In Chapter 4, the researcher discussed the process and data analysis performed during this research. The results from the questionnaires were analysed and presented in tables, graphs and figures. The strategies were also presented based on the findings. Chapter 5 will outline the summary, limitations, recommendations and conclusion.

CHAPTER 5

SUMMARY, LIMITATIONS, RECOMMENDATIONS AND CONCLUSION

5.1 INTRODUCTION

In the previous chapter, the results of the data were presented, analyzed, interpreted and discussed. This chapter concludes the study, discusses the limitations, recommendations and conclusion for nursing education and further research. The aim of this study was to identify contributory factors to academic failure of student nurses and develop strategies to enhance graduate throughput of student nurses in Limpopo College of Nursing, South Africa.

5.2 ACHIEVEMENT OF OBJECTIVES

Chapter 1 of the study outlined the objectives of the study and the researcher managed to achieve the set objectives.

The first objective of the study was to:

- Identify contributory factors to academic failure of student nurses in Limpopo College of Nursing.

Based on the results of the study this objective was achieved as follows:

- Wrong choices, inability to adjust in clinical areas and personal problems decreased graduate throughput. Student nurses seemed not to be fully informed of what the nursing profession entailed. These student nurses entered the nursing profession disillusioned and were not able to handle the demands of what they encountered.
- The student nurses' poor performance was contributed by physiological anxiety, poor mentoring, lack of student accompaniment, negative attitude of ward staff and poor supervision. These factors contributed to poor coping mechanisms that developed upon the student nurses.

- Factors that affected theory-practice integration as viewed by nurse educators were shortage of human and material resources, lack of equipment, overcrowding of student nurses, negative attitude of ward staff. These factors attributed to the decrease in graduation throughput. Shortage of resources and equipment jeopardised the student nurses chance to master the art and skill of nursing and midwifery.

The second objective of the study was to:

- Develop strategies to enhance graduate throughput of student nurses in Limpopo College of Nursing.

This objective was achieved as follows:

The strategies to enhance graduate throughput of student nurses in Limpopo College of Nursing were developed, based on the lack of accompaniment, lack of supervision, poor mentoring, lack of material and human resources and equipment. Therefore, this is the evidence that there is poor throughput of student nurses in Limpopo province.

- Nursing colleges is obliged to strengthen the collaboration with the University of Limpopo and University of Venda in order to produce competent, skilful and quality professional nurses and midwifery graduates.
- Strategies that might assist the student nurses to enhance their graduate throughput were clear and relevant, selection criteria to be designed and to be applied, adequate supply of resources, availability of good functioning equipment, determined and selfless nurse educators, student nurses' responsibility in purchasing of prescribed text books, accessibility to computers' and internet for research activities, fully functioning and well-resourced libraries.

5.3 SUMMARY

The quantitative descriptive, cross-sectional method was used to develop identified strategies to enhance graduate throughput of student nurses' student nurses in Limpopo College of Nursing, South Africa. The study population included all student nurses who repeated any level of study during their R425 Basic Programme and all nurse educators facilitating learning to R425 Basic Programme. Cluster random sampling was used to ensure that all the student nurses who repeated any level of study and all nurse educators who facilitated learning of the R425 Basic Programme had an equal chance of been included in the study.

Questionnaires were used to collect data from student nurses and nurse educators at Limpopo College of Nurses Campuses. Data were collected by the researcher with the aid of the contact persons to ensure privacy and confidentiality and avoid bias. Data analysis and interpretation were presented in frequency and percentage tables and graphs. The findings were academic stress, anxiety, negative attitude of ward staff, overcrowding in clinical setting, shortage of resources and materials, use of teaching strategies, factors affecting theory-practice integration, inadequate supervision of student nurses.

5.4 LIMITATIONS OF THE STUDY

The study was conducted at a Limpopo College of Nursing Campuses in Limpopo Province, South Africa. Therefore, the findings cannot be generalised because the study was not conducted in all the Nursing Colleges in the other provinces of South Africa. It was important to note the limitations of this study which limit generalizability of the results.

5.5 RECOMMENDATIONS

5.5.1 Nursing Education

Student nurses

- Student nurses are supposed to be responsible and be able to prioritize between their studies and social activities.

- They must have intrinsic motivation, be self-directed in their learning and studies to be able to reach their goals.
- Student nurses must be able to seek assistance, counselling and support services if they encounter crisis or any challenges and issues that affect their academic performance for example anxiety, academic stress or work over-load.

Nurse educators

- Nurse educators must be well skilled to execute their duties uncompromisingly to develop student nurses who will become responsible, registered professionals at the end of their training.
- Nurse educators must be given chance to further their studies so that they are capable of producing well skilled professionals that are a diligent and competent workforce.
- Nurse educators should be able to identify student nurses who need support and guidance that included academic and clinical support and wellness programmes.

Limpopo College of Nursing Management

- The training institutions and hospitals should include the strategies that can enhance graduate throughput of student nurses.
- Limpopo College of Nursing must ensure that nurse educators undergo various workshops, in-service trainings, courses to keep them abreast and updated with the latest knowledge, information and skills.

5.5.2 Nursing Services

- The hospitals must be able to have adequate material, resources and equipment so that student nurses are able to develop their psychomotor domain so as to be able to function well.
- Nursing services should ensure that they minimize and prevent overcrowding of student nurses in one unit in order to encourage good exposure and effective learning.

5.5.3 Department of Health

The Department of Health should employ clinical instructors and preceptors that will deal with practical in clinical setting so that student nurses are thoroughly taught, guided, mentored, monitored and supervised during clinical exposure practice.

5.5.4 Research

- Further studies could be conducted on the same topic by replication of the same study in a different Nursing College or Campus to compare findings because the nursing education environment where facilitation of teaching and learning (education and training) takes place is not the same and the study might yield different findings.
- Formulation, development and implementation of the strategies to enhance graduate throughput of student nurses could assist on achieving improved results, hence best academic performance and achievement.

5.6 CONCLUSION

Student nurses are challenged by their own lack of persistence, an inability to adjust to the academic demands of higher education, a lack of integration into social activities offered at a higher educational institution as well as failure to cope with the demands of theoretical and clinical environment. In this study, the researcher established that there was still a need to improve nursing education. Various retention strategies that enhance graduate throughput in a form of support programmes must be put into place for the at risk-student nurses. Some nursing students found solution when using the offered support. Despite those efforts to retain student nurses until they complete their nursing training programme, it had been found that poor academic performance lead to academic failure hence termination of training. Therefore, unfortunately termination might never be diminished and might still be debated in future.

If the Limpopo College of Nursing has to produce effective proactive nursing professionals, they have to put into place the strategies that would enhance graduate throughput like student counselling, student support services etc.

The aim of chapter 5 as the final chapter of this research was to provide a comprehensive overview and evaluation of this research through reflecting on the objectives of this study.

The results were used to propose recommendations and further research on formulation or development and implementation of the strategies to enhance graduate throughput of student nurses in Limpopo College of Nursing that could assist in achieving improved results, which could lead to best academic performance and achievement.

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APPENDIX 1: ETHICAL CLEARANCE CERTIFICATE



University of Limpopo
Department of Research Administration and Development
Private Bag X1106, Sovenga, 0727, South Africa
Tel: (015) 268 2212, Fax: (015) 268 2306, Email:noko.monene@ul.ac.za

TURFLOOP RESEARCH ETHICS COMMITTEE CLEARANCE CERTIFICATE

MEETING: 27 January 2016

PROJECT NUMBER: TREC/02/2016: PG

PROJECT:

Title: Strategies to enhance graduate throughput of student nurses in Limpopo College of Nursing, South Africa

Researchers: Ms ND Neshunzhi
Supervisor: Ms MK Thopola
Co-Supervisor: Prof ME Lekhuleni
Department: Nursing Science
School: Health Sciences
Degree: Masters in Nursing



PROF TAB MASHEGO
CHAIRPERSON: TURFLOOP RESEARCH ETHICS COMMITTEE

The Turfloop Research Ethics Committee (TREC) is registered with the National Health Research Ethics Council, Registration Number: REC-0310111-031

Note:

- i) Should any departure be contemplated from the research procedure as approved, the researcher(s) must re-submit the protocol to the committee.
- ii) The budget for the research will be considered separately from the protocol.
PLEASE QUOTE THE PROTOCOL NUMBER IN ALL ENQUIRIES.

APPENDIX 2: DEPARTMENT OF HEALTH APPROVAL LETTER



LIMPOPO
PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA

DEPARTMENT OF HEALTH

Enquiries: Latif Shamila

Ref:4/2/2

Neshunzhi ND
University of Limpopo

Greetings,

RE: Strategies to enhance graduate throughput of student nurses in Limpopo College of Nursing, South Africa.

The above matter refers.

1. Permission to conduct the above mentioned study is hereby granted.
2. Kindly be informed that:-
 - Research must be loaded on the NHRD site (<http://nhrd.hst.org.za>) by the researcher.
 - Further arrangement should be made with the targeted institutions, after consultation with the District Executive Manager.
 - In the course of your study there should be no action that disrupts the services.
 - After completion of the study, it is mandatory that the findings should be submitted to the Department to serve as a resource.
 - The researcher should be prepared to assist in the interpretation and implementation of the study recommendation where possible.
 - The above approval is valid for a 3 year period.
 - If the proposal has been amended, a new approval should be sought from the Department of Health.
 - Kindly note, that the Department can withdraw the approval at any time.

Your cooperation will be highly appreciated.


Head of Department

15/06/2016
Date

18 College Street, Polokwane, 0700, Private Bag x9302, POLOLKWANE, 0700
Tel: (015) 293 6000, Fax: (015) 293 6211/20 Website: <http://www.limpopo.gov.za>

The heartland of Southern Africa – *development is about people*

APPENDIX 3: PERMISSION LETTERS FROM THE CAMPUSES VICE-PRINCIPALS



LIMPOPO
PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA



DEPARTMENT OF HEALTH LIMPOPO COLLEGE OF NURSING: GIYANI CAMPUS

04-05-2016

**MS. ND NESHUNZHI
P.O BOX 2423
THOHYANDOU
0950**

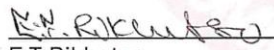
PERMISSION TO CONDUCT A RESEARCH STUDY

Permission is hereby granted to conduct a research study at this campus. You indicated your topic as "strategies to enhance graduate throughput of student nurses in Limpopo College of Nursing, South Africa".

Please make arrangements with the institution before coming. Ensure that classes are not disrupted and adhere to ethical principles.

Yours Truly

Vice Principal


E.T Rikhotso

Private Bag X9658 GIYANI, 0826
Tel: (015) 812 0330/1/2 or (015) 812 0123/0213 Fax: (015) 812 0123
Website; <http://www.limpopo.gov.za>

The heartland of Southern Africa – Development is about people!



LIMPOPO

PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA

DEPARTMENT OF HEALTH

LIMPOPO COLLEGE OF NURSING: THOHYANDOU CAMPUS

Enq: Tshiswaise MI
Tel: 015 9641567
Fax: 015 9641517

Date: 2016.05.08

To: Ms Neshunzhi D
Thohoyandou Campus

From: Acting Vic Principal
Thohoyandou Campus

RE: YOUR NOTIFICATION TO CONDUCT RESEARCH

1. The above matter refers.
2. The Campus management hereby gives you permission to collect data at Thohoyandou Campus.
3. Kindly make arrangements on when to collect data.
4. Hoping that you find this in order.

Thank you

Tshiswaise MI; Acting Vice Principal

Private Bag X919, SHAYANDIMA, 0945, Vhembe District
Next to Tshilidzini Hospital along Punda Maria Road
Tel: (015) 964 1516/8 . Fax: (015) 964 1517
Website; <http://www.limpopo.gov.za>

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LIMPOPO
PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA



DEPARTMENT OF HEALTH

LIMPOPO COLLEGE OF NURSING:
SOVENGA CAMPUS

To: ND Neshunzhi
From: The Acting Vice Principal
Date: 9/5/2016

RE: REQUEST FOR PERMISSION TO CONDUCT RESEARCH

The above matter has reference:

Permission to conduct a research study on **strategies to enhance graduate throughput of student nurses in Limpopo College of Nursing** is hereby granted.

Sovenga campus as a targeted institution to conduct the study has no objection, provided your presence does not disrupt or compromise students learning activities.

Your cooperation in this regard would be appreciated

TJ Gwangwa

Acting Vice Principal

Private Bag X1122, SOVENGA, 0727
Houtbosdorp Road behind Mankweng Hospital, Sovenga, 0727 Tel: 015 267 1114 Fax: 015 267
9372
Website: <http://www.dhsd>.



LIMPOPO
PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA



DEPARTMENT OF HEALTH
WATERBERG CAMPUS

Enq: Mochaki NW
Tel: 015 291 1120
Fax: 015 291 1194

Date: 27-05-2016

To: Ms D Neshundzhi
Thohoyandou Campus

From: Vice Principal
Waterberg Campus

Re: Your notification to conduct research

The above matter bears reference

It is with pleasure to inform you that you are heartily welcomed to come and collect data at Waterberg Campus. Waterberg Campus management really appreciate your endeavour to develop and grow as a nurse scientist. We await your arrival and it is upon you to meet your respective participants.

Good luck with your studies.

Regards

Mochaki NW: Vice Principal; Waterberg Campus

27-05-2016.

Date

APPENDIX 4: STATISTICIAN CERTIFICATE



University of Venda

Enq: Mulaudzi T.B

Tel: 015 962 8302

Cell: 076 470 9174

University of Venda

P/Bag x 5050

Thohoyandou

0950

30 January 2017

TO WHOM IT MAY CONCERN

PROOF OF DATA ANALYSIS: NESHUNZHI N.D

This is to certify that I, **MULAUDZI T.B** of University of Venda (statistics department), have analyzed the Master of Nursing Sciences Dissertation of **NESHUNZHI N.D** (201529388). She is a registered student at the University of Limpopo, School of Health Sciences.

A handwritten signature in black ink, appearing to read 'Mulaudzi T.B', written over a dotted line.

Mulaudzi T.B

A handwritten date '30/01/2017' in black ink, written over a dotted line.

Date

APPENDIX 5: LANGUAGE EDITOR CERTIFICATE

Private Bag x5050

THOHOYANDOU

0950

10 July 2017

TO WHOM IT MAY CONCERN

Topic of the edited document: Strategies to enhance graduate throughput of student nurses in Limpopo
College of Nursing, South Africa

Student name: Ms. ND Neshunzhi

Student number: 201529388

This serves to confirm that a dissertation to be submitted in fulfillment of the requirements of Master of Nursing degree in the Department of Health Sciences in the School of Health Care Sciences at the University of Limpopo was edited for glaring language errors.

Hoping you will find this in order.

Faithfully yours



Dr. LMP Mulaudzi (PhD)

English Department

University of Venda P/Bag x5050

Thohoyandou, Limpopo South Africa

Tel: 015 962 8362

Fax: 086 4014 823



University of Venda

APPENDIX 6: QUESTIONNAIRE FOR STUDENT NURSES

RESPONDANT CODE

INSTRUCTION:

Kindly complete this questionnaire with an "X" in the space of box provided

SECTION A: DEMOGRAPHIC DATA

VARIABLES

1. Age ranges

17-19	
20-22	
23-25	
26-28	
29-30	
30-35	

2. Gender

Male	1
Female	2

3. Level of training

Level I	1
Level II	2
Level III	3
Level IV	4

4. Level repeated

Level I	1
Level II	2
Level III	3
Level IV	4

5. Subject repeated

Biological & Natural Sciences	1
Community Nursing Science	2
General Nursing Science	3
Midwifery Science	4
Psychiatry Nursing Science	5
Social Sciences	6

SECTION B: FACTORS CONTRIBUTING TO ACADEMIC FAILURE RELATED TO STUDENTS

KEY:

- 1 = (SA) Strongly Agree
- 2 = (A) Agree
- 3 = (D) Disagree
- 4 = (SD) Strongly Disagree

Mentoring and guidance by nurse educators

KEY	SA 1	A 2	D 3	SD 4
STATEMENTS				
6. Work overload				
7.Low self-esteem and low morale				
8.Academic stress				
9.Understanding the amount of work required				
10.Different teaching strategies are used by nurse educators				
11.Poor facilitation of learning to student nurses in theoretical area				
12.Poor interpersonal relationships between nurse educators and students				
13.Inability to impart knowledge				
14.Lack of dedication				
15.Poor understanding of medium of instruction				
16. Putting social activities upfront				
17.Poor language skills				
18.Lack of support from nurse educators				
19.Lack of personal standards of quality				
20.Interference from psychological problems				
21.Failure to assume responsibility				

22. Selection of the wrong college or tertiary institution				
23. Chronic illnesses				
24. Attitude of nurse educators to students				
25. Poor relationship between students and nurse educators				
26. Unapproachable and unfriendly nurse educators				
27. Overcrowded classes due to large number of students				
28. Lack of adequate time for filling of registers and workbooks				
29. Large group of students in class where individualised learning is limited				
30. Inability to concentrate in the studies				
31. Teaching strategies				
32. Transition from high school to tertiary institution				
33. Lack of integration of theory to practice				
34. Not studying and preparing enough for tests, formative assessment and examination				
35. Appalling living conditions at nurses home				
36. Unbearable noise levels				

Accompaniment in clinical area

KEY	SA 1	A 2	D 3	SD 4
STATEMENTS				
37. Effective accompaniment by nurse educators in practical area				
38. Less accompaniment by nurse educators in practical area				

39.Lack of enough exposure in clinical settings				
40.Lack of adequate accompaniment to clinical areas by nurse educators				
41.Overcrowding in one unit in practical area due to large numbers of student nurses				
42.Lack of adequate time for filling of registers and workbooks				

Mentoring and guidance

KEY	SA 1	A 2	D 3	SD 4
STATEMENTS				
43.There is not enough mentoring of student nurses by nurse educators				
44. There is not enough mentoring of student nurses by nurse educators due to large numbers of student nurses				
45.There is no adequate individualised care of student nurses due to large group in classrooms				
46.Lack of access to computers				
47.Lack of data projectors				
48.Lack of adequate library				
49.Lack of adequate study centre				
50.Lack of models to practice procedures				

Supervision

KEY	SA 1	A 2	D 3	SD 4
STATEMENTS				
51.Lack of adequate supervision from nurse educators in theoretical area				
52.Lack of adequate supervision from nurse educators in practical area				

Student counselling and support

KEY	SA 1	A 2	D 3	SD 4
STATEMENTS				
53.There is support services for student nurses				
54.Remedial teaching to student nurses who are not performing well in their studies				
55.Counselling to student nurses with learning difficulties				
56.Counselling of student nurses with psychosocial and physical problems				

SECTION C. FACTORS CONTRIBUTING TO ACADEMIC FAILURE RELATED TO RESOURCES AND EQUIPMENT

KEY:

1 = (SA) Strongly Agree

2 = (A) Agree

3 = (D) Disagree

4 = (SD) Strongly Disagree

KEY	SA 1	A 2	D 3	SD 4
STATEMENTS				
57.Lack of access to internet				
58.Lack of books in library				
59.Lack of facility equipment				
60.Lack of access to computers				
61.Lack of data projectors				
62.Lack of adequate library				
63.Lack of adequate study centre				
64.Lack of models to practice procedures				
65.Availability of computer lab				

APPENDIX 7: QUESTIONNAIRE FOR NURSE EDUCATORS

RESPONDANT CODE

INSTRUCTION:

Kindly complete this questionnaire with an "X" in the space of box provided

SECTION A: DEMOGRAPHIC DATA

VARIABLES

1. Age

20-25	
26-30	
31-35	
36-40	
41-45	
46-50	
51-55	
56-60	
61-65	

2. Gender

Male	1
Female	2

3. Highest qualification passed

Diploma in Nursing Education	1
BA Cur Degree	2
BA Cur Honours Degree	3
MA Cur Degree	4
PHD Degree	5

4. Level of facilitation

Level I	1
Level II	2
Level III	3
Level IV	4

5. Years of teaching experience

0-5 years	1
6- 10	2
11-20	3
20 and more	4

6. Subject currently facilitating

Biological & Natural Sciences	1
Community Nursing Science	2
General Nursing Science	3
Midwifery Science	4
Psychiatry Nursing Science	5
Social Sciences	6

SECTION B: FACTORS RELATED TO NURSE EDUCATORS

KEY:

1 = (SA) Strongly Agree

2= (A) Agree

3 = (D) Disagree

4= (SD) Strongly Disagree

Empowerment and support by management

KEY	SA 1	A 2	D 3	SD 4
STATEMENTS				
7.Increase failure rate of student nurses has a negative image of the college				
8. Overcrowded classes due to large number of students making it difficult to facilitate effective learning				
9.Poor interpersonal relationships between students and nurse educators				
10.There is lack or minimal support from college management				
11.Shortage of nurse educators				
12.Lack of incentives to motivation				
13.Open communication exists in the management and nurse educators				
14.Information is shared up and down according to the hierarchical line in the organization				
15.Nurse educators are conversant with curricula and orientated to new policies				
16.Team meetings are efficiently conducted				
17.The college adopts coaching, guiding and mentoring leadership style				
18.College management provides the support needed				
19.College management acknowledges autonomy of nurse educators				

20.College management promotes good cooperation				
21.Top Management supports the academic advancement of nurse educators				
23.Innovative proposals are welcomed by the college management				
24.Nurse educators are able to handle work overload				
25.Nurse educators are satisfied and fulfilled with their work				
26.Nurse educators are free to voice out their frustrations without being afraid of victimization by the management				

Student co-operation

KEY	SA 1	A 2	D 3	SD 4
STATEMENTS				
27. Effective time management				
28. Lack of commitment in student studies				
29. Purchasing of prescribed books				
30. Absenteeism in both theory and practice				

Accompaniment in practical area

KEY	SA 1	A 2	D 3	SD 4
STATEMENTS				
31. Lack of adequate time for accompaniment of students in clinical setting				
32. There is time to do accompaniment of student nurses in clinical area				
33. There are no clinicians and preceptors currently				
34. There is shortage of nurse educators in the campuses of the college				

Theoretical area

KEY	SA 1	A 2	D 3	SD 4
STATEMENTS				
35. Increase failure rate of student nurses has a negative image of the college				
36. Overcrowded classes due to large number of students				
37. Poor interpersonal relationships between students and nurse educators				
38. There is positive attitude of students to nurse educators				

Workload and shortage of nurse educators

KEY	SA 1	A 2	D 3	SD 4
STATEMENTS				
39. Less quantity of nurse educators in disciplines				
40. Due to shortage of nurse educators there is work overload				

SECTION C. FACTORS CONTRIBUTING TO ACADEMIC FAILURE RELATED TO MATERIAL RESOURCES AND EQUIPMENT USED IN CLASSROOMS AND DEMONSTRATION ROOMS

KEY:

- 1 = (SA) Strongly Agree
- 2 = (A) Agree
- 3 = (D) Disagree
- 4= (SD) Strongly Disagree

KEY	SA 1	A 2	D 3	SD 4
STATEMENTS				
41.Inadequate teaching facilities				
42.Lack of access to internet				
43.Lack of books in library				
44.Lack of facility equipment				
45.Lack of laptops				
46.Lack of data projectors				
47.Lack of models to demonstrate procedures				
48.Availability of computer lab				
49. There are no preceptors and clinicians to mentor, guide students on how to perform different procedures and develop skills in practical setting				
50.The college provides materials and equipment sufficient for effective facilitation of learning				

APPENDIX 8: CONSENT FORM

CONSENT FOR PARTICIPATING IN A STUDY

I have been asked to participate in the research study to be conducted **by Neshunzhi N.D, contact numbers:**

082 536 2600 / 083 476 3406

The title of the research is: **STRATEGIES TO ENHANCE GRADUATE THROUGHPUT OF STUDENT NURSES IN LIMPOPO COLLEGE OF NURSING, SOUTH AFRICA.** The aim of the study and my rights to participate were explained to me as well as my rights to terminate participation.

I understand that the benefits from participating in this study will help the students, nurse educators, Department of Health and the Limpopo College of Nursing to improve on provision of nursing education on student nurses who are affected. While the affected students will be able to identify the contributory factors of academic failure, use the different coping strategies in their learning, where and when to seek help.

I was assured of the confidentiality of the information I will provide and that research will be used to identify my responses from those of other student nurses and other nurse educators. No information will be linked to my personal details. I understand that my refusal to participate will involve no penalty or loss of privilege to which I am entitled to. I may withdraw from the study at any time without fear of losing any services or benefits.

The study is the requirement for Master of Nursing Degree at the University of Limpopo.

Signature of participant.....date.....

Signature of researcher.....date.....