

**A SURVEY OF THE ASSESSMENT OF CLINICAL LEARNING IN
SELECTED NURSING EDUCATION INSTITUTIONS IN
KWAZULU-NATAL WITHIN AN
OUTCOMES-BASED EDUCATION (OBE) CONTEXT**

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MASTER'S IN NURSING (EDUCATION)**

BY

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SEPTEMBER 2003

DECLARATION

I, Sindisiwe Zamandosi Mthembu, declare that this dissertation titled “**An analysis of the assessment of clinical learning with an OBE context in selected nursing education institutions in KwaZulu-Natal**” is my original work. It has never been submitted for any other purpose, or at any other university. Sources of information utilised in this work have been acknowledged in the reference list.

Signature: 

Date: ... 

DEDICATION

THIS DISSERTATION IS DEDICATED TO :

**MY FAMILY, THE CELE AND MTHEMBU FAMILIES AND ALL THOSE
WHO HELPED ME BELIEVE IN MYSELF
AS I PERSEVERED TOWARDS A GOAL THAT WAS ONCE ONLY A
DREAM.**

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May God bless each one of them...

ABSTRACT

Assessment of clinical learning as a process for determining competence in practice is one of the underpinning principles of establishing and measuring student progress in nurse education. Literature reviewed for this study revealed that assessment of clinical learning in nursing education has been a problem for many years in the profession and it still is even today. This study was therefore aimed at investigating the current methods of assessing clinical learning used in nursing education institutions specifically as these relate to the South African Qualification Authority (SAQA)'s call for applied competence.

The study was an exploratory descriptive survey. Data were collected through the use of questionnaires. Questionnaires were mailed to those institutions that were not easily accessible owing to their geographic location and questionnaires were delivered by the researcher to the geographically accessible institutions. All nurse educators employed in five nursing colleges, two university nursing departments and one technikon in KwaZulu-Natal (KZN) were asked to participate in the study. The total number of nurse educators in the above-mentioned institutions was 195. The return rate of completed questionnaires was 56%.

The results of this study revealed that the Objective Structured Clinical Examination (OSCE) and continuous clinical assessments were the two methods currently most commonly used in nursing education for assessing clinical learning. The results also revealed that triangulation of assessment methods of clinical learning was prevalent in nursing education institutions, with the OSCE and continuous clinical assessments being the most favoured combined strategies in assessing clinical learning. Very few participants mentioned the non-traditional clinical assessment methods (such as

the triple jump and portfolio assessments) as strategies of assessing clinical learning that were used in their institutions.

This study also revealed that continuous clinical assessment as a method of assessing clinical competence allowed nurse educators to assess applied competence and was generally believed to provide a more valid, reliable and realistic form of assessment. Continuous clinical assessments were also favoured for their authenticity because they were undertaken in a real clinical setting. Within the era of outcomes-based education, the focus in assessment moves from judgemental assessment methods to developmental assessments with extra emphasis on authentic and integrated assessment methods.

LIST OF ABBREVIATIONS

1. ETQA Educations and Training Quality Assurance
2. FECU Further Education Curriculum Unit
3. KZN KwaZulu-Natal
4. NQF National Qualification Framework
5. OBE Outcomes-Based Education
6. OSCE Objective Structured Clinical Examination
7. RLJ Reflective Learning Journal
8. SANC South African Nursing Council
9. SAQA South African Qualification Authority
10. SPSS Statistical Package for Social Science
11. TJE Triple Jump Exercise

TABLE OF CONTENTS

DECLARATION.....	(ii)
DEDICATION.....	(iii)
ACKNOWLEDGEMENTS.....	(iv)
ABSTRACT.....	(v)
LIST OF ABBREVIATIONS.....	(vii)
TABLE OF CONTENTS.....	(viii)
LIST OF TABLES.....	(xiii)
LIST OF FIGURES.....	(xiii)
LIST OF APPENDICES.....	(xiii)

CHAPTER ONE

INTRODUCTION

Background of the Study	1
Problem Statement	6
Objectives of the study	8
Significance of the Study	9
Definition of Concepts	9
Outcome-based education	9
Integrated assessments	10
Clinical assessments	10

Clinical learning	10
Authentic assessment	11
Learning outcome	11
Competence	12
Performance	12

CHAPTER TWO

LITERATURE REVIEW

Introduction	13
Assessment in OBE	16
Criterion-referenced assessment	17
Norm-referenced assessment	17
Strategies and/or approaches to Assessment of Clinical Learning	19
Objective Structured Clinical Examination	19
Observation-based Assessment	22
Checklist	24
Rating scale	24
Triple Jump Exercise	27
The three steps of triple jump exercise	28
Portfolio assessment	30
Summary.....	33

CHAPTER THREE
RESEARCH METHODOLOGY

Introduction	35
Study Design	36
Selection of Participants	36
Data Collection and Instruments	37
Reliability and Validity of Instruments	38
Data Analysis	39
Ethical Considerations	40
Limitations	41

CHAPTER FOUR
PRESENTATION OF THE MAIN FINDINGS OF THE RESULTS

Introduction	42
Population and Sample Realization	42
Salient Characteristics of Study Participants	43
Categories of Personnel Involved in Clinical Assessment	48
Involvement of Nurse Educators in Assessment of Clinical Learning	50
Common Methods of Assessment of the Clinical Learning Outcomes	50
Percentage of the Final Grade Constituted by the Clinical Learning Outcome in the Courses Provided.....	52
Assessment Methods and Practical Competence	53
Assessment Methods and Foundational Competence	53

Assessment Methods and Reflective Competence54

Problem Associated with the Assessment Methods Currently Used in Assessment of
Clinical Learning55

Ability of the Assessment Methods Used for Courses Offered to be a True Reflection
of the Student’s Clinical Learning57

Transparency of the System of Clinical Assessment Method Used for Students57

CHAPTER FIVE

DISCUSSION, CONCLUSION AND RECOMMENDATIONS

Introduction59

Categories of People Involved in Clinical Assessment59

Commonly Used Methods of Clinical Assessment60

Continuous clinical assessment.....60

The OSCE.....62

Triangulation of assessment methods.....63

Perceptions of Nurse Educators with Regards to the Clinical Assessment Method
Used65

Assessment methods and practical competence65

Assessment methods and foundational competence66

Assessment methods and reflective competence66

Problems Associated with the Assessment Methods Currently Used in Assessment of
Clinical Learning67

Conclusion70

Recommendations70

References73

LIST OF TABLES

TABLE 1 : An Example of a Checklist	25
TABLE 2 : An Example of a Rating Scale.....	26
TABLE 3 : Age Distribution of Respondents	43
TABLE 4 : Pre-registration Educational Qualifications of Nurse Educators	44
TABLE 5 : Teaching Qualifications of Nurse Educators	45
TABLE 6 : Basic Clinical Subjects Taught by Nurse Educators	46
TABLE 7 : Post-basic Clinical Subjects Taught by Nurse Educators	47
TABLE 8 : Commonly Used Methods of Assessing Clinical Learning	51
TABLE 9 : Triangulation of Assessment Methods	52

LIST OF FIGURES

FIGURE 1 : Categories of Personnel Involved in Clinical Assessment	49
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APPENDICES

APPENDIX A : Request for Permission to conduct a study.....	79
APPENDIX B : Permission for Research Study.....	83
APPENDIX C : Research Questionnaire.....	87
APPENDIX D : Covering Letters.....	95

CHAPTER ONE

INTRODUCTION

Background of the Study

The clinical learning experience of student nurses is an important and integral part of all pre-registration and post-registration preparation, training and education programmes. Clinical learning is described by McCabe (1995) as the heart of professional education as it provides students with the opportunity to consolidate knowledge, socialize into professional roles and acquire professional values. Students' competence in clinical learning is an important component of nursing education. Its assessment is thus of great importance, as it is the reflection of the quality and quantity of learning and shows students' progress and standards of attainments. This assessment, however, has always been a problem and a controversial area in nurse education (Wooley, 1977) and it continues to be so (Nicol, Fox-Hiley, Bavin & Sheng, 1996). Assessment of students' clinical performance thus requires that what is valued is identified, that criteria and standards for performance be delineated, and that reliable and valid means for measuring attainment of standards be developed.

Clinical assessment is described by Mellish, Brink and Paton (1998) as the method to determine whether students are becoming clinically competent in the practice of nursing. Quinn (1995) further describe clinical assessment as a process of obtaining information for making judgment about the learner's performance in the clinical setting. Through assessment, information is provided to determine student progress toward goal attainment, identify learning needs and propose strategies for improving student learning (Mellish,

Brink & Paton, 1998). This assessment takes place outside the formal didactic situation in a real or simulated practice setting or in an actual clinical practice (Ewan & White, 1995).

The assessment of clinical performance is outcome oriented and the goal is to assess the effectiveness of knowledge and skill in the practice setting (Boud, 1990). The primary reason for assessment procedures, as highlighted by Boud (1990), are to facilitate student learning, to enable students to become reflective practitioners and to provide formal accountability and accreditation of knowledge. Quinn (1995) further state that all types of student assessment should aim at assessing student performance in relation to the aims of the particular programme in question. Clinical assessment must be regarded as an integral component of the teaching and learning process, and not simply a means of measuring attainment and it must encourage the student to undertake self-assessment and reflection on their learning thus serve as a source of feedback to students about progress being made (Quinn, 1995). The main method of assessing clinical competence is by observing the students' performance. This observation is usually combined with some form of checklist or rating scale that serve as a guide for the assessors.

In 1998, South Africa (SA) adopted a new approach in education that is premised on outcomes-based education (OBE). This new approach is described in terms of active learners, assessment on an ongoing basis, critical thinking, reasoning, reflection and action, an integration of knowledge, learning which is relevant and connected to real-life situations, learner-centredness, self-directedness and emphasis on what the learner becomes and understands (Department of Education, 1997).

OBE stands in direct contrast to the previous approach to education in SA. It rejects the very roots of the previous traditional curriculum. The traditional educational

curriculum had its emphasis on teacher-centredness, discipline and one-directional transmission of knowledge, that is, from the teacher to students (Claassen, 1998).

Traditionally teachers have been all powerful in assessment processes. They decided what was to be assessed, how it would be assessed and what criteria would be used and they would judge which students had met the standards. Learners were not involved. With the new curriculum, effective and informative assessment practice is student-centred, there is cooperative interaction between the teacher and the learners and among the learners themselves. One of the basic tenets of OBE is that the syllabus outcomes and the assessment processes to be used should be made explicit to learners, and that learners should participate in the negotiation of learning tasks and actively monitor and reflect upon their achievements and progress (Claassen, 1998; Department of Education, 1997).

Within the context of OBE, the South African Qualification Authority (SAQA) defines assessment as the process of collecting evidence of learners' work to measure and make judgments about the achievement or non-achievement of specified National Qualification Framework (NQF) standards and/or qualifications (SAQA, 1995). SAQA recommends the use of integrated assessment. Integrated assessment refers to that form of assessment that permits the learner to demonstrate applied competence. Applied competence, on the other hand, refers to practical skills, application of theoretical knowledge, attitudes, personal development and experience that one applies or will apply in the workplace. Integrated or comprehensive approaches seek to combine knowledge, understanding, problem solving, technical skills, attitudes and ethics in assessment (SAQA, 1995).

Integration is achieved by using methods that assess a number of elements and their performance criteria simultaneously. According to SAQA (1995), integrated assessment refers to (a) assessing a number of outcomes together, (b) assessing a number of assessment criteria together, (c) assessing a number of unit standards together, (d) using a combination of assessment methods and instruments for an outcome/outcomes, (e) collecting naturally occurring evidence (authentic) such as in a workplace setting and (f) acquiring evidence from other sources such as supervisors' reports, testimonials, portfolios of work previously done, logbooks, journals and others.

According to SAQA (1995), where possible, assessments should make use of naturally occurring performance because this provides authentic evidence of a learner's skills. Authentic assessment refers to any type of assessment that requires students to demonstrate skills and competencies that realistically represent problems and situations likely to be encountered in daily life (Hart, 1994). In authentic assessment, students are assessed according to specific criteria that are known to them in advance. Hart (1994), further states that students are required to produce ideas, to integrate knowledge and to complete tasks that have real-world application. Friedman (2000) asserted that assessment methodology should focus on creating authentic environments that assess multiple dimensions of performance as they are carried out in real life. According to Wiggins (1990), assessment is authentic when student performance on worthy intellectual tasks is directly examined. Authentic assessments are designed not only to be assessment tools but also to be exercises through which students explore their understanding of a topic and apply that knowledge (Friedman, 2000; Wiggins, 1990). Such assessments are student centered, engaging and educational (Hart, 1994).

Gerber (1996), states that OBE defines assessment as a formative and/or summative determination of a learner's competence in demonstrating a specified outcome. In agreement with SAQA, she/he further asserts that assessment of students' achievements should adopt more comprehensive methods for assessing learning.

With the transformation of the Health and Education Systems in South Africa, the South African Nursing Council (SANC) emphasizes teaching and learning strategies that will enhance student-centered education and training that will focus on health care needs/problems of individuals, families and communities as the main method of acquiring knowledge (SANC, 1999). This emphasis has caused a number of nursing education institutions to reconsider their nursing curricula and they have introduced innovative methods of education, for example, Community-Based Education, Problem-Based Education, Case-Based Education, and others. This transformation in education calls for relevant methods of assessment of learning congruent to the methods used in teaching (SANC, 1999).

Literature review reveals that owing to the lack of quality evaluation and assessment methods, students' clinical assessments have been a problem for both medical and nursing education (Gibbons et al., 2002; Nicol et al., 1996; While, 1991; Wooley, 1977). According to Hawranik (2000), this dilemma of clinical evaluation and assessment of nursing students has been debated throughout the history of nursing education. Fair and accurate assessment of students' performance is the goal of all nurse educators, although, it remains one of the most elusive components of nursing education. Pavlish (cited in Hawranik 2000), points out that one of the difficulties in clinical assessment in nursing

education stems from the fact that educators try to observe in an objective manner to make subjective decisions and then often defend those subjective decisions with objective data.

Gibbons et al. (2002), further state that nurse educators have struggled with fair clinical assessments and have attempted many techniques to address creatively the challenges of graduate-level clinical nursing education. Most clinical teachers lack confidence in clinical performance assessments as the principal method for making judgments about clinical competence. Clinical assessment methods are considered subjective, unreliable, logistically difficult and time consuming, despite their potential validity (Gibbons et al., 2002).

Bujack, McMillan, Dwyer and Hazelton, (1991), point out that the evaluation and assessment of safe and comprehensive nursing performance requires the consideration of a much broader range of practice competencies than has previously been the case with traditional education methods. They further state that in particular there is a need to explore integrated assessment approaches. According to Bujack et al. (1991), assessment methods should be able to accommodate a range of competencies. Integrated assessment methods allow students to integrate a range of knowledge and skills and to demonstrate the use of these in planning, implementing and evaluating care given to patients.

Problem Statement

Outcomes-based education requires learners to demonstrate what they really know, are able to do and appreciate. According to OBE, assessment guides (a) the curriculum development, (b) learning and teaching and (c) the supply of learning experiences. It is performance-based and is criterion-referenced. Assessment criteria, therefore, must reflect

the kinds of evidence that will be required to demonstrate that a specific (learning) outcome has been achieved and these are linked via a specific outcome and are measurable (Gerber, 1996).

Similarly, Claassen (1998) maintains that an outcome is not merely a mark but a demonstration of competence. A learning outcome is the end product of a learning process. Gerber (1996) describes learning outcomes as clear, observable demonstrations of student learning that occur after a significant set of learning experiences. These demonstrations or performances reflect (a) what a student knows and is competent to do, (b) what the student can actually do with the competencies, (c) what he or she knows and (d) the student's confidence and motivation in carrying out the demonstration (Gerber, 1996).

Over the years, nurse educators have struggled to identify and design 'reliable' and 'valid' strategies for assessing clinical competence. Traditionally, these have included observation-based assessments and the Objective Structured Clinical Examination (OSCE). Literature abounds, however, on the inadequacies of both the OSCE and observation-based assessments as reliable and valid strategies for assessing clinical competence (Chabeli, 2001; Harden & Gleeson, 1990; Mellish et al., 1998; Nicol & Freeth, 1998). With the introduction of OBE and the demand for change in education in SA, nursing education included, emphasis has been placed on the teaching/learning process. Very little or no attention has been paid to the evaluation of clinical learning, and specifically, the implications of OBE for the assessment of clinical performance in nursing education. Polit and Hungler (1997) maintained, "the problem statement should identify the key study variables, which should be amenable to observation and measurement, and the nature of the population of interest" (p. 81).

These authors further differentiated between two forms of problem statements, the declarative and the interrogative forms. The declarative type of statement is a declaration of what the study intends to achieve, whereas the interrogative type is stated in the form of a research question. In the context of this study, the declarative form is used.

The purpose of this study is then to examine current practices in the assessment of clinical learning in nursing education, specifically as these relate to SAQA's call for integrated assessment and applied competence.

Objectives of the Study

This study seeks to:

1. Identify commonly used strategies for assessment of clinical learning in nursing education;
2. Analyze the views of nurse educators regarding the congruence of current practices in the assessment of clinical learning with the principles of integrated assessment; and
3. Identify the strengths and the weaknesses of clinical assessment strategies currently being used in nursing education in assessing practical competence, foundational competence and reflective competence.

Significance of the Study

Since literature reveals that there are few research studies in this field (Gibbons et al., 2002; While, 1991), it is believed that this study could make a contribution to nursing education by highlighting current practice in clinical assessment, and in so doing make

explicit aspects of assessment of clinical learning that need to be improved in order to achieve the goals of integrated assessment.

The results of this study have potential to benefit nurse educators and nursing students because if recommended improvements or changes are implemented then the quality of clinical assessments should also improve. It is essential for nursing education to facilitate and encourage empirical work in the assessment of clinical learning.

Currently, training of assessors in nursing education is required by SAQA and SANC. According to SAQA (1998) and SANC (2002), every institution of education should have at least two trained assessors who are registered with the Education and Training Quality Assurance body (ETQA). This study should help by focusing on that training, specifically because assessment is a contested requirement in nursing education.

Definition of Concepts

Outcome-based education. Outcome-based education is a term used to imply that everything (curriculum design, instructional planning, teaching, assessment and advancement of learners) will be designed and organized around the intended learning demonstrations at the end of the learning programme, hence it focuses on the desired end result of education (Department of Education 1997). According to Oliver (1999), OBE concerns a shift from teacher inputs (what teachers do) to learner outcomes (what the learners know and can do). An outcome is the specification of what learners are able to do at the end of a learning experience (Department of Education 1997). OBE is a learner-centred, activity-based approach to teaching that encourages the development of learners as creative, critical and independent-minded individuals who are at home in team activities,

which are designed to build their all-round growth as assertive individuals (Claassen, 1998).

Integrated assessments. Integrated assessments are those that seek to combine knowledge, understanding, problem solving, technical skills, attitudes and ethics in assessment (Hager, Gonczi & Athanasou, 1994). Hager et al. further state that theory and practice are combined in integrated assessment and are problem oriented, embracing professional practice, covering groups of competencies, focusing on common circumstances, demanding analytical abilities and combining theory and practice. Integrated assessments have to be built into curricula in such a way that they can contribute powerfully to student learning, as well as serve the needs of summative certification (Hager et al., 1994; SAQA, 1995).

Clinical assessment. Clinical assessment, according to Quinn (1995), is the process of obtaining information for making a judgment about the learner's performance in a clinical setting. Through the process of assessment, information is provided to determine student progress toward goal attainment, to identify learning needs and to propose strategies for improving student learning (Quinn 1995).

Clinical learning. Clinical learning is learning which occurs in settings similar to those in which the student will eventually work (Ewan & White, 1995; Mellish et al., 1998). It is defined by McCabe (1995), as a totality of directed activity in which students engage in nursing practice with consumers to meet their health needs. Through clinical

learning experiences students (a) are socialized to the role of the professional nurse and to nursing, (b) develop commitment and accountability, (c) learn decision making and time management and (d) learn to set priorities and understand patient experiences (McCabe, 1995; Mellish et al., 1998).

Authentic assessment. Authentic assessment is the type of assessment strategy which reflects as much as possible, real world performance conditions and which assesses student performance under those conditions (Hart, 1994). Authentic assessment addresses the skills and abilities needed to perform actual tasks. According to Friedman (2000), in authentic assessment students are required to produce ideas, to integrate knowledge, and to complete tasks that have real-world application.

Learning outcome. Gerber (1996) describes learning outcomes as clear, observable demonstration of the students' learning that occur after a significant set of learning experiences. Similarly, Claassen (1998) maintains that an outcome is not merely a mark but a demonstration of competence. According to SAQA (1995), a learning outcome is what a person must know, understand and be able to do after successfully learning something. In other words, outcomes explain the skills, knowledge and values that will be assessed. All qualifications and standards will state what outcomes of learning should be. The NQF recognizes two types of outcomes – the specific outcomes, which are linked to a learning field, and the critical cross-field outcomes, which are broader than any specific learning field (SAQA, 1995). A learning outcome is therefore a demonstrable and assessable end product of a learning process.

Competence. Competence is defined by the Further Education Curriculum Unit (FECU) (cited in Quinn, 1995), as the possession and development of sufficient skills, knowledge, appropriate attitudes and experience for successful performance in life roles. It is the demonstration of skills that reflect learning at the higher levels of the cognitive, affective and psychomotor domains (Scheetz, 2001). It is demonstrated by the ability of the student to utilize the skills of problem solving, to apply theory to practice and to perform psychomotor skills in a particular context. It is therefore what someone knows, understand and can do.

Performance. Performance is defined by Hager and Butler (1996) as a higher level of integration of knowledge and skills. It is a student's active generation of a response that is observable either directly or indirectly. According to Scheetz (2001), the concepts of clinical performance includes the actual observable behavior expected of a practicing clinical nurse, that is, the way in which a nurse carries out the tasks or duties expected of her reflects her clinical performance. Performance assessment is the direct systematic observation of an actual student performance and the rating of that performance according to previously established performance criteria. This type of assessment ask student to express their learning and knowledge through practical demonstration or action (Scheetz, 2001).

CHAPTER TWO

REVIEW OF LITERATURE

Introduction

The primary aim of nurse education is to provide education that will equip nurses and midwives to maintain and develop their competence as practitioners of nursing. Assessment in education and training thus plays an important role in collecting evidence of the learner's work, so that judgments about the learner's achievement, or non-achievement can be made and decisions arrived at (Mellish et al., 1998). Clinical assessment is thus critically important because competency in practice ultimately will determine the future of advanced nursing practice. SAQA (1995) further asserts that as assessment is central to the recognition of achievement, the quality of the assessment is therefore important to provide credible certification. Based on the SAQA (1995), assessment is defined as:

“The structured process of identifying, gathering and interpreting evidence about a learner's achievement in order to assist the learner's development, improve the process of learning and teaching and make judgments about the learner's achievement of outcomes in relation to registered national standards and qualifications” (p. 6).

Assessment in outcome-based education thus emphasizes outputs or end products, in the form of outcome and competence. These are measured by means of assessment criteria, which measure applied competence (Oliver, 1999). Competence in SAQA terms is applied competence that is the union of practical, foundational and reflective competence. Practical competence refers to the demonstrated ability to perform a set of tasks and

actions in authentic contexts. Foundational competence is the demonstrated understanding of what one is doing and why one is doing it. Reflective competence is the demonstrated ability to integrate one's performance with one's understanding so that one is able to adapt to changed circumstances and explain the reason behind those adaptations (SAQA, 1995). According to Nicol and Freeth (1998), one shows competence when she/he is able to combine the use of the skills, information and understanding necessary to a particular learning situation, and the essential outcomes at a required level of performance.

The primary reasons for assessment procedures, as highlighted by Boud (1990), are (a) to facilitate student learning, (b) to enable students to become reflective practitioners and (c) to provide formal accountability and accreditation of knowledge.

The principles upon which all evaluation or assessment should be based, as stated by Mellish et al. (1998) are that (a) assessment should be in terms of the objectives (the desired outcomes) of the educational program, (b) it must be in terms of observed student behavior, (c) criteria must be defined and be possible to observe, (d) it should be a continuing process, (e) it should take into consideration the stage of growth and development that the student has reached, (f) it should include all who participate in the educational program, so that prejudice on the part of one person can be avoided and (g) valid measuring instruments should be used, that is they must measure accurately what they are intended to measure (Mellish et al., 1998).

The ideal procedure for assessing clinical competence, according to Sibert et al. (2001), should take into consideration and fulfill the criteria of practicability, validity and reliability. According to Mellish et al. (1998), practicability refers to ensuring that assessments take into account the available financial resources, facilities, equipment and

time. Assessments that require elaborate arrangements for equipment and facilities, as well as being costly, will make the assessment system fail. Validity, on the other hand, means that the strategy needs to meet constantly the performance objectives of the skills. The tool must measure accurately what it is intended to measure. According to Benett (1993), validity contains two distinct components, the intention of the assessor and the nature of what is to be assessed. Thus an assessment method is said to be valid if it assesses what it is intended to assess (Benett, 1993). In the context of practical learning, reliability means that the tool must measure the same procedure consistently when used by a wide range of assessors and the same results should be obtained by different assessors (Mellish et al., 1998; SAQA, 1995). Benett (1993) is of the same view, referring to reliability as the consistency of marks obtained by the same individual when reassessed with the same test, on different occasions, or with different sets of equivalent test items, or under other variable assessment conditions.

Another underlying idea is that assessment, teaching and learning should be integrated (Department of Education, 1997; SAQA, 1995). This integration helps to focus all the educational processes on learning outcomes. Learning outcomes describe what learners should know and be able to do (SAQA, 1995).

Assessment is not seen as the end product of teaching and learning, but rather as a continuous process that provides feedback to the student and the teacher about the teaching and learning outcomes. Assessment should therefore aim to be authentic in the sense that it integrates the teaching and/or learning context as closely as possible to the real world. This principle according to Oliver (1999) refers to a holistic (rather than an atomistic) approach to learning and to the integrated nature of assessment activities. Welch (cited in Oliver,

1999) adds to the above by stating that the principle of 'integratedness' is also linked to the notion of authentic assessment. Ultimately, learning should enable students to function in the real world. Assessment is therefore part of and contributes to the learning process.

Assessment in OBE

According to Claassen (1998), the way of assessing learning achievements is inextricably linked to the characteristics of the curricula. If the curricula are content-based the assessment will focus on mastering content and if curricula are problem- and competency-based, then assessment will focus on mastering of competencies and problem solving. He/she further states that the curriculum design for OBE is learner-centered and problem-oriented as opposed to the subject-centered and content-centered design of the traditional curriculum. The problem-oriented approach in learning adopts a more self-directed approach to learning with a view to develop critical thinking skills, the ability to analyze and synthesize, to reflect, to problem-solve and to work in a team (Oliver, 1999). Since OBE is a transformational perspective on the curriculum, this transformational perspective should be also evident in assessment procedures. Claassen (1998) maintains that OBE means that education should always be outcome based. Because OBE requires learners to demonstrate what they really know and are able to do and appreciate, there is less competition between individuals and more emphasis on cooperative teamwork (Claassen, 1998). Claassen further states that, according to OBE, the outcomes that are assessed in an examination are measurable or observable skills, knowledge and values that learners have demonstrated at certain stages of their development. An outcome is thus not merely a mark, but a demonstration of a competence. Thus, criterion-referenced

assessment rather than norm-referenced assessment is preferred in clinical assessments (Claassen, 1998; Quinn, 1995).

Criterion-referenced assessment. Criterion-referenced assessment is an assessment of students conducted with reference to specified criteria for adequate or satisfactory performance. These criteria form the objective standards by which student performance is judged (Mellish et al., 1998). They further state that when this type of assessment is used, levels or criteria that have to be met are agreed upon, clearly defined and laid down, and the students will be then measured against these criteria. The object of criterion-referenced assessment is, according to Quinn (1995), that different assessors will give the same student the same rating because their assessment will be based on observation of performance that are compared with the established criteria.

Norm-referenced assessment. This is an assessment of students conducted with reference to the performance of the student's peers. Such an interpretation demonstrates that a student has more or less knowledge, skill, or ability than others in the group (Mellish et al., 1998). The level of performance of peers is used to set the standards and norms used in the assessment. The assessment is thus referenced to that of the norm group. This assessment uses the results of all students to determine the standard (Quinn, 1995).

The main difference between these two forms of referencing is that norm-referenced assessment means that the score obtained by the student is influenced by the performance of the group to which he/she is compared. Criterion referencing, on the other

hand, does not depend on any form of comparison with others, but only with achievement in relation to a specific criterion or standard.

With assessment in OBE, the focus moves from judgmental assessment methods to continuous developmental assessments (Oliver, 1999). Continuous assessment means continuous planned process of gathering information about the performance of students measured against the assessment standards. The assessment standards describe the minimum level, depth and breadth of what is to be learnt (SAQA, 1995). Furthermore, Oliver (1999) maintains that the nature and extent of assessment now becomes more diagnostic, in order to guide, redirect and assure students of their progress. Outcome-based assessment implies not only the assessment of knowledge and skills but also the application or employment thereof in order to achieve the outcome (Claassen, 1998; Oliver, 1999).

The basic principle of assessment in OBE is that students must demonstrate that they have achieved a particular outcome or a group of outcomes before they are considered competent in relation to that piece of learning (Van Niekerk & Killen, 2000). Traditionally, assessing and testing students involved some form of examination and the allocation of marks and/or grades. This assessment and reporting was dominated, according to Van Niekerk and Killen (2000), by the teacher's interpretation of the object of knowledge and of the evidence that students produced to demonstrate their learning. But with OBE, students have to be asked to produce some evidence that they understand the nature of learning and teachers have to report their interpretations of this evidence (Van Niekerk & Killen, 2000). Evidence acquired can be evidence such as supervisor's reports, testimonials, portfolios of work previously done, logbooks, journals, etc. Therefore

assessment should be an integral component of instruction and should, as far as possible, be authentic. These assessments according to Wiggins (1990) are highly individualized and highly reflective of an individual student's learning and professionalism.

Strategies and/or Approaches to Assessment of Clinical Learning

A number of strategies and/or approaches to assessing clinical learning in nursing education have been in existence and in use over the years. For example the OSCE, direct observation, and others.

With the advent of problem-based learning and emphasis on performance evaluation, portfolios and the triple jump exercise have gained acceptance in nursing education as “valid”, if not “reliable” assessment approaches. This section of the study will therefore, focus on a brief review of literature on these approaches.

✱ Objective Structured Clinical Examination

The OSCE is a method of assessing a student's clinical competence, which is objective rather than subjective, and in which the areas tested are carefully planned by the examiners (Harden & Gleeson, 1990). It is a composite of many single observational assessments of clinical performance and competence. It has its origin in medicine. In nursing education it was developed and used as a powerful instrument or strategy for summative evaluation of clinical competence. OSCE is also known as OSCA, which is an acronym for Objective Structured Clinical Assessment. Harden and Gleeson state that the OSCE is the best-known and most widely researched development in clinical competency assessment pioneered by the medical profession.

The OSCE consists of clinical and static stations. Clinical stations assess a student's ability to perform a specified procedure e.g. physical examination, administration of oral medication etc. and in the static stations, also known as writing station, students answer short- answer questions. These stations can also be differentiated into examiner stations and marker stations. At the examiner stations an observer is asked to score a student's performance, usually entailing interaction with a standardized patient or situational problem. At marker stations a student is asked to write written assessment item that require subsequent marking. Mellish et al. (1998), state that the OSCE stations provide the clinical situations by which students are assessed. At each clinical station, the student is presented with a short patient scenario and is requested to demonstrate a clinical skill. The format of each station is tailored to testing one aspect of clinical competence. Similar views are shared by Bramble (1994), who pointed out that the OSCE is designed to assess a student's competence, with clinical skills that are tested broken down into various components. Testing stations both clinical and static, are allocated equal time. Static stations allow the examination of a greater number of students (Mellish et al., 1998).

According to Bramble (1994), students find the OSCE to be a stimulating and effective form of assessment, which assists them in learning clinical skills. It also helps students see clearly their performance ability and the need to think as opposed to memorization. Students also mentioned anxiety in the OSCE. "Students mentioned that it was scary, threatening, nerve racking and anxiety provoking" (Bramble, 1994; p. 87). Ross, Carroll, Knight, Chamberlain, Fothergill-Bourbonnaise and Linton (1988) in their research study of the OSCE found that the students' responses to the OSCE were positive; they perceived it to be a relevant and motivating factor for learning skills.

In her research study on nurse educators' perceptions of the OSCE as a clinical evaluation method, Chabeli (2001) found that the tutors were not clear about the principles guiding the management, execution, monitoring and evaluation of the OSCE. According to Gravett (cited in Chabeli, 2001), every clinical examination needs good administration with careful planning. The selection of a committee is mandatory. Mellish et al. (1998) stated that all forms of assessment and evaluation require careful planning, with consultation, testing, a review of previous examinations from time to time and alterations made according to the changing needs.

According to Chabeli (2001), a lack of human and material resources were perceived as a limitation of the OSCE. This limitation adds strain to the tutors and learners. Going from one department to another requesting necessary equipment or seeking staff to be evaluators is rather cumbersome. Mellish et al. (1998), argue that the OSCE can be very frustrating and stressful for learners and examiners, and suggest therefore that in all assessments, care should be taken to eliminate stress in learners as far as possible. Thoughtful planning and organization of any assessment is imperative. Nicol and Freeth (1998) are of the same opinion that the OSCE may have severe limitations that have an impact on the assessment of clinical nursing skills. These entail limited time for each situation, handling large numbers of learners, small venues and lack of equipment. Because of these constraints, Chabeli (2001) maintains that vital aspects of clinical competence may be omitted, resulting in the credibility of the OSCE as a method of clinical evaluation being questioned. In spite of the fore-mentioned problems regarding the OSCE, proponents argue that it is an objective (Harden & Cairncross, 1998), reliable (Verhoeven, 2000) and practical means of assessing clinical learning.

According to Harden and Cairncross (1998), objectivity in the OSCE is maintained in the sense that all students sit a similar examination and each will see a number of examiners. Examiners use checklists when marking a student's performance or his/her written answers. Reliability results from the large sample of competences and content assessed, from standardization of the examination so that all students have the same examination, and from increased objectivity brought about by the use of a checklist and the assessment of each student by a number of examiners. A major factor affecting the reliability of the OSCE, according to Verhoeven (2000), is the so-called case-specificity problem, that is, the variability in candidate's performance across stations. The OSCE must consist of a large number of stations to obtain reliable scores, which generally means that many hours of testing time are needed.

Observation – based Assessment

Observation-based assessment, in simple terms, means the assessment of a person's competence against prescribed standards of performance. It is the same as direct observation. The students' competence is determined through observing their ability to perform a given task or activity. It is also known as a 'glance and mark' method of assessing clinical competence. The assessment of learners' clinical competence in nursing education traditionally takes place in the demonstration/practical rooms within colleges of nursing or at the clinical placements (hospital wards). This approach, according to Nicol and Freeth (1998), ensures adherence to well-established clinical protocols, routine practices and atomistic, specific assessment and evaluation, characterized by a detailed list

of skills. Such an approach to education has proven to be inadequate and does not adequately equip graduates for future holistic practice in any discipline (Chabeli, 2001).

According to Quinn (1995), there are three major factors influencing observation-based assessment, the assessor, the student and the methodology. Quinn highlights the fact that assessors may be biased in their perception of a performance and this can take a number of forms. The 'halo' effect occurs when the assessor is influenced by the general characteristics of the student, that is, if given a good impression of the student, then the student is likely to be rated highly on the performance and if the impression is unfavorable, the reverse will occur. Another common factor is the central-tendency error, in which the rater gives everybody an average mark. The generosity error occurs when the rater gives a higher score than is warranted and the explanation for this is, according to Quinn (1995), the tendency to feel that our nursing role is to care for students, so this the assessor does unconsciously (Quinn, 1995). With the student, the main factors that influence assessment are the state of preparation, level of anxiety and the presence of others (Quinn, 1995).

The most commonly used instruments for measuring student performance during observation-based assessment are checklists and rating scales. According to Harden and Cairncross (1998), direct observation of the student performing a technical or an interpersonal skill in the real, simulated or examination setting would appear to be the most valid way of assessing such skills but unfortunately, the reliability of these observations, according to Harden and Cairncross, is likely to be seriously low. The use of checklists and rating scales was introduced to limit such unreliability in order to improve the method of scoring (Harden & Cairncross, 1998).

Checklist. A checklist is an instrument used in assessing observable behavior or performance. Mellish et al. (1998) explain that the aspects that are regarded as essential to a procedure are listed. When a student's performance is assessed or evaluated, each statement on the list is ticked off (marked) according to whether or not the student performed it. Mellish et al. (1998) further state that checklists are used for clinical skills that can be divided into a series of actions that are clearly defined and specific. This means that the list is drawn up with a series of questions. The marker will then tick YES for an action performed and NO if the action was not done and NOT APPLICABLE if in that particular set of circumstances the performance of that action was unnecessary (Mellish et al., 1998; Rines, 1974). A checklist may contain only the desired behaviors, or may also include the behaviors that constitute poor performance. That there is no means of indicating how well a behavior was carried out limits the usefulness of a checklists (Quinn, 1995). See Table 1 for an example of a checklist.

Using checklists in assessment of clinical learning ensures that training is based on a standardized procedure, that all participants will have their skills measured according to the same standard and forms the basis for follow up feedback or coaching and evaluation (Ewan & White, 1995; Mellish & Johnston, 1986). According to Bujack et al. (1991), checklists are the most effective tools of performance observation because components of performance can be specified in detail and in a sequence in which each action should occur.

Rating scale. Rating scales are also used to assess how well a student performs when carrying out a task, and are similar to checklists in that criteria against which students are rated or marked are laid down. The form used contains the criteria and the

rating scale must give different degrees of competence ranging from poor to excellent, from below average to superior, or simple figures. The person doing the assessment is then required to supply the appropriate degree or grade for the student's performance against each criterion (Mellish et al., 1998; Rines, 1974). Table 2 presents an example of a rating scale.

Table 1: An example of a checklist

	Yes	No	N/A
1. Care given to patients: 1.1. Good standard. 1.2. Poor standard.			
2. Attitude to patients: 2.1. Very good. 2.2. Insensitive to needs.			
3. Powers of observation: 3.1. Observant at all times. 3.2. Unobservant.			

Source: Mellish & Johnston, 1986.

A problem with the rating scales, according to Ewan and White (1995), is that as they provide a means for quantifying the observer's judgment they provide a false sense of

security. The numerical scores derived from rating scales can be subjective unless observers are trained to provide reliable judgments.

Table 2: An example of a rating scale

1	2	3	4	5
Very poor	Poor	Satisfactory	Good	Excellent

Source: Mellish et al. 1998

The use of checklists and rating scales in assessment of students is based, according to Clissold (cited in Krichaum, Rowan, Duckett, Ryden & Savik, 1994), on lists of student characteristics thought to influence performance. In a study done by Krichaum and colleagues on the measure of quality of clinical performance of nursing students, the students were assessed in the light of what Clissold (cited in Krichaum et al., 1994), referred to as “standards”, such as appearance, personality, articulateness, and stamina. Values were implicit in the elaboration of indicators used to describe desirable student characteristics. Personal traits were measured subjectively by the instructor, who decided which students met the expectations and which did not (Krichaum et al., 1994).

Rating scales come in many styles but the essential feature is that the observer is required to make a judgment along a scale, which may be continuous or intermittent. Rating scales are highly disliked for subjectivity, which is an unavoidable problem (Nicol & Freeth, 1998).

According to While (1991), the main problem in observational assessments lies with subjectivity. While explains that human observation is noted to have an inherent bias and is a subjective process. Polit and Hungler (1997) summarized the potential problems of observation thus:

“Observational data are clearly vulnerable to many distortions and biases. Human perceptual errors and inadequacies are a continuous threat to the quality of obtained information” (p. 220).

In an attempt to minimize bias, Bondy (cited in While, 1991) developed a five-point rating scale for the assessment of student clinical performance, the validity and reliability of which was enhanced by an explanation of the criteria for assessment (While, 1991).

^{class} ✶ **Triple Jump Exercise**

The triple jump is a structured exercise consisting of three parts or steps which are (a) definition of the problem, (b) information search and study and (c) problem synthesis formulation and intervention. The triple jump exercise was first introduced at McMaster University for informal evaluation of medical students' performances in problem solving (Powles, Wintrip, O'Neill & Spitch, 1981). According to Feletti and Ryan (1994), the triple jump exercise is an experiential exercise, which allows students to observe and evaluate their problem-solving behavior, while simultaneously verifying their self-awareness with another person.

It is a three part, structured assessment used for both formative and summative assessment in problem-based learning. The objectives are to assess the individual student's ability to (a) generate hypothesis from a given clinical situation, (b) seek out and critique relevant data and (c) develop either a diagnosis or management (care) plan to evaluate his or her own performance in the exercise (Vernon & Blake, 1993).

The Three Steps of the Triple Jump Exercise

Step no. 1: of the triple jump exercise is the primary analysis of the case. After the student is given information describing a brief case scenario, the student generates issues and questions and using these, elicits further clinical information about the situation by requesting data from the tutor. The student will generate some early hypothesis. This can take up to ½ hour.

In **step no. 2**, the student engages in independent study and finds relevant information for a period of two hours. Critical thinking is important at this stage.

In **step no. 3**, the student returns to write about the information obtained in relation to the presenting situation. The student presents conclusions drawn from the issues studied. This step lasts for 45 minutes (Powles et al., 1981).

According to O'Gorman, Trimble and Smyth (1998), the triple jump exercise is a well-recognized approach to the assessment of problem-solving skills. In the triple jump exercise, students must be able to identify what actions they would take, why they would take them, and what resources are needed. Actions must be directed towards the problems that were identified in step two. This means that in the triple jump exercise, critical thinking is evaluated by presenting a situation to a student who is expected to develop a

hypothesis, enquire to find more information about the situation, formulate and prioritize interim patient problems and nursing interventions, identify gaps in the student's knowledge, find out more about the situation and improve on the interim problem identification and interventions. The triple jump is recommended as a cost-effective assessment instrument because the written format is administratively easier and less interpersonal and more reliable. As many students as possible can be examined with this process (O'Gorman et al., 1998; Powles et al., 1981). Similar views are shared by Callin and Gliska (1983), who stated that the triple jump exercise could be used to examine and illuminate or to evaluate and grade the problem-solving behavior of students. It can also be used for evaluation purposes but it is particularly constructive as a diagnostic tool. According to Schmidt (1993), the triple jump exercise is advantageous in that it (a) assesses the application of science in explanation, (b) assesses problem solving, (c) assesses self-directed learning, (d) assesses self-assessment, (e) can be adapted to various situations and (f) can be varied in difficulty by altering the initial problem, database and criteria.

Callin and Gliska (1983) indicate that the triple jump exercise is a demanding one-to-one experience for both students and teachers. They further explain that in the exercise the student assumes the more active role while the tutor functions as a facilitator, observer and information source about the problem. The triple jump is criticized for penalizing less verbally articulate students during the 'first jump' (Powles et al., 1981). At this stage, students are required to think aloud, give a hypothesis, seek out data, identify problems and suggest interventions.

Portfolio Assessment

Portfolio assessment is one of the self- assessment methods used in clinical education. According to Boud (1990), self-assessment is defined as students taking responsibility for monitoring and making judgments about aspects of their own learning. Boud (1990), further states that this process encourages students to look to themselves and to other sources to determine what criteria should be used in judging their work rather than being dependent solely on their facilitators and this type of evaluation is called reflective self-evaluation.

Portfolio is one way of assessing performance in practice over a period of time (Snadden & Thomas, 1998). A portfolio assesses the application of theory and the performance of the student. A portfolio is a purposeful collection of student work that exhibits the student's efforts, progress and achievements in one or more areas. Students should be involved in selecting contents, the criteria for selection, the criteria for judging merit and evidence of student self-reflection (Paulson, Paulson & Meyer, 1991). Wenzel, Briggs and Puryear (1998) state that a portfolio is not just neat, organized samples of student work, but instead a documentation of the skills and experience possessed by an individual. Furthermore, Paulson et al. (1991) indicate that portfolios offer a way of assessing students that is different from traditional methods. Portfolio assessment provides the teacher and the students an opportunity to observe students in a broader context, taking risks, developing creative solutions and learning to make judgments about their own performances (Paulson et al., 1990). This means that a skill could be shown to have been practiced and could be assessed on the basis of illustrative evidence provided by the completion of certain tasks.

A portfolio is based on developing a collection of evidence that learning has taken place (Pitts, Coles & Thomas, 1999). Portfolios are excellent tools for assessment particularly suited to assessing the application of theory in practice. According to Wenzel et al. (1998), portfolios as authentic assessment follow a long-term developmental perspective and measure higher order learning such as critical thinking and synthesis.

Snadden and Thomas (1998) found that tutors felt that a portfolio was a valuable learning and assessment tool from their point of view. The same view is shared by Gwele (2001), who states that portfolios have been seen as both learning and assessment tools in nursing education. In her study of graduate nursing education students reflecting on their experiences in developing portfolios, she states that portfolios are significant in facilitating the development of self-directed learning, helping students to gain self-awareness and enhancing reflective learning. According to Snadden and Thomas (1998), a number of students felt that keeping a portfolio helped them in their learning and was a fair assessment tool, but the majority did not. The main problems for students were uncertainty regarding what was expected of them and anxiety about recording personal feelings (Snadden & Thomas, 1998).

In the study conducted by Karłowicz (2000), on the use of portfolios, one of the findings was that it is more time consuming to implement for both the students and the teacher than other assessment methods. Portfolio development is a longitudinal process that can take from months to years to complete. This requires that students engage in more thoughtful consideration of possible portfolio projects and adopt a true commitment to ongoing self-evaluation.

According to Snadden and Thomas (1998), portfolios may be difficult to assess because they may contain personalized material with few points of objectivity that allow comparisons to be made between students. Assessment is also labor intensive and requires careful reading and response to a learner's objectives and evidence of whether they have been met. Therefore, portfolios are regarded effective as mechanisms to support and facilitate personal learning and growth.

Pitts, et al. (1999), in their study about the reliability of portfolio assessment, found that as an assessment instrument portfolios have particular advantages. These stem primarily from the differences from a 'typical' examination situation, which is according to Pitts, et al., a pressurized and stressful time-limited event occurring at the end of a course or program. Pitts, et al. (1999) further state that because a portfolio is not an examination, completing a portfolio over time allows multiple attempts and opportunities, allows for revision and reflection, can address multiple tasks and use many forms of data entry (Pitts et al., 1999).

Karlowicz (2000) indicates that the portfolio content should illustrate the student's ability to think critically, perform therapeutic nursing interventions, and communicate effectively, as these are the required outcome behaviors of baccalaureate degree programs. The portfolio development process requires students to reflect on their personal strengths and weaknesses to understand how they learn or why they failed to learn. This ongoing self-reflection enables students to gain confidence as they witness their personal and professional development through the portfolio (Karlowicz, 2000; Pitts et al., 1999). Wiggins (1990) asserts that the main purpose of portfolio assessment is to highlight students' strengths and show progress over time. In this manner, students see the results of

their hard work and are able to gauge themselves against themselves instead of comparing their work with the rest of the class. Portfolios provide students with the ability to view themselves as thinkers, learners and writers, increasing confidence as information demonstrating personal growth is compiled (Wenzel et al., 1998).

The portfolio thus not only serves as a product or reflection of student accomplishment but also as an ongoing process and assessment of what the student knows and is able to do. Routledge (cited in Gwele, 2001) emphasizes the successful use of portfolios for summative evaluation.

Summary

It was evident through literature review that even though there had been changes in the curriculum in nursing education, assessment strategies had not been part of those innovations, specifically referring to assessment of clinical learning. Although South Africa had adopted the outcomes-based education as a transformational perspective on the curriculum, this transformational perspective is not evident in assessment procedures in nursing education. OBE requires students to demonstrate what they really know and are able to do and appreciate, and according to OBE, the outcomes that are assessed should be observable skills, knowledge, reflective skills, problem-solving skills and critical thinking skills that students have demonstrated at certain stages of their development, and above all these outcomes are demonstrations of competence.

The OSCE and observation-based clinical assessments are among other clinical assessment approaches that have been used for a number of years in nursing education and

are regarded as traditional methods in this study, and yet there is a lack of evidence of the use of the OSCE as an integrated assessment method of testing clinical competence.

Very limited information was available on the non-traditional methods of clinical assessments that are beginning to penetrate in nursing education, such as the triple jump and portfolios, yet the literature review reveals a lack of quality assessment methods for assessing clinical learning in nursing education.

This study aims to analyze the clinical assessment strategies that are currently used in nursing education and also their quality, that is, the reliability and validity of the clinical assessment approaches used nowadays in nursing education.

CHAPTER THREE

METHODOLOGY

Introduction

This chapter on research methodology presents a description of the process followed in conducting this study and includes the study design, selection of participants, a description of the instruments used to collect the data, discusses the reliability and validity of the instruments. Data analysis is also included, and ethical considerations.

Study Design

An exploratory descriptive survey was used for this study. A survey is the most commonly used descriptive method in educational research. It refers to the collection of data directly from the subjects, usually by questionnaire or interview (Polit & Hungler, 1997). Survey research asks the respondents to report their attitudes, opinions, perceptions or behaviors. The advantage of a survey research is the collection of a large amount of information from a large population in an economical manner (LoBiondo-Wood & Haber, 1990; Polit & Hungler, 1997). Descriptive studies can be used to identify problems with current practice, justify current practice or to determine clients' experiences (Burns & Grove, 1997; Polit & Hungler, 1997). Explorative studies provide more insight about the nature of the phenomenon (Polit & Hungler, 1997).

Targeted Population

The targeted population for this study was all the nurse educators or lecturers currently employed in public nursing education institutions in KwaZulu-Natal (KZN). There are five nursing colleges, two university nursing departments and one technikon in this province. These institutions are Edendale College of Nursing, Addington College of Nursing, Grey's College of Nursing, King Edward VIII College of Nursing, R. K. Khan College of Nursing, Ngwelezana College of Nursing, Benedictine College of Nursing and Charles James Memorial College of Nursing University of Natal, University of Zululand and Durban Institute of Technology. All these institutions form eleven campuses altogether. The total number of nurse educators in the above-mentioned institutions is 195.

Sampling

Sampling technique was the non-probability purposive sampling. According to Polit and Hungler (1997), the researcher might decide to purposively select the widest possible number of respondents or choose subjects who are judged to be typical of the population in question or particularly knowledgeable of the issues under study. Therefore, the total population was taken as the sample for this study (Polit & Hungler, 1997). The sample consisted of all nurse educators from the twelve institutions; five nursing colleges, one nursing school and two university and technikon nursing departments were used. However, the total number of nurse educators in KZN is about 280 (Department of Health, Human Development, KZN, 2002). This figure only refers to public nurse educators only. All 195 nurse educators from twelve public nursing education institutions were included in the study because data collection instrument used in the study was going

to be mailed to subjects, it was likely that some questionnaires would not be returned. The researcher had thus chosen to ask all nurse educators currently employed in selected institutions to participate in the study.

Data Collection and Instruments

Data were collected through the use of a questionnaire developed by the researcher (Appendix 1). According to Polit and Hungler (1997), a survey study may use questionnaires that yield readily coded answers. A questionnaire is a simple type of data collection instrument. It is less expensive and less time consuming (Burns & Grove, 1997). Both closed and open-ended questions were used in this study. Closed-ended questions were used because they provide great uniformity of responses and are more easily processed (Burns & Grove, 1997; Polit & Hungler, 1997). Open-ended questions allowed subjects to respond to questions in their own words (Polit & Hungler, 1997). Questionnaires were mailed to those institutions that were not easily accessible owing to geographical location. For the geographically accessible institutions, questionnaires were delivered to the Head of the Institution for distribution to the subjects.

The questionnaire consisted of two sections. The first section dealt with demographic data. This data included age, pre-registration qualification, teaching qualification, teaching and experiences in clinical assessment. The second part of the questionnaire required information on the common assessment methods used in assessing clinical learning in nursing education and the perceptions and views of the subjects on the current clinical assessment methods used in their respective institutions.

One of the disadvantages of the mailed questionnaire is that it has a risk of low response rate (Brink, 1998). To enhance return rates, the questionnaires that were mailed, were mailed together with return self-addressed envelopes.

Reliability and Validity of Instruments

The reliability of an instrument concerns its consistency and stability; it is its ability to measure accurately the variables under investigation (LoBiondo-Wood & Haber, 1990). Reliability is defined as the extent to which the instrument yields the same results on repeated measures and measures accurately the variables under investigation (Polit & Hungler, 1997). They further point out that the reliability of an instrument may be influenced by several factors.

The researcher did test-retest reliability which is the administration of the same instrument to the same subjects under similar conditions on two occasions (LoBiondo-Wood & Haber, 1990). Two institutions were chosen for testing reliability, one university and one nursing college. The researcher administered the questionnaire to five subjects in each institution. Two weeks later, the questionnaire was administered again to the same subjects. The scores obtained from the close-ended questions on repeated testing were compared and the comparison was expressed through a computed reliability coefficient. The reliability coefficient obtained was 0.84. Polit and Hungler (1997), maintains that a reliability coefficient may range from a low of .00 to a high of 1.00.

Validity refers to whether or not an instrument accurately measures what it is supposed to measure (LoBiondo-Wood & Haber, 1990). Literature suggests that the content validity of a new instrument can be achieved by referring to literature pertaining to

the research topic or by calling the experts in the content area to examine the items to see if they represent adequately the hypothetical content universe in the correct proportions (Burns & Grove, 1997; Polit & Hungler, 1997). They further argue that if the researcher can demonstrate that an instrument measures all the different components of the variables in question, he/she might be confident that the instrument has a high content validity. Content has two subtypes, face validity and expert validity.

Content validity of the instrument in this study was then ensured by giving the instrument to be used to experts for evaluation of the content after it had been carefully constructed (Burns & Grove, 1997). The experts used were education specialists and experts in research. The instrument was handed over to these experts for analysis, corrections and adjustments, which were done accordingly.

Data Analysis

Each questionnaire was assigned a number or coded. For close-ended responses, data analysis was done using Statistical Package for Social Science (SPSS). This was done using frequency distribution, percentages where necessary and also using graphs.

The responses for open-ended questions were analyzed using content analysis, where all responses were scrutinized to establish the main ideas or themes. Thereafter, these themes were categorized according to their characteristics and the information from the literature.

Ethical Considerations

When designing a research study, it is essential that the nurse researcher be guided by ethical principles that involve respect for the rights of the research subjects (Brink, 1998). A similar view is expressed by Lo-Biondo Wood and Haber (1990), when they state that the researcher should understand his/her responsibility to the subjects and consider that research intrudes into the ongoing life process of the respondent. Nursing research must not only have the potential to generate and refine knowledge but must be ethical in its development and implementation (Burns & Grove, 1997).

Consequently, prior to conducting the study, the research proposal was presented to the University of Natal Research Committee for approval. Permission was obtained from the Provincial Departments of Health, Heads of Nursing Departments at the participating universities and technikons, and also from all the principals of the Nursing Colleges and a nursing school that were participating in the research study.

A covering letter was attached to each questionnaire explaining the aims of the study and requesting participation in the study. The subjects were informed in writing of the study and of their right to decide voluntarily whether or not to participate in the study and to refuse to give information or to end their participation. An informed consent was attached to the questionnaire that explained the procedure. See appendix C.

The questionnaires were anonymous and there was no way of tracing the information back to the participants because no names were to be used on the questionnaires to ensure anonymity.

Limitations

According to Burns and Grove (1997), limitations of a study “are restrictions in a study that might decrease the generalization of the findings”(p. 49). These restrictions may be either theoretical or methodological. In this particular study, the limitations were caused by the unavailability of relevant literature on the subject content.

Obtaining relevant empirical literature on assessment of clinical learning, especially in nursing education, presented a problem because this aspect in nursing education is not yet well researched. Availability of such literature on assessment of clinical learning in nursing education was very limited. Very few research studies had been done or are available for reference in this area and this posed a problem to the researcher whilst doing literature review. This limitation is supported by Birscumshaw (cited in While, 1991) who stated that a review in literature revealed only limited work regarding the clinical performance evaluation of student nurses.

The other limitation was that data collection took an overextended time to be completed of up to three months. The study was started at the beginning of the year and thus there were delays in obtaining permission for the study from the Department of Health and the Heads of the institutions used in the study.

CHAPTER FOUR

PRESENTATION OF THE MAIN FINDINGS OF RESULTS

Introduction

This chapter entails the analysis of data and presentation of the results.

Demographic data is presented using frequency distributions, percentages and graphs where necessary. Results for open-ended questions are reported under the following categories: (a) commonly used methods of assessment of clinical learning, (b) assessment methods and practical, foundational and reflective competencies, (c) problems associated with the assessment methods currently used in assessing clinical learning, (d) ability of the assessment methods used for the courses offered to be a true reflection of the students' clinical learning and (e) the transparency of the system of clinical assessment used for students.

Population and Sample Realization

The accessible population for this study was all nurse educators currently employed in the public nursing education institutions in KZN. These institutions are the five nursing colleges, one nursing school, two university nursing departments and one technikon. All of the nurse educators employed in public nursing education institutions in KZN were asked to participate in the study. Of the 195 questionnaires that were distributed to nurse educators, 110 (56%) were returned.

Salient Characteristics of Study Subjects

More than half the number of the subjects ($n = 61$; 55,4%) who participated in the study was 46 years old or older. Table 3 reveals that the subjects who were aged 36 to 45 years were 27,3% ($n = 30$), and the younger group of the subjects who were between 26 to 35 years old were found to be 17,3% ($n = 19$) only.

Table 3 : Age Distribution of the Subjects

AGE	Frequency	Percent
26 to 35 years	19	17.3
36 to 45 years	30	27.3
Above 46 years	61	55,4
Total	110	100,0

As can be seen in Table 4 below, most of the subjects (47,3%; $n = 52$) had their pre-registration qualifications as a Diploma in General Nursing and/or Midwifery, or Community Health nursing or Psychiatry. This was followed by those whose pre-registration qualifications were Diploma in Nursing (General, Community, Psychiatry) and Midwifery and those subjects with Basic Nursing Degrees at 25,5% ($n = 28$) and 22,7% ($n = 25$) respectively.

Table 4 : Pre-registration Educational Qualification of the Subjects

Qualification	Frequency	Percent
Basic Nursing Degree	25	22.7
Diploma in Nursing (General, Community, Psychiatry) and Midwifery	28	25.5
Diploma in General Nursing and/or Midwifery or Community Health Nursing or Psychiatric Nursing	52	47.3
Bridging Programme and other programmes	5	4.5
Total	110	100

It is evident in Table 5 that more than half the number of the subjects (52,7%; n = 58) held a teaching qualification with a degree in nursing education, whilst (32,7%; n = 36) of them, had a diploma in nursing education. Very few had honors and masters in nursing education, which were 6,4% (n = 7) and 8,2% (n = 9) of the subjects, respectively.

Table 5 : Teaching Qualification of the Subjects

QUALIFICATION	Frequency	Percent
Diploma in Nursing Education	36	32.7
Degree in Nursing Education	58	52.7
Honors in Nursing Education	7	6.4
Masters in Nursing Education	9	8.2
Total	110	100

As seen in Table 6 below, 32,5% (n = 36) of the subjects reported that they taught General nursing science, only 6,4% (n = 7) reported that they were involved in teaching Community nursing science. Fundamental nursing science was reported to be taught by 5,5% (n = 6) of the subjects, whereas 6,4% (n = 7) of the subjects reported that they taught Midwifery. The same number of the subjects as those who reported they taught Midwifery reported that they taught Psychiatry. However, some subjects reported that they taught more than one clinical subject at a given time.

A number of subjects (n = 29; 26,4%) reported that they taught two clinical nursing subjects, whereas five subjects (n = 5; 4,5%) taught three clinical nursing subjects. A few subjects (n = 12; 10,9%) did not indicate which clinical nursing subject they taught.

Table 6 : Basic Clinical Subject Taught by the Subjects (nurse-educators)

Clinical subject	Frequency	Percent
General Nursing Science	36	32.5
Community Nursing Science	7	6.4
Fundamental Nursing Science	6	5.5
Midwifery	7	6.4
Psychiatry	7	6.4
Other	12	10.9
General and Community Nursing Sciences	7	6.4
General and Fundamental Nursing Sciences	10	9.1
General Nursing Science and Midwifery	6	5.5
General Nursing Science and Psychiatry	4	3.6
General, Community and Fundamental Nursing Sciences	2	1.8
General and Community Nursing Sciences and Midwifery	6	5.5
Total	110	100

Of the 110 questionnaires that were returned by the subjects, 24 of them did not indicate whether the subjects were in fact involved in post-basic teaching or not. The 24 questionnaires were not included in the analysis of this section of the results.

Table 7 below, outlines the post-basic subjects taught by the subjects (nurse educators). More than half the number of the subjects (n = 55; 62,5%) of those who responded to this section indicated that they were not involved in post-basic teaching. The study revealed that only one (1,1%), subject taught Advanced Psychiatric nursing, whereas three (3,4%) subjects reported that they taught Advanced Midwifery. Community nursing was taught by six (6,8%) subjects. Critical Care was taught by four (4,6%) subjects. And lastly, Orthopaedic Nursing was taught by six (6,8%) subjects. Other post-basic subjects that were mentioned by the subjects and constituted 14,8% (n = 13); were the Operating Theatre nursing and Paediatric nursing.

Table 7 : Post-basic Clinical Subjects Taught by the Subjects (nurse-educators)

Post basic subjects	Frequency	Percent	Valid Percent
None	55	50	62.5
Advanced psychiatric nursing	1	0.9	1.1
Advanced midwifery	3	2.7	3.4
Community nursing	6	5.5	6.8
Critical care	4	3.6	4.6
Orthopaedic nursing	6	5.5	6.8
Other	13	11.8	14.8
Total	88	80	100.0

Categories of Personnel Involved in Clinical Assessment

More than twenty two percent (22,7%) of the subjects reported that clinical assessment was done by nurse educators only, and 17,3% of the subjects also reported that clinical assessment was done by nurse educators with clinical instructors. Further more, 14,5% of the subjects reported that clinical assessment in their institutions was done by nurse educators, clinical instructors and ward staff. In most cases, the ward staff used were registered nurses with or without an educational qualification and who were not trained to be assessors. The other 10% of the subjects reported that clinical assessment was done by the clinical instructors only.

This study also revealed that 11,8% of the subjects reported that clinical assessment was done by a combination of nurse educators, clinical instructors, preceptors and ward staff. This study thus revealed that teaching staff and non-teaching staff who did not hold any teaching qualification actually did assessments of clinical learning.

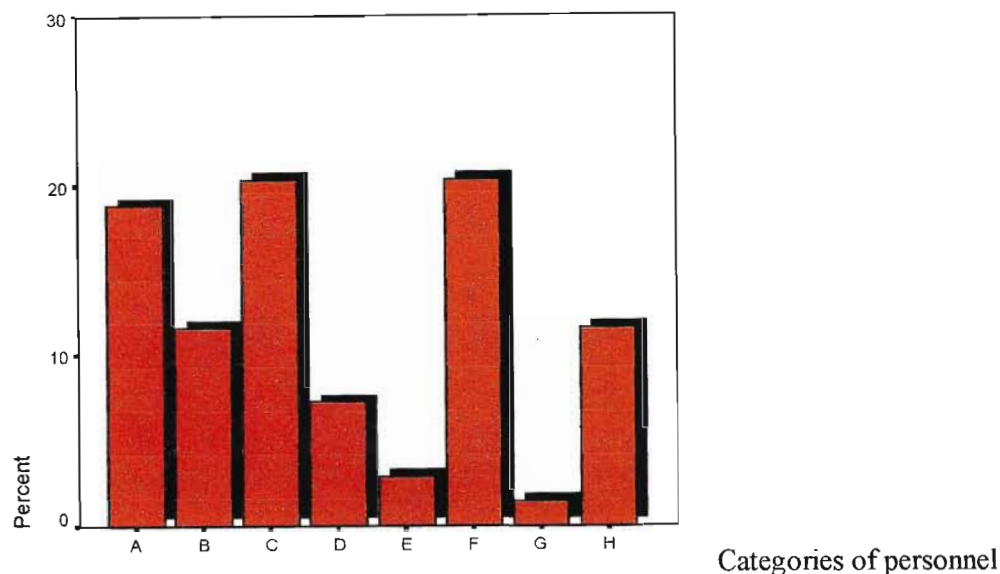


FIGURE 1 : Categories of Personnel Involved in Clinical Assessment

KEY :

A = Nurse educators	E = Nurse educators and Clinical instructors and Preceptors
B = Clinical instructors	F = Nurse educators and Clinical instructors and Ward staff
C = Nurse educators and Clinical instructors	G = Nurse educators and Ward staff
D = Nurse educators and Ward staff	H = Nurse educators, Clinical instructors, Preceptors and Ward Staff

In cases where individuals who did not hold any teaching qualification did assessments of clinical learning, only 18,6 % of the subjects reported that training for such individuals was provided in their institutions. The type of training provided was described as not an extensive one, for instance some subjects stated that:

"It is like an orientation on the formats and tools to be used".

"Mini orientation is done on the day of the examination".

"No formal training but short orientation on what is expected of them as examiners".

Involvement of Nurse Educators in Assessment of Clinical Learning

This study revealed that almost all subjects ($n = 109$, 98,9%) were involved in assessment of student's clinical learning. This is however contradictory to Figure 1, which revealed that 11,8% of the subjects, reported that clinical assessment in their institutions was in fact done by clinical instructors only. It was reported that 70% ($n = 77$) of subjects were involved in the decision making regarding the method of assessment to be used for assessing clinical learning, whereas, 84,5% ($n = 93$) of the subjects reported that they were involved in planning the equipment and other resources to be used in clinical assessment.

Almost all the subjects (90,9%; $n = 100$) reported that they were involved in the implementation stage of clinical assessments and 84,5% ($n = 93$) reported that they were involved in informing students about the results of assessments. Therefore this study shows that most of the nurse educators are highly involved in the assessment of student clinical learning in almost all the stages of assessment.

Common Methods of Assessment of the Clinical Learning Outcomes

Common methods of assessment that were repeatedly mentioned in the study, as shown in Table 8 were the OSCE ($n = 45$) 40,9%, continuous clinical assessments ($n = 46$) 41,8%, triple jump exercise ($n = 12$) 10,9%, reflective learning journals ($n = 5$) 4,6% and clinical workbook and ward reports ($n = 2$) 1,8%. Clinical accompaniment was also mentioned as a clinical assessment method by a large number of the subjects ($n = 36$) 32,7%. This citing was, however, questionable, since clinical accompaniment is not an assessment strategy but rather a means of supporting learners in a clinical setting.

Table 8 : Commonly Used Methods of Assessing Clinical Learning

Method	Frequency	Percentage
OSCE	45	40.9
Continuous clinical assessment	46	41.8
Triple jump exercise	12	10.9
Reflective learning journals	5	4.6
Clinical workbook and ward reports	2	1.8
TOTAL	110	100

Table 9 below shows that the OSCE and Continuous clinical assessment were the most commonly combined assessment strategies used, as this was reported to be so by 75 (68,8%) subjects. This triangulation of clinical assessment methods was followed by a combination of the OSCE and triple jump exercise that was reported by 26 (23,9%) subjects.

Only one subject reported that the OSCE and portfolio were the methods of clinical assessment used in assessment of students' clinical learning in his/her institution. Five subjects reported that they combined the OSCE and reflective learning journals and only two subjects reported to be using the OSCE and clinical workbook in their institution.

Table 9 : Triangulation of Assessment Methods

Method	OSCE and Continuous clinical Assessment	OSCE and TJE	OSCE and portfolio	OSCE and RLJ	OSCE and Clinical workbooks	Total
Frequency	75	26	1	5	2	109
Percentages	68.8	23.9	0.9	4.6	1.8	100

KEY :

TJE => Triple jump exercise

OSCE => Objective structured clinical examination

RLJ => Reflective learning journals

Percentage of the Final Grade Constituted by the Clinical Learning Outcome in the Courses Provided

Most of the subjects (n = 69; 62,7%) indicated that clinical assessments were an independent component of the course. Summative clinical assessments were reported to form 75% of the final clinical learning grade whereas clinical projects counted for 25% of the final clinical grade.

Assessment Methods and Practical Competence

Almost all statements given by the subjects were positive in relation to this category with 96,4 % (n = 106) yes responses and only 3,6% (n = 4) of negative responses.

The following statements were repeatedly mentioned:

“With the continuous clinical assessments, students are visited in the clinical settings and they really perform nursing actions in the real situation and on real patients”.

“Students are able to perform a set of tasks at a given instance”.

“Direct observation is able to assess practical competency because an assessor assesses what can be done”.

Assessment Methods and Foundational Competence

Of the 110 subjects who participated in the study, 101 (90,2%) stated that the assessment strategies used were capable of assessing foundational competence. Many of the supporting statements showed that in fact nurse educators had full understanding of what this meant. Subjects reported that students were able to support their actions when asked to do so, meaning that students understood what they were doing. The most common statements related to this category included the following:

“Students are expected to give rationale for their actions and they always do it positively”.

“Questions are asked in the course of presentation to evaluate understanding of the theoretical basis, and rationale for any intervention is demanded”.

“Students understand and have reasoning behind their actions and at the end of the procedure, they are able to reflect upon their actions and give reasons for their actions. If any problems are encountered during the procedure, then they have to apply problem solving skills”.

"Students are able to understand the underlying principles for specific actions undertaken".

Very few subjects (8,9%; n = 10) reported that, with the OSCE in particular, students were not expected to give rationale for any actions demonstrated, which meant that this method of assessment failed to assess foundational competence. The following are some of the supporting statements for this observation:

"Students are never asked during an OSCE why they do what they do".

"Only reflective journals allow for students to state reasons behind their actions. In other methods like the OSCE, this criteria is not met".

"Students are so tense in the OSCE they won't be able to answer any question or expatiate on any actions".

Assessment Methods and Reflective Competence

Of the total number (n = 110) of the subjects who participated in the study, a few (5,4%; n = 6) reported that the clinical assessment approaches used were unable to assess reflective competence; whereas 84,4% (n = 95) of the subjects mentioned that the clinical assessment approaches used in their institutions were able to assess reflective competence. Statements such as the following supported this:

"Students always reflect on their experiences and challenges they encounter on daily basis in the clinical area when being assessed".

"Students are able to reflect on their performances and are encouraged to do so because they learn from their reflective discussions".

"Students' behaviors always reflect what they have learnt and experienced".

“Assessing students using reflective journals is very useful because reflective journals are very good in showing what the students are experiencing and thus what they have learnt in the clinical settings”.

Problems Associated with the Assessment Methods Currently Used in Assessment of Clinical Learning

The central themes delineated from this category included problems with validity, reliability, credibility, feasibility and authenticity. Of 110 nurse educators who participated in the study, 9,8% (n = 11) of the responses pointed out validity as a problematic aspect of clinical assessments. Two subjects mentioned that:

“Students are only asked to demonstrate skills during their practical examination and never asked the reasons behind their actions thus knowledge and understanding are not measured”.

“The OSCE only tests the practical skill and not the theory behind it”.

Reliability was reported as a problematic area in assessment of clinical learning by 16,1% (n = 18) of subjects and the following was mentioned:

“Students do not obtain the same scores on one procedure evaluated by two examiners at the same time”.

“Although checklists are being used in an OSCE, some assessors will credit students for steps undertaken in order of sequence whilst others will credit students for any step undertaken even if not in sequence”.

“Continuous clinical assessment is not objective. If no tools are used, then the assessors tend to use their own subjective judgments”.

Feasibility was also reported as a problem in clinical assessments by 12,5 % (n = 14) of subjects. Problems mentioned in this aspect related to the time factor, that is, the

time needed for preparation of equipment, tools, venues and shortage of resources, both human and material resources. In one response it was mentioned that:

“It is expensive to use some of the equipments needed for the procedure and for all students to use them especially those used once and discarded. The solution will be to evaluate students on one and the same procedures, avoiding those procedures that will cost time and money”.

Another participant mentioned that:

“During clinical teaching, it becomes increasingly expensive to use a bottle of multistix on a single specimen of urine for teaching purposes and how much more in assessment where now many multistix would be needed”.

Very few subjects 5,4 % (n = 6), mentioned **authenticity** as posing some problems in assessment of clinical learning. The following statements were mentioned:

“Students are not assessed in a practical situation but in simulated situation thus methods not realistic and practical”.

“It is possible to evaluate student competence but impossible to evaluate affective domain”.

“The OSCE only test a skill, it is not holistic in nature and is sometimes simulated, it creates stress for students. Continuous clinical assessments are realistic and take place in real situations”.

The last criterion that emanated as a problem when assessing students' clinical learning was **credibility**. Only two subjects (1,8%) gave this aspect of clinical assessment as a problem. Supporting statements were that:

“The number of procedures selected for clinical assessments, does not really reflect whether students are really competent for their level of training because students normally do well in the few procedures selected but may be incompetent in the other procedures”.

Ability of the Assessment Methods Used for Courses Offered to be a True Reflection of the Student's Clinical Learning

In this category, more than half the number (54,5 %; n = 61) of subjects felt that the methods used for assessing clinical learning in their institutions were indeed a true reflection of what was assessed, whilst another 46,1% (n = 51) said they were not a true reflection of what students had learnt. Some of the negative responses cited were:

"Students just learn to do those procedures that they will be assessed at but if not told to be ready in the wards, they tend to fail the procedure."

"Only a few procedures are chosen for assessments. If the student pass these few procedures then it is assumed he/she knows, what about the other procedures?"

"Sometimes students only do assessments to pass or to impress the tutors and after that forget about the procedures."

Transparency of the System of Clinical Assessment Used for Students

Almost all subjects (94,6%; n = 105) reported that the system of clinical assessment used in their institutions was transparent enough to students because it explicitly stated (a) what the student was expected to achieve, (b) the criteria that would be used to assess achievement, (c) what the student would have to do to show achievement, (d) how performance would be assessed, (e) the conditions under which or situations in which the assessment would take place and (f) when the assessment would be taking place.

Subjects did, however, point out some of the problems that made the system of clinical assessment in their institutions not transparent enough. Six (5,5%) subjects

reported that students were not told anything about the criteria to be used to assess their achievement. Furthermore, five (4,6%) subjects reported that the students were not aware of the expectation of what they would have to do to show that they were in fact competent. Nine (8,2%) subjects reported that their institutions had a system of clinical assessment that did not explain to students how performance would be assessed. Another nine (8,2%) subjects reported that the students in their institution were not told about the conditions or situations under which the assessment would be taking place.

CHAPTER FIVE

DISCUSSION, CONCLUSION AND RECOMMENDATIONS

Introduction

The purpose of this study was to examine current practices in the assessment of clinical learning in nursing education, specifically as this relates to SAQA's call for integrated assessments and applied competence. Subjects were asked to report on the approaches that they commonly use to assess clinical learning. They were further asked to report on the problems, if any, that they experienced during assessment of clinical learning of nursing students in their institutions.

Categories of People Involved in Clinical Assessment

The findings of this research study revealed that assessment of clinical learning was mostly done by nurse educators and/or clinical instructors. Only a few (11,8%) subjects reported that clinical assessment was done by and/or with staff who were not really educators or trained for such purposes. It was further reported that for the individuals who are not educators, no training whatsoever was done for such individuals who were involved with students' clinical assessments. According to SAQA (1995), the principles of assessment include that: (a) assessors should be trained and be competent in administering assessments, (b) assessors should give clear, consistent and unambiguous instructions (c) assessors should be subject experts in their learning field(s) and (d) assessors should meet and talk to each other (SAQA, 1995).

The SANC has conformed to SAQA's call for trained assessors as it has released a circular that stipulates that all nursing education institutions must have at least two nurse educators who are trained as assessors, by the end of year 2003. In fact, according to the SANC, all those who are involved in student assessment should be trained as assessors before they are allowed to do any student assessments (SANC, 2002), irrespective of whether those particular individuals have done nursing education. The SANC does not stipulate anything in its circular about the duplication of content for those individuals who are qualified as nurse-educators and who covered this aspect during their studies towards their qualifications as nurse-educators.

Chabeli (2001) encourages team spirit or partnership in clinical assessment. According to her, the team involves all stakeholders in the education and training of students, such as unit nurse managers, ward sisters, clinical nurse educators, preceptors or mentors and students. This integrated collaborative approach to clinical assessment is in keeping with the contemporary requirements of OBE and is greatly encouraged (Chabeli, 2001; Oliver, 1999). These writers further explain that the ward sisters should not be excluded from student assessment but should be empowered with the necessary knowledge and skills of clinical assessment. Such individuals should be trained as assessors.

Commonly Used Methods of Clinical Assessment

Continuous clinical assessment. It was found in this study that continuous clinical assessment is the most used clinical assessment strategy, reported so by 35,4% of the subjects. It has transpired in this study that continuous clinical assessment is favored because it allows the assessment of the students' ability to integrate information gathered

from exposure and learning and determines whether students can use clinical skills appropriately in the management of different clinical problems. These findings correspond to the findings of the study done by Lofmark and Thorel-Ekstrand (2000) on the evaluation of continuous assessment as a clinical learning assessment strategy. Subjects in these authors' study stated that: "this strategy appears to be widely used and it is generally believed to offer a more valid, reliable and realistic form of assessment" (p. 94).

These findings are consistent with the projections made by Hamdy, Prasad, Williams and Salih (2003), who indicated that direct observation of student clinical competence in real clinical placement during a clinical encounter with real patients seems to have a reasonable degree of validity as a tool to assess the clinical competence of students.

The term 'continuous assessment' has been put into practice, as a continuing awareness by the teacher of the development and knowledge of the learner. According to While (1991), progress in continuous assessments is assessed throughout the particular experience, allowing for repeated observation of on-job performance. Similar views are shared by Bujack et al. (1991) who stated that continuous assessment is a process that extends over a period of time and is a gradual build up of a cumulative judgment about performance. According to Lofmark and Thorel-Ekstrand (2000), continuous assessment in clinical education has been regarded as a step forward in assessing students in practice, as it implies that student performance is monitored continuously during day-to-day activities. They further state that this type of assessment method has been shown as potentially capable of monitoring on-going student development. In terms of the assessment policy document on outcomes-based education, continuous assessment is considered the best

model to assess outcomes of learning and it enable improvements to be made in teaching and learning process (Oliver, 1999). Oliver further states that continuous assessment is a means of assessment that comprises a range of assessment strategies. These assessment tools and techniques include portfolio assessment, observation sheets, journals, project works and assignments.

Against these views are Nicol and Freeth (1998), who in their research on assessment of clinical skills, found that continuous clinical assessment ensures adherence to clinical protocols, routine practices and atomistic, specification assessment and evaluation characterized by a detailed list of skills which does not adequately equip graduates for future holistic practice in any discipline. While (1991) is of the same ideas that with this method, the student's clinical performance is evaluated while she/he is still in the process of learning the skills being evaluated and this is, according to While (1991), less than an ideal situation. Bujack et al. (1991), further stated that it takes a lot of time assessing students one by one, and this can be exhausting to assessors. Nevertheless, it would seem that nurse educators who participated in this study view continuous clinical assessments as an invaluable means of compensating for some of the deficiencies associated with the OSCE, such as the inability of the OSCE to assess foundational competence.

The OSCE. The OSCE was reported by a large number of subjects (34,6% of the subjects) as the method of assessing clinical competence used in their institutions. This was almost equal to the number of subjects who reported that they used the continuous clinical assessment method. These two were thus the most commonly used strategies of assessment. The results of this study, however, revealed that the subjects were not satisfied

with the OSCE. The OSCE was described by the participants in this study as a method of assessing clinical skills that was not integrated, holistic nor authentic. The OSCE can measure students' practical skills, but the theoretical background to actions performed by the students is not tested, nor is the reflective component, so that an assessor is unable to recognize the reasons behind a student's actions. The same results were found in a study conducted by Chabeli (2001). From 20 subjects, who used the OSCE as a clinical assessment method, the conclusion drawn was that the OSCE did not measure the students' clinical competence holistically. Yet, in research conducted by Harden and Cairncross (1998) on the use of the OSCE in assessment of practical skills, the findings were that the OSCE was a reliable and practical means of assessing clinical learning. Bujack et al. (1991), are of the same opinion, on their research on assessing comprehensive nursing performance using the OSCE, the results of their study revealed that the OSCE was an effective way of assessing student's comprehensive nursing performance

Triangulation of assessment methods. It was also noted from the results of this particular study that a large number of subjects reported that they were doing triangulation of assessment methods. The OSCE and continuous clinical assessment strategies were found to be the most commonly combined methods when assessing clinical learning. These results are in line with Oliver (1999) who stated that different types of assessment should be used to afford all learners different opportunities to be assessed in different ways. The same views are shared by the Department of Education (1997). This department refers to triangulation of clinical assessment methods as an 'expanded opportunity'.

It was also noted in this particular study that clinical accompaniment was repeatedly mentioned and reported as an approach used for assessing clinical competencies by 36 (32,7%) subjects. Clinical accompaniment is not an assessment strategy but it is defined by the SANC as: “ directed assistance and support extended to a student nurse by a registered nurse or registered midwife with the aim of developing a competent and independent practitioner”(SANC, 1991, p. 8).

In the literature review section of this study, assessment methods were categorized into traditional and non-traditional approaches to clinical assessments. The OSCE and continuous clinical assessment were classified as traditional assessments whereas the triple jump exercise and portfolios were classified as non-traditional assessments. The results of this study revealed that the latter were still not used much in nursing education. The results of this study therefore indicated that the common assessment methods currently used in assessing clinical learning are the traditional methods, the OSCE and observation-based assessments. The triple jump and portfolio assessments were mentioned by very few subjects as methods used in assessing clinical learning (n = 12; 10,9% and 1; 0,9%, respectively).

OBE deviates from the conventional and traditional content-based education and training in the sense that it focuses on the mastering of processes linked to intended outcomes, as well as on mastering of knowledge and skills needed to achieve those outcomes. With the assessment in OBE, the focus moves from judgmental assessment to continuous developmental assessments that are authentic. A move towards more authentic task and outcomes improves teaching and learning, students have greater clarity about their obligations (and are asked to master more engaging and meaningful tasks), and teachers

come to believe that assessment results are both meaningful and useful for improving instruction (Oliver, 1999). Therefore, according to OBE, there is a need to move towards using more diverse methods, with an increase in continuous assessment and greater emphasis on understanding rather than acquisition of factual knowledge (Bujack et al., 1991; Lofmark & Thorel-Ekstrand, 2000; Oliver 1999). It has transpired, however, from this study that continuous clinical assessment is the approach commonly used in nursing education institutions (reported so in this particular study by 45 participants) and this is the type of strategy of assessing clinical learning that is recommended in OBE.

Perceptions of Nurse Educators with Regard to the Clinical Assessment Methods Used

Assessment methods and practical competence. Almost all the subjects in this study ($n = 106$; 96,4%) were satisfied that the assessment methods that they used in their institutions were indeed able to assess the student's practical competence. SAQA (1995) describes practical competence as the demonstrated ability to perform a set of tasks in an authentic context. Continuous clinical assessment was the method specifically mentioned in this study as a clinical assessment method that allowed the students to demonstrate their competence in a real clinical setting. According to Sibert et al. (2001), the OSCE does not bridge the gap between 'showing how' under artificial test conditions and actually 'doing' in daily clinical practice. This discrepancy is in line with the results of this study, which revealed that the subjects were satisfied with continuous clinical assessment strategy because it allowed assessors to assess students in a real clinical setting whereas with the

OSCE, there is, no authenticity. Students are assessed in clinical laboratories or demonstration room using models or simulated patients.

Assessment methods and foundational competence. This study revealed that almost all the subjects who participated in this study reported that the methods used in their institutions were able to assess foundational competence. This is the ability of the method of assessment to assess the students' understanding of what they were doing and why they were doing it (SAQA, 1995). The OSCE in this study was, however, mentioned as a method that only allowed students to demonstrate practical skill and not the theory behind it. During the OSCE, students were not allowed, or rather given a chance or instruction, to give any rationale behind their actions. They were only expected to demonstrate a nursing action. According to OBE, if one unpacks what should be assessed in the clinical area, one finds that it includes components such as practical skills, the application of theoretical knowledge, competence, attitudes, personal development and experience.

Assessment methods and reflective competence. Reflective competence was an aspect that was reported by 95(86,4%) subjects who participated in this study as being possible to achieve using the clinical assessment methods used in their institutions. Reflective competence is the demonstrated ability to integrate performance with understanding, so as to show that the learner is able to adapt to changed circumstances appropriately and responsibly, and to explain the reason behind an action (SAQA, 1995). The majority of the subjects of this study reported that continuous clinical assessment allowed the students to reflect on their experiences, but the OSCE was mentioned as

unable to meet this criterion. With continuous clinical assessment, the problem is that students are allocated to clinical placements for limited periods of time, during which they are expected to adjust to their new environment that includes not only the physical structure or lay-out but also the patients and/or clients, nursing staff and other personnel. Students are also expected to apply what they have been learning in the classroom to the clinical situation, which may present its own problems in terms of marrying the idea with the reality of clinical life. With the continuous clinical assessment strategy, the student's clinical performance is assessed while she/he is in the process of learning the skills being evaluated. But strategies such as portfolio assessment could also allow students enough time to reflect on their experiences, actions and reactions, and competencies.

In the study done by Chabeli (2001) on the perceptions of nurse educators regarding OSCE as a reliable clinical assessment method used in nursing education, her reports of the study indicated that the time provided for students to reflect on the procedure during assessment, in relation to previous experience, was very limited. It was further reported that the written scenarios in the OSCE provide insufficient information to enable the student to analyze, interpret and reflect on the activity to be performed.

Problems Associated with the Assessment Methods Currently Used in Assessment of Clinical Learning

Problems identified by the participants with regard to the assessment methods used in this study were problems with regard to validity, reliability, feasibility, credibility and authenticity. These attributes were widely recognized as being desirable in any assessment

process. Taking into account the holistic view on assessment, Oliver (1999) states that the assessment must be always valid, reliable and fair.

In this study, the OSCE was reported to have some validity problems. As mentioned above, some of the subjects in this study reported that the OSCE does not give students time to reflect on their experiences for the time is limited. To overcome some of the problems created by the OSCE, Nicol and Freeth (1998), assert that the validity of the OSCE is reliant upon the quality of the problems posed at each station. Authentic problems are encouraged, through which learners are given enough time to reflect and make their own interpretations and decisions (Nicol & Freeth, 1998). It is advisable rather to have fewer stations where learners would have time to apply their own clinical reasoning and prioritize actions appropriately in a realistic manner, than to have many stations that encourage superficial thinking and actions rushing to complete the procedure (Chabeli, 2001). Fashy and Lumby (cited in Nicol & Freeth, 1998) assert that the OSCE should aim to integrate and contextualise the skills needed, and modify the number of stations and length of time at each station. Some stations could, as they suggested, take up to 45 minutes. The long time spent by student on each OSCE station was found to improve the validity and reliability of the examination, to reduce learner stress and to encourage learners to reflect upon and evaluate their own experiences (Nicol & Freeth, 1998).

The results of this particular study revealed that the OSCE had poor authenticity as an assessment method. This weakness is supported by the reports from the study on clinical performance assessment in practice done by Gorter and colleagues (2002), who reported that the OSCE does not bridge the gap between 'showing how' under artificial test conditions and actually 'doing' in daily clinical practice.

The tension between the authenticity of the method and the feasibility of using it is a major problem in clinical learning assessment in nursing education as was revealed in this study. According to Hamdy et al. (2003), direct observation in continuous clinical assessment represents an attempt to find a balance between authenticity and feasibility of clinical assessment methods. This is in agreement with Hays et al. (2002), who in their study on selecting a performance assessment method, reported that direct observation of an individual's practice was highly reliable and valid, and this conclusion is in line with the results of this particular study which revealed that continuous clinical assessment was much authentic as it allows for the assessors to observe the student in the practical area, that is, in the real clinical setting (Hays et al., 2002).

Another problem mentioned with the OSCE was the feasibility problem. In this study, lack of human and material resources was perceived as a limitation in the OSCE. This finding is in line with the results found by Chabeli (2001), who stated that the limitation of the OSCE adds stress and strain to educators and students. Nicol and Freeth (1998), are of the same opinion that the traditional OSCE has severe limitations that have an impact on the assessment of clinical nursing skills. These entail limited time for each situation, handling large number of students, small venues and lack of equipment. Gillings and Davies (cited in Chabeli, 2001) maintain that because of these constraints, vital aspects of clinical competence may be omitted, resulting in the credibility of the OSCE as a method of clinical assessment being questioned.

Conclusion

The overall picture gained from the analysis of this particular survey of the clinical assessment methods that are currently used in nursing education is that nurse educators are still using assessment methods based on the traditional approaches of clinical assessments in nursing education in spite of the SAQA's call for integrated authentic assessments. The overall assessment strategy used in assessing clinical learning includes a variety or triangulation of assessment methods so as to ensure that all intended learning outcomes, skills and knowledge, are validly assessed. There was, however, no evidence of innovation in assessment or reflection on the rationale for the method used.

Continuous clinical assessment was reported to be mainly used in conjunction with the OSCE. The continuous clinical assessment was found in this study to be the most favoured strategy with very few disadvantages reported as an assessment method. It was found to be a realistic, valid and reliable form of clinical assessment that is authentic and done in a real practical setting. It is also possible to monitor students' development in an ongoing process, using continuous clinical assessment. The negative part of continuous clinical assessment was that it needs a lot of time to assess students one by one in the different clinical areas where the students are allocated and this method is thus extremely resource intensive.

The OSCE was the other strategy revealed to be widely used and it has also negative and positive aspects. The positive aspects confirm that it is possible to assess quite a large number of students in one day. It was, however, evident that the OSCE failed to assess foundational and reflective competence. It also needed more time, human and

material resources especially to prepare and conduct such an assessment. Nevertheless, these shortcomings seemed to have been anticipated and compensated for by the use of more than one clinical assessment strategy.

Recommendations

There are three main purposes of assessment and those are (a) to assist in the process of learning, (b) determining what learning has occurred, and (c) providing evidence regarding the success or otherwise of the programme in question. Of these, the second probably gets the major share of attention to the particular disadvantage of the first (Benett, 1993). Assessment has to be built into curricula in such a way that it can contribute powerfully to student learning, as well as serve the needs of summative certification. The assessment of students' clinical performance is thus a necessary component of helping students learn to be better nurses, since nurse education is aiming at preparing nurses who will be able to function at all levels of health care and irrespective of the availability of resources. Thus, when doing assessments, the emphasis should be on principles of assessment rather than on procedures or processes. Procedures are mainly based on institutional policies with less focus on whether the student adhered to principles or not. On the other hand, principles are transferable to different contexts of any level of health care setting in the country.

When measuring clinical learning outcomes of the students, reliable and valid clinical assessment methods should be used to distinguish between students with adequate clinical competence and those without. Again, the use of a variety of assessment methods will help nurse educators to assess a broader range of knowledge, including the practical,

analytic, reflective and problem-solving skills that the students must demonstrate in order to be competent nurses.

This study does not offer solutions to the search for the perfect clinical assessment method, but it does call for increased dialogue between educationalists to discuss the implications of this research for the development of an appropriate clinical assessment strategy. Because of the development of the new curricula in nursing education that is based on outcomes, there is a need to provide the opportunity to develop and test new approaches to clinical assessment, which will be integrated, be holistic in nature and which will consider authenticity. It is, however, recommended that further research be undertaken to explore and describe the alternative, authentic methods of assessment to measure students' comprehensive and holistic clinical competence. It is also suggested that assessment innovations be developed alongside the implementation of the outcome-based curriculum with the areas that require extensive work (a) assessment of progression towards defined outcomes and the attainments of acceptable standards of performance, (b) integrated assessments strategies and (c) learning and reflecting through assessment, such as the assessment of clinical learning with the use of portfolio evidence. The results of this study as presented and discussed above can at least serve as a starting point for the transformation of clinical assessment strategies used in nursing education in KZN.

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APPENDIX A

REQUEST FOR PERMISSION TO CONDUCT A STUDY

School of Nursing
Faculty of Community and Development Disciplines

Durban 4041 South Africa

Telephone: +27 (0)31 260 2499

Facsimile: +27 (0)31 260 1543

17. 12. 2002

Dr L. L. Nkonzo-Mthembu
Department of Health
Private Bag X9051
3200

Dear Madam,

Re: Application for permission to conduct research at nursing colleges in KwaZulu-Natal

I am a student at the Nursing Department of the University of Natal – Durban, studying for a Masters Degree in Progressive Education for Health Professional. As a requirement for the degree, I have to conduct a research titled: **An analysis of the assessment of clinical learning in nursing education institutions in kwaZulu-Natal in an outcomes-based education context.**

I therefore request access to the selected nursing schools and colleges in your province and also permission to interview nurse educators at the selected institutions.

Thank you,

Yours faithfully,



Ms S.Z. Mthembu (M Cur Student)

Supervisor
Prof. N.S. Gwele

School of Nursing
Faculty of Community and Development Disciplines

Durban 4041 South Africa
Telephone: +27 (0)31 260 2499
Facsimile: +27 (0)31 260 1543

24. 01. 2003

The Head of School
Prince Mshiyeni Nursing School
P/Bag X 10
Mobeni 4060

Dear Madam,

Re: Permission to conduct a research study: January/February 2003.


I am conducting a research study on **analysis of the assessment of clinical learning in nursing education in an OBE context**. This is a partial requirement for Master's Degree in Progressive Education for Health Professionals.

I hereby request permission to conduct this study in your institution and be allowed to collect data from the nurse-educators in this institution.

Permission for voluntary participation will be requested from nurse educators. Their rights related to confidentiality, informed consent and freedom of choice will be observed.

I hope that my request will have your favourable consideration.
Herein I have included a copy of permission to conduct this study as granted by the Provincial Department of Health.

Yours faithfully



S. Z. Mthembu (M. Cur student)

Supervisor
Prof. N.S. Gwele

School of Nursing
Faculty of Community and Development Disciplines

Durban 4041 South Africa
Telephone: +27 (0)31 260 2499
Facsimile: +27 (0)31 260 1543

27. 01. 2003

The Head of School
Charles Johnson Memorial Nursing College
P/Bag X5503
Nguthu
3135

Dear Madam/Sir,

Re: Permission to conduct a research study: January/February 2003.

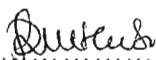
I am conducting a research study on **analysis of the assessment of clinical learning in nursing education in an OBE context**. This is a partial requirement for Master's Degree in Progressive Education for Health Professionals.

I hereby request permission to conduct this study in your institution and be allowed to collect data from the nurse-educators in this institution.

Permission for voluntary participation will be requested from nurse educators. Their rights related to confidentiality, informed consent and freedom of choice will be observed.

I hope that my request will have your favourable consideration.
Herein I have included a copy of permission to conduct this study as granted by the Provincial Department of Health.

Yours faithfully



S. Z. Mthembu (M. Cur student)

Supervisor
Prof. N.S. Gwele

APPENDIX B

PERMISSION FOR RESEARCH STUDY

PROVINCE OF
KWAZULU-NATAL
HEALTH SERVICES

ISIFUNDAZWE
SAKWAZULU-NATALI
EZEMPILO

PROVINSIE
KWAZULU-NATAL
GESONDHEIDDIENSTE

NATALIA
330 LONGMARKETSTREET
PIETERMARITZBURG

TEL. 033-3952111
FAX 033-3426744

Private Bag :X9051
Isikhwama Seposi : Pietermaritzburg
Privaatsak : 3200

REFERENCE : 9/2/3/R – Vol.6
ENQUIRIES : Mr G. Tromp
EXTENSION : 2761

17 JAN 2003

Ms S.Z. Mthembu
University of Natal
School of Nursing
Faculty of Community and Development Discipline
DURBAN
4000

Dear Ms Mthembu

APPLICATION TO CONDUCT RESEARCH AT NURSING COLLEGES IN KWAZULU-NATAL

Your letter dated 17 January 2003 refers.




Please be advised that authority is granted for you to conduct a research at Nursing Colleges in Kwazulu-Natal, provided that;

- (a) Prior approval is obtained from Heads of relevant Institutions;
- (b) Confidentiality is maintained;
- (c) The Department is acknowledged; and
- (d) The Department receives a copy of the report on completion.

Yours sincerely


SUPERINTENDENT-GENERAL
HEAD : DEPARTMENT OF HEALTH

NNM/mthembu-colleges2

	Charles Johnson Memorial Hospital		034-2711900	Private Bag X5555 NQUTU 3135
	Office of the Principal Nursing Campus	FAX E-MAIL	034-2710094	
				 : Enquiries: PRINCIPAL Date : 31. 01. 2003

ATTENTION: S. Z. MTHEMBU

Madam

PERMISSION TO CONDUCT A RESEARCH PROJECT

With reference to your letter dated 27. 01. 2003.

Kindly be advised that permission is hereby granted to you to conduct your research study on condition that confidentiality should be maintained.

Good Luck !

Yours faithfully

M. M. Dha

For **CAMPUS PRINCIPAL**

DEPARTMENT OF HEALTH

PROVINCE
KWAZULU-NATAL
HEALTH SERVICES

ISIFUNDAZWE
SAKWAZULU-NATALI
EZEMPILO

PROVINSIE
KWAZULU-NATAL
GESONDHEIDIENSTE

PRINCE MSHIYENI NURSING SCHOOL
PRIVATE BAG X 10
MOBENI
4060

TELEPHONE: (031) 9078156

FAX NO.: 9067772

07.02.03

Ms S.Z. Mthembu
University of Natal
School Of Nursing
Faculty of Community and Development Discipline
DURBAN
4000

Dear Sir/Madam

RE: PERMISSION TO CONDUCT A RESEARCH STUDY:
JANUARY/FEBRUARY 2003

Permission is granted to conduct a research study on analysis of the assessment of clinical learning in nursing education in an OBE context.

Yours faithfully



A.S. Radebe
College Principal

APPENDIX C

RESEARCH QUESTIONNAIRE

APPENDIX C

Section A: Demographic Data

Instruction: Please mark your response with an X on the following questions.

1. What is your age in years?

Below 25		1
26 – 35		2
36 – 45		3
Above 45		4

2. What is your pre-registration qualification?

Basic Nursing Degree		1
Diploma in General Nursing (Community, Psychiatry) and Midwifery		2
Diploma in General Nursing and Midwifery		3
Bridging programme		4
Other (specify).....		5

3. What is your teaching qualification? (Please tick all the programmes applicable to your qualifications).

Diploma in Nursing Education		1
B. Degree (major subject being Nursing Education)		2
Honors Degree (in Nursing education)		3
Master's Degree (in Nursing Education)		4
Other (specify).....		5

4. Which of the following basic clinical subjects do you teach and at which level?

		Year 1	Year 2	Year 3	Year 4
General Nursing Science	1				
Community Nursing Science	2				
Fundamental Nursing Science	3				
Midwifery	4				
Psychiatric nursing	5				
Other (specify).....	6				

5. Which of the following post-basic clinical subjects do you teach?

Advanced psychiatric nursing	1
Advanced midwifery	2
Community nursing	3
Critical care	4
Trauma	5
Orthopaedic nursing	6
Other (specify).....	7

6. Who are involved in assessment of clinical learning in your institution?

Nurse-educators	1
Clinical instructors	2
Preceptors	3
Ward staff	4
Other (specify).....	5

Operational definitions:

Nurse-educator is an individual with a teaching qualification in nursing.

Clinical instructor is an individual employed for clinical instruction and have a teaching qualification in nursing.

Preceptor is a registered nurse, specifically appointed to act as a resource person for the students and also responsible for seeing to it that they receive the maximum benefit from their allocation to the unit, be it a hospital or a community setting.

7. Is training in clinical assessment provided for individuals who do not hold a teaching qualification when required to participate in clinical assessments?

Yes		1
No		2

8. If yes, please describe the nature of the training that is provided including the content, process and duration.....
.....
.....
.....
.....
.....
.....

SECTION B: Common methods of clinical assessments used in assessing nursing students.

Instruction: Please mark your response with an X, and specify or elaborate where necessary.

1. Are you involved in assessing students clinical learning?

Yes		1
No		2

2. At what stage of the process are you involved? (Please tick all that is relevant)

Decision making regarding the method of assessment		1
Planning equipment and other resources needed		2
Implementation		3
Informing students about the results of assessment		4

2. Please list the clinical learning outcomes for one of the clinical nursing courses that you teach.

.....

.....

.....

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.....

.....

3. What methods **do you use** to assess attainment of these clinical learning outcomes?
(Please list all the methods that you use)

.....

.....

.....

.....

.....

4. What percentage of the final grade in this course do these clinical learning outcomes constitute?

.....

.....

.....

.....

.....

6. Are the methods listed in question 4 above able to assess the ability of a student to perform a set of task and actions in a given context? (Practical competence).

Yes		1
No		2

Please explain.....

.....

.....

.....

.....

7. Are the methods listed in question 4 above able to assess the student's understanding of what they are doing and why they are doing it? (Foundational competence).

Yes		1
No		2

Please explain.....
.....
.....
.....
.....
.....

8. Are the methods listed in question 4 above able to assess the student’s ability to integrate performance with their understanding so that they are able to explain the reason behind these adaptations? (Reflexive competence).

Yes		1
No		2

Please explain.....
.....
.....
.....
.....

9. What do you think is a problem (if any) with the assessment method that you currently use in assessing the stated learning outcomes for this particular course?

Reliability		1
Validity		2
Credibility		3
Feasibility		4
Authenticity		5

Please explain.....
.....
.....
.....
.....

10. Do you think that the methods of assessment you use for this course are the true reflection of student’s clinical learning?

Yes		1
No		2

Please explain.....
.....
.....
.....
.....
.....

11. Is the system of clinical assessment used in your institution transparent to students in that it explicitly states:

	1	2
	Yes	No
What the learner is expected to achieve?		
What criteria will be used to assess achievement?		
What the learner will have to do to show achievement?		
How performance will be assessed?		
The conditions under which or situation in which the assessment takes place?		
When the assessment takes place?		

APPENDIX D

COVERING LETTERS



School of Nursing
Faculty of Community and Development Disciplines

Durban 4041 South Africa
Telephone: +27 (0)31 260 2499
Facsimile: +27 (0)31 260 1543

10. 02. 2003

The Campus Principal
Ngwelezana College of Nursing
P/Bag X 20016
Empangeni
3880

Dear Colleague,

Research Project: **"Analysis of the assessment of clinical learning in selected nursing education institutions in KwaZulu - Natal in an OBE context".**

Thank you for your participation in this study. I am studying at the above university, doing a master's degree in nursing education. the research project is a requirement for the course.

Will you kindly complete the attached questionnaire? The questionnaire will take approximately 15 minutes to complete. Confidentiality will be maintained when dealing with the information gathered. You are not obliged to participate in the study if you are not interested.

Thank you,

Yours faithfully,

Mrs. S.Z. Mthembu

Supervisor

Prof. N.S. Gwele

27. 02. 03

Dear Colleague,

RE : PERMISSION TO CONDUCT A RESEARCH

**TOPIC : ANALYSIS OF THE METHODS OF ASSESSING CLINICAL
LEARNING IN NURSING EDUCATION IN AN OBE CONTEXT.**

I hereby wish to request permission to conduct a research project. This is a partial requirement for Master's Degree done at the above-mentioned university.

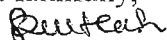
This study is basically looking at the methods of assessing clinical learning in nursing with the view that we are now using new methods of teaching such as Problem-based learning, community-based education, Case-based education etc. literature reviewed concentrated on assessment methods such as OSCE and Observation-based assessments which are traditional methods and also Portfolio's and Triple jump Exercise which are non traditional methods.

Please be informed that confidentiality and anonymity will be maintained, as no name is required when filling the form. No one is forced to participate in the project.

The questionnaire will take about 10-15 minute to fill.

Thank you for your participation.

Yours faithfully,



Mrs. S.Z. Mthembu.

Supervisor

Prof. N.S. Gwele