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CONCEPTIONS OF CRITICAL THINKING FOR NURSING
JUDGEMENT HELD BY NURSE EDUCATORS

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Abstract

Over the last decade there has been a major shift in nursing education with an emphasis on facilitating students to think critically. Nurses engaged in professional practice encounter, in their every day work, situations requiring multidimensional decision-making. In order to be safe in their practice nurses need to be critical thinkers. The Nursing Council of New Zealand (1999) requires nurses to make sound professional judgement based on research, and reflection, in decision-making and problem solving.

In the literature there is no clear definition of critical thinking as it relates to nursing judgement. In recent years there has been a move to broaden the conception of critical thinking from a linear problem solving process to include aspects of the affective domain. If nurse educators are to facilitate the development of critical thinking in students it seems essential that they have a clear understanding of the concept.

The purpose of this study was to explore the conceptions of critical thinking for nursing judgement held by a group of nurse educators working in the Health Studies Department of a large city Institute of technology. Methods they used to facilitate the development of critical thinking and measure its achievement in students was also investigate

A semi-structured interview was used to explore the nurse educator's conceptions. In addition the nurse educators where asked to discuss students work and critical incidents in clinical performance, which, in their opinion, demonstrated critical thinking.

The study revealed that the nurse educators considered that critical thinking included both a rational/analytical component and an intuitive/reflective aspect. They considered critical thinking to be essential for caring nursing practice. The most common means of facilitating critical thinking was dialogue and encouraging reflection on practice through journal writing

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DECLARATION

I declare that the work presented in this thesis is entirely my own independent study, and has not previously been submitted for a degree or diploma in any institution of higher education; and that to the best of my knowledge it does not contain any material previously published or written by another person except where due reference is made in the text.

Signature of Candidate

Patricia Julia Walthew

15, November 1999

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INTRODUCTION

In 1991 vision '2000', a national workshop involving nurse leaders meet to define the future of nursing needs in New Zealand. It was decided to establish nursing education at a degree level. This change in nursing in nursing education in New Zealand has altered the expectations of learning for nursing students. It is recognised that nurse engaged in professional practice encounter, in their everyday working life, complex, multivariable problems. They must be able to make independent, nursing decisions based on sound judgement. Nursing educational institutes are being asked to guarantee that nurse will emerge from their programmes with the knowledge and skill necessary to perform at this level.

Critical thinking is one of the key concepts in the health studies department in which this study took place. The department guarantees that nurses who emerge from the programme have the ability to think in a critical manner. As the department was about to undertake a curriculum review it was appropriate that a study related to the concept of critical thinking be undertaken. Informal discussion with the nurse educators in the department indicated that there was a lack of consensus as to a clear conceptualisation of the concept. As a concept critical thinking was in danger of being uncritically accepted

In recent years extensive debate in relation to the concept of critical thinking has appeared in nursing literature. Many of these studies have had their origins in North America. They have centred round the ability to define of critical thinking as it relates to nursing judgement, the importance of critical thinking to

nursing practice, methods nurse educators use to facilitate its development and measure its achievement

There is a clear indication in literature that the understanding of the concept of critical thinking as it relates to nursing judgement and decision making is moving away from a rational, linear, problem solving approach to include intuition and areas of the affective domain (Miller & Rew, 1989; Pless & Clayton, 1993; Tanner, 1993, 1997). The purpose of this study was to explore the conceptualisations of critical thinking held by nurse educators in the Department of Health Studies in which the study took place. It is thought a clear understanding of the concept is needed in order to facilitate its development. Congruence between the departments definition of critical thinking and methods the nurse educators used to facilitate, measure and evaluate its development were explored.

The following questions arose out of the literature:

Do the nurse educators perceive critical thinking to be an important concept in?

Do the nurse educators perceive critical thinking as being a generic set of skills or as being dependent on a specific body of knowledge?

Do the nurse educators consider that critical thinking has an affective component?

What factors do the nurse educators think affect the nurse's ability to think critically?

Are the nurse educators' conceptions of critical thinking congruent with the programmes goals?

Are the nurse educators' conceptions of critical thinking congruent with their methods of evaluating the construct?

What methods do the nurse educators use to facilitate the development of critical thinking in the students?

These questions were to assist in the construction of an interview sheet that was used to guide both the researcher and the participant. It was thought to be a useful technique to ensure that all information need was obtained while at the same time giving the participants freedom to explore and enlarge upon the concept. It must be emphasised that the purpose of this study was to gain an in-depth understanding of the nurse educators' own conceptions of critical thinking rather than restricting the information obtained to responses from a set body of questions

CHAPTER ONE

Historical and Educational Issues Related to the Study

Historical Background to Nursing Education in New Zealand

Nursing training in New Zealand began at the turn of the century as an apprenticeship-type training. Grace Neil, an early nurse leader, sought to improve the standard of nursing by introducing a three-year training programme culminating in a state examination by an independent board of examiners, leading to registration. Her ideas came to fruition with the advent of the Nurses Registration Act of 1901, making New Zealand the first country in the world to bring into being the registration of general nurses. This training took place in publicly funded schools of nursing attached to public hospitals, with the employee-nursing student providing much of the bedside nursing care. Registered nurses were involved more in supervisory and managerial type roles necessary for the daily running of the ward. This situation led to a strongly hierarchical organisation of nursing tasks according to the level of each person's seniority in the system. Christensen (1990, p. 10) quotes a final year student nurse in a hospital programme as late as 1993 stating "I don't really want to pass my exams because I won't be allowed to be a nurse any more".

In the 1970's the suitability of this type of nursing education began to be challenged. The New Zealand Nurses Association (1992, p. 12) had a vision of nursing service that required an autonomously thinking professional, free from medical dominance. The aim of nursing services was to be the continuing improvement and adaptation of nursing to meet the changing needs of the

people. In order to achieve this nurses must develop a climate in which they question their own practice; promote research; accept responsibility for making decisions; and advise, consult and work with colleagues in other disciplines to provide an improved health service.

It was recognised that the apprenticeship-type training, in which the student nurse did most of the bedside care, was inappropriate to provide professionals capable of giving the service described by the New Zealand Nurses Association. According to Christensen (1990, p. 10), there was concern over the consequences of a situation whereby patients were being nursed by students during critical life events, and registered nurses were not able to use their considerable knowledge and skills in bedside nursing.

Dr Helen Carpenter, a World Health Organisation nurse consultant, was appointed by the government in 1971 to make recommendations on the most appropriate system of nursing education for New Zealand. In her report on an improved system of nursing education for New Zealand, Carpenter (1971) recommended that responsibility for nursing education be transferred from the Department of Health to the Department of Education and that a nursing programme leading to an undergraduate diploma be established in an appropriate educational setting, with existing nursing schools to be phased out. It was recommended that staffing patterns for nursing service in public hospitals be established with the aim of increasing the proportion of qualified nursing staff in order to reduce the dependence on students. The Professional Services Committee of the New Zealand Nurses Association (1972) endorsed the recommendations that were accepted by the government.

A three-year comprehensive nursing education programme began at Christchurch and Wellington Polytechnics in 1973. In 1975 a further two programmes commenced in Nelson and Auckland. Further courses were slowly phased in and by 1988 there were fifteen polytechnics throughout the country offering comprehensive nursing courses. Hospital based training was slowly phased out, finally ending in 1989. However, there was considerable opposition to the changes. Many nurses, other health professionals and lay people felt that nurses learned by doing and that this could only be accomplished in the traditional hospital setting where the student nurse learned to perform tasks by imitating those slightly more senior to themselves in the hierarchical structure. Claire (1991) suggests a possible reason for this resistance to change was disunity between nurse educators and nurse practitioners, many of whom, Claire suggests, did not expect that nurses would have a need for advanced education.

The Education Amendment Act of 1990 enabled polytechnics to confer degrees, thus making these qualifications more accessible. Until that time degrees could only be conferred by universities. In 1991 'Vision 2000' - a national workshop involving nurse leaders from education, practice and management - took place in Auckland. The focus of the workshop was on defining future nursing needs in New Zealand. It was decided to establish nursing education at a degree level with professional nurses entering the work force with a bachelor's degree. During the 1990s nurses were expected to work in increasingly complex situation. The economic health reforms, which emphasised the changing focus of health care from acute hospital to

community based setting, resulted in a higher degree of acuity among hospital patients who tended to stay in hospital for a shorter period of time. In the community, families are now expected to accept greater responsibility for the care of their relatives, often with close nursing supervision. Whether the nurse is working in a hospital setting where patients are more acutely ill, or in a community setting where problems encountered are often complex and multidimensional, the nurse requires advanced knowledge and expertise. Litchfield (1991, p.23) suggests that "For nurses to work in an expanded way across settings, they require educational opportunity for advanced study in nursing to use theory, practice and research."

The Bachelor of Health Science Degree at the Institute in which the Study was Conducted

The institute in which the study was conducted established a Bachelor of Health Science (Nursing) degree in 1995. All nurse lecturers were involved in the development of the curriculum, which was largely influenced by Bevis and Watson's (1989) *Towards a Caring Curriculum: A New Pedagogy for Nursing*. With the consultation of Dr Judith Christensen, the first person to have gained a PhD in nursing in New Zealand and author of *Nursing Partnership – A Model for Nursing Practice* (Christensen, 1990) curriculum development began in 1993. The nurse educators identifying core values in nursing and education upon which the philosophy of the degree and profile of the graduate nurse were structured. Key concepts included primary health care, cultural safety, nursing, caring, praxis, and critical thinking.

Bandman and Bandman's (1995,p. 5) definition of critical thinking was adopted, which describes critical thinking as "the rational examination of ideas, inferences, assumption, principles, arguments, conclusions, issues, statements, beliefs and actions. This examination covers scientific reasoning, including the nursing process, decision-making and reasoning in controversial issues".

Critical Thinking and Nursing Judgement

Gillmore (1993) suggests several reasons for the importance of critical thinking in nursing today:

- The rapid rate of change in the health care system demands prompt and competent decision-making.
- Critical thinking provides novel solutions to problems encountered in everyday nursing practice.
- Because of the complexity of our society nurses frequently encounter decisions requiring multidimensional considerations.

Nurses engaged in professional practice must be able to make independent decisions based on sound nursing judgement. Kataoka-Yahiro and Saylor (1994, p. 521) define nursing judgement as "the clinical judgement of nurses relevant to nursing problems in a variety of settings. nursing judgement entails decisions formed in direct, semi-direct and indirect nursing care roles". They suggest staff nurses making decisions about patient care is an example of a direct nursing care role. A director of a nursing agency making decisions about

the distribution of nursing resources is an example of semi-direct nursing role. An example of an indirect nursing role is a nurse educator making curriculum decisions. Thus, in their everyday work, nurses encounter situations requiring complex multivariable decision-making.

With the current emphasis on critical thinking in nursing, it is reasonable to expect that there would be a strong correlation between critical thinking and nursing clinical judgement. Miller and Malcolm (1990) suggest that the ability to think critically is fundamental in the process of forming clinical judgements. Brooks & Shepherd (1990) found a weak, though significant, positive correlation between critical thinking and clinical decision-making. However a number of research studies have found no significant statistical relationship between critical thinking and clinical judgement (Kintgen-Andrews, 1991; Pardue, 1987; Sullivan, 1987). Tanner (1993, p. 100) suggests that the failure to find a strong correlation between critical thinking and clinical judgement could be because critical thinking has been "conceptualised as something that it is not, such as problem-solving or the nursing process". Frequently the Watson-Glaser Critical Thinking Appraisal (WGCTA) Scale has been used to measure critical thinking in nursing research (Adams, 1999; Brooks & Shepherd, 1990, 1992; Gross, Takazairo & Rose, 1987; Hartly & Aukamp, 1994; Howenstein, Bilodeau, Brogna & Good, 1996; Saucier, 1995; Sedlak, 1997). Pless and Clayton (1993) suggest that the reason why no significant relationship has been found between critical thinking and clinical judgement is that it is difficult to adequately measure a complex construct such as critical thinking by using a broad, itemised, objective test such as the WGCTA.

A number of definitions of critical thinking as it relates to nursing judgement appear in nursing literature, many borrowed from philosophy or education. Hickman (1993) suggests that Watson and Glaser's (1964) definition in which critical thinking is seen as a composite of attitudes, knowledge and skills is frequently used. Brigham (1993, p. 49) cites Paul's (1990) definition of critical thinking as "disciplined, self-directed thinking which exemplifies the perfection of thinking appropriate to a particular mode or domain of thought". Birx, (1993 p. 49) cites Ennis (1987) who defines critical thinking as "reasonable reflective thinking that is focused on deciding what to believe or do". However Birx adopts Smith's (1990) description of critical thinking as "a single contextual, all-embracing operation of the mind, powered by an imagination that never rests, not a collection of disparate skills", suggesting that this holistic view of critical thinking resonates with nursing's holistic view.

It has been suggested (Birx, 1993; Jones & Brown, 1991; Kataoka-Yahiro & Saylor, 1994; Tanner, 1993, 1997; Woods, 1993) that critical thinking as a concept in nursing education has not been clearly understood by nurse educators. Critical thinking in nursing has sometimes been narrowly defined as a rational, linear, problem-solving activity that reflects the nursing process (Adams, 1999; Birx, 1993; Chang & Gaskill, 1991; Gillmore, 1993; Jones & Brown, 1991; Tanner, 1993). Orlandano first introduced the concept of the nursing process in 1961. Since that time it has been used widely by nurses as a basis for planning and implementing patient care, and has often been considered as synonymous with critical thinking in nursing.

The nursing process has been defined by Badman and Bandman (1995, p. 83) as a "variation of scientific reasoning used by nurses to diagnose and to treat human responses to potential and actual health problems". The nursing process consists of five steps: 1. Assessment - gathering data regarding the client, family or the community for the purpose of identifying needs problems and concerns; 2. Diagnosis - critically analysing the data gathered during the assessment phase in order to draw conclusions regarding the clients needs, problems and concerns; 3. Planning – the development of strategies to prevent, minimise or correct the problems identified in the nursing diagnosis 4. Implementation - the initiation of the action necessary to achieve the outcomes defined in the planning stage and 5. Evaluation - an ongoing process, which determines the extent to which the goals of care have been, achieved (Taptich, Iyer & Bernocchi-Losey, 1990).

Recently the underlying assumptions of the nursing process have been challenged. Although problem solving is an important part of patient care, it has been suggested (Allen, Bowers & Diekelman, 1991) that solving clinical problems in a rational step by step manner is insufficient. Tanner (1997) refers to this linear problem-solving approach to critical thinking as 'Vulcanising' critical thinking (referring to Spock of Star Trek™ fame). Spock, the model of rationality, exhorts his humanoid spaceship mates to strive for emotional detachment. Tanner expresses concern that a number of nursing programmes have adopted what she describes as 'Vulcan mores' by accepting definitions of critical thinking, which exclude affective components, and asks:

If critical thinking is in some way being equated with the nursing process (or decision-making or problem-solving) and if affective components are not being included, what in the world is happening to the relation dimension of nursing practice, to caring and caring practice that draws, at least to some extent, on emotional involvement? (Tanner, 1997, p. 3).

Tanner suggests that the concept of critical thinking needs to be broadened to include aspects of the affective domain if it is to serve the purpose of nursing. In the affective domain Tanner includes attitudes and dispositions towards critical thinking, as well as emotions either as part of rationality or distinct from it. Pless and Clayton (1993) also call for a broader concept of critical thinking, one based on the logic of the discipline of nursing and on the knowledge embedded in the clinical practice of nursing. The concept of intuitive knowledge embedded in clinical nursing decision-making and practice has been largely developed by Benner (1984) who refers to intuitive knowledge as "knowledge that occurs over time in the practice of an applied discipline" (Benner 1984, p. 1). Benner, refers to practical knowledge as 'knowing how' in contrast to the 'knowing that' of theory-based knowledge. She suggests that knowledge is developed in an applied discipline by making visible, and clearly documenting, the 'knowing how'. Benner based her theory on the Dreyfus model (Dreyfus, 1981; Dreyfus & Dreyfus, 1980) which depicts the student as moving through five different levels of proficiency in skill acquisition. These levels range from novice, advanced beginner, competent and proficient through to expert. Each level is qualitatively different. For example, a novice nurse is

very much rule-driven. A competent or proficient nurse needs to use a step by step analytical problem-solving process, whereas an expert nurse is able to draw on past situations to perceive the current situation as a whole without considering a large number of irrelevant options.

Much of the nursing literature related to critical thinking and nursing decision making in the last decade has centred around defining the concept of critical thinking, developing models to represent it and developing means to measure it. Facione, Facione and Sanchez (1994) summarise the development, reliability and validity of the California Critical Thinking Disposition Inventory (CCTDI) which is based on a consensus definition of critical thinking developed by the American Philosophical Association (1990), who define critical thinking in the following manner:

The ideal critical thinker is habitually inquisitive, well informed, trustful of reason, open-minded, flexible, fair-minded in evaluation, honest in facing personal biases, prudent in making judgements, willing to reconsider, clear about issues, orderly in complex matters, diligent in seeking relevant information, reasonable in selection of criteria, focused in inquiry, and persistent in seeking results which are as precise as the subject and the circumstance of the inquiry permit.

(Facione, Facione & Sanchez, 1994, p.345)

Facione et al (1994) suggest this definition captures not only the thinking skills but also the 'critical spirit' which includes dispositions, and they make links

between specific dispositions, e.g. open-mindedness, and aspects of nursing practice.

Rather than using a general definition of critical thinking, Pless and Clayton (1993) argue for a re-conceptualisation of critical thinking based on the theory of the discipline of nursing and on knowledge embedded in the clinical practice of nursing. Along similar theoretical lines Kataoke-Yahiro and Saylor (1994) also contribute to our understanding of critical thinking in nursing by developing a model of critical thinking which includes both general and discipline-specific knowledge, as well as competencies, standards and dispositions.

Jacobs, Ott, Sullivan, Ulrich and Short (1997), Rane-Szostak and Fisher Robertson (1996) and Videbeck (1997a) emphasis the need for congruence between curriculum definition of critical thinking and methods used to evaluate it. Videbeck (1997a) used a self-reporting questionnaire to describe the practices regarding the definition and evaluation/measurement of critical thinking in fifty-five baccalaureate nursing programmes in North America and found that frequently there was an incongruence between the definition of critical thinking and the methods used to evaluate it. Forty-three of these programmes included both affective qualities and cognitive abilities in their definitions of critical thinking but frequently programmes used methods generally considered as cognitive only, such as problem-solving, decision-making and the use of the nursing process to evaluate critical thinking.

Rane-Szostak and Fisher Robertson (1996) compare the use of commercial instruments and portfolios to measure critical thinking and suggest that the

possible higher degree of involvement of students in the use of portfolios makes them an attractive alternative. Facione and Facione (1996a) also advocate the use of assessment portfolios and suggest that the goal should be to predict how well graduates will make clinical judgements in highly variable, emotional and politically sensitive situations. Oermann (1997) also addressed the need for a multi-model method of evaluating critical thinking in clinical practice, suggesting the use of observation of students' practices, Socratic questioning for critical thinking, problem-solving strategies and written assignments

Critical Thinking and Nursing Education

The development of critical thinking has become of increasing concern to nurse educators. In its *Criteria and Guidelines for the Evaluation of Baccalaureate and Higher Degree Programs in Nursing*, the United States National League for Nurses (1992) cites critical thinking as a required outcome for nursing education. Referring to this, Tanner (1993, p. 99) suggests that it is essential that attention be given to "how we define critical thinking, what educational methods support its development and how we can be assured that students have achieved some acceptable level of skill". In New Zealand nursing education there is also an emphasis on critical examination of practice. The Nursing Council of New Zealand (1997, p. 30), when discussing nursing education in the twenty-first century, state "Health care services require critically reflective practitioners who can constantly examine their practice to develop new knowledge and insights."

The literature is inconclusive regarding the impact of nursing education on critical thinking. Bauwens and Gerhardt (1987), Kintgen-Andrews (1991),

Maynard (1996) and Sullivan (1987) found no significant gains in critical thinking over the period of students' nursing education programmes. However, Berger (1984) and Gross, Tatazana and Rose (1987) reported a significant improvement in critical thinking throughout the programme. Howenstein, Bilodeau, Brogna and Good (1996) found that age and years of experience were negatively correlated with critical thinking yet the level of education was positively related to critical thinking. They suggest that as a result of these findings older nurses should be encouraged to pursue higher education. Haffer and Raingraber (1998) found confidence, rather than education, to be a key factor in developing critical reasoning abilities in relation to nursing judgement and that confidence increased as the nurse gained experience. Maynard (1996) also found that the experiential component of practice was the most influential factor in the development of competence and critical thinking. Maynard uses Benner's (1984) stages of skill development (novice, advanced beginner, competent, proficient and expert) to define professional nursing competence. Benner suggests that as nurses gain experience they are able to function in a qualitatively different manner. The novice nurse who has no experience of the situation functions in a rule-driven manner whereas the expert nurse no longer relies on analytical principles to guide action but can draw on an enormous background of experience as the nurse has 'an intuitive grasp of each situation'.

If nurse educators are to be held accountable for facilitating the development of critical thinking in their students, it would be reasonable to expect that they would have a clear understanding of the concept and be proficient critical

thinkers themselves. While a large number of research studies related to critical thinking and nursing focused on nurse practitioners and nursing students, only three studies were found on critical thinking as it relates to nurse educators. One of the studies (Hartley & Aukamp, 1994) used the Watson-Glaser Critical Thinking Appraisal (WGCTA) to measure the critical thinking abilities of fifty nurse educators and found that the nurse educators had a significantly higher level of critical thinking than did a similar sized sample of nursing students. However, in a second study, Saarmann, Freitas, Rapps and Reigel (1992), also using the WGCTA, found that the critical thinking ability of nurse educators was not significantly higher than that of nursing students when the influence of age was controlled statistically.

A third study (Chenoworth 1998), demonstrated that both nursing students and nurse educators considered critical thinking to be an important component of nursing practice because nursing was thought to be a process requiring a combination of cognitive abilities, motivation and action, all deemed to be components of critical thinking.

Although there is no clear definition of critical thinking for nursing judgement nursing literature has drawn widely on educational and philosophical theories to discuss and debate the issue. The following chapter will discuss critical thinking from two distinctly different perspectives; a traditional viewpoint and a feminist perspective.

CHAPTER TWO

Concepts of Critical Thinking - Traditional and Feminist Viewpoints

In our rapidly changing, complex society critical thinking has become imperative in all aspects of life (Paul, 1993). However critical thinking is not a well-defined or clearly understood concept? Two broad accounts of critical thinking are nonetheless evident, one firmly based in a traditional view, the other embracing feminism. Each needs to be considered.

Traditional View of Critical Thinking

A representative viewpoint of critical thinking theory's traditional focus will be presented using the work of Ennis, Siegel, Paul and McPeck. Ennis defines critical thinking in the following way: "Critical thinking is reasonable reflective thinking that is focused on deciding what to believe or do" (Ennis, 1987, p. 12). He emphasises that this definition implies that critical thinking involves more than reflective thinking alone; it also involves action. Ennis maintains it is not sufficient to have the skills necessary to be a critical thinker. One must also have the tendency to use these skills.

Ennis (1987) views the correct assessment of statements as the basis of critical thinking, focusing his attention on itemising the skills and dispositions involved in critical thinking. His taxonomy of critical thinking consists of twelve aspects, which he describes as abilities or skills, and fourteen dispositions. The dispositions consist of such items as:

- seek a clear statement of the theses
- try to be well informed
- use and mention credible sources

His list of skills focuses very much in the area of logic:

- analysing arguments
- asking and answering questions of clarification
- judging the credibility of a source
- deducing and judging deductions
- inducing and judging indications
- making value judgements (Ennis, 1987, p2-12.).

While the list is very extensive, Johnson (1992) suggests it poses some questions. Does it cover all the needed skills? Must a critical thinker be proficient in all these cognitive skills? If not, how do we detect which skills are essential?

Siegel (1988, 1992), like Ennis, views critical thinking as involving skills and dispositions. He maintains that critical thinking has two key components, a reason-assessment component involving skills relevant to correct reasoning, and a critical spirit consisting of dispositions, for example, the disposition to seek reasons in making judgements, attitudes, including a respect for the importance of reasoned judgement, and character traits. Siegel argues that to seek reasons one has to be committed to principles because principles are necessary to determine the relevance of reasons. Critical thinking is principled thinking which is impartial, consistent and non arbitrary -

"...rationality/justifiability of particular beliefs is absolute in that it does not vary across persons, times, culture..." (Siegel, 1992, p. 104). Furthermore, like Ennis, Siegel considers critical thinking involves an action component. Siegel (1988, p. 32) defines a critical thinker as a person who is appropriately moved by reason. Thus a critical thinker is a rational actor with not only the ability to access reason but also the disposition to do so. A critical thinker must have a "love of reason" - a habitual inclination to seek reasons. This is what Siegel (1988, 1992) refers to as the 'critical spirit', suggesting that:

A person who is a critical thinker must be to the greatest possible extent emotionally secure, self confident and capable of distinguishing between having faulty beliefs and having a faulty character. A positive self image and traditionally conceived psychological health are important features of the psychology of the critical thinker, for their absence may well present practical obstacles to the execution of critical thinking (Siegel, 1988, p. 40).

It follows from this description that Siegel considers a critical thinker to be a certain sort of person with certain dispositions, habits of mind and character traits. Any deficit in character is seen as a hindrance to critical thinking.

Paul (1993) warns of the importance of not placing too much emphasis on the definition of critical thinking because of the complexity of its nature. However, he does offer the following definition:

Critical thinking is disciplined, self-directed thinking which emphasises the perfection of thinking appropriate to a particular mode or domain of thinking. It comes in two forms. If the thinking is disciplined to serve the interests of a particular individual or group to the exclusion of other relevant persons and groups, I call it sophistic or weak sense critical thinking. If the thinking is disciplined to take into account the interests of diverse persons and groups, I call it fair-minded or strong sense critical thinking (Paul, 1993, p.137).

From the definition above it can be seen that Paul, like Siegel, emphasises personal characteristics as well as skills in his conceptualisation of critical thinking. He goes on to say "I favour a formulation that highlights the intimate relationship between the component skills of critical thinking with the traits of the critical thinker" (Paul, 1993, p.139). However, Paul takes a somewhat different approach to critical thinking than Siegel. According to Siegel, one is either a critical thinker or not. Paul draws a distinction between what he calls weak sense critical thinking and strong sense critical thinking.

Paul (1987, 1993) claims people are by nature egocentric and ethnocentric and have a tendency to be irrational. They have a tendency to want to present themselves in the best possible light. Weak sense critical thinkers are adept at presenting arguments in such a way that protects them from examining their own deep-seated egocentric beliefs. In order to engage in strong sense critical thinking it is necessary to be willing to scrutinise one's deep-seated beliefs in order to recognise and overcome egocentrism in one's own thinking and thus become open to others' points of view. This, suggests Paul, does not come

naturally. It has to be learned, practised and refined. "It is certainly of the nature of the human mind to think - spontaneously, continuously, and pervasively - but it is not of the nature of the human mind to think critically about the standards and principles guiding its spontaneous thought" (Paul, 1993, p. 134).

Paul maintains that few of us are aware of our own internal biases that affect the process that we use to construct a logical point of view. He considers that the education system has not encouraged many students to be critical thinkers, citing the teaching of history as an example. Most teachers, he claims, teach history from their own nation's point of view and thereby teach students to think monologically rather than multilogically. One dominant theory or established procedure can settle monological issues. However, most problems in our everyday life are multilogical and need to be approached from diverse points of view. Paul suggests this requires dialogical thinking, which he describes as the ability to step outside oneself and see things from another point of view.

McPeck's (1981) view of critical thinking differs in a number of ways from what he describes as the standard view of critical thinking expressed by Ennis, Paul and Siegel. He considers critical thinking to be subject specific and, according to McPeck, the epistemology of various disciplines is of utmost importance. He acknowledges the role logic plays in critical thinking but maintains that knowledge and experience are of central importance. McPeck describes critical thinking in the following manner:

The phrase 'reflective scepticism' captures the essence of the concept, but a more complete description would be something like

'the disposition and skill to do Y in such a way that E (the available evidence from a field) is suspended (or temporarily rejected) as sufficient to establish the truth or viability P (some proposition or action with X). (McPeck 1981, p. 13)

Clearly McPeck considers critical thinking to include both disposition and skills, however knowledge is of vital importance. McPeck (1981, p. 7) talks about 'the appropriate use of scepticism' and considers that this requires a firm grounding in knowledge. He considers that critical thinking is different in each discipline. McPeck does not think that because a person thinks critically in one area it necessarily follows that that person thinks critically in all other areas, as he considers there are no generic critical thinking skills. As McPeck (1990, p.58) maintains that critical thinking is integrally linked to a specific field of knowledge, he questions whether Ennis' twelve abilities are in fact generalisable abilities. It follows from the above argument that McPeck does not consider it possible to teach critical thinking in the abstract, divorced from a specific domain of knowledge.

Feminist View

Although the descriptions of critical thinking given by Ennis, Paul, Siegel and McPeck differ in various ways, they all agree that critical thinking has two components; a reason-assessment component, consisting of skills necessary to assess reason and arguments, and a critical spirit component, which consists of dispositions and attitudes. All four writers present a traditional perspective of critical thinking. They take a rational approach to thinking as a means of acquiring knowledge. They view reasoning as a set of distinctly conscious

mental operations that precede and guide human action. A number of women writers (Addelson, 1993; Bailin, 1993, 1995; Belenky, Clinchy, Goldberger and Tarule, 1986; Code, 1991; Gilligan, 1982; Martin, 1992; O'Loughlan, 1991; Thayer-Bacon, 1993) have presented an alternative view in which subjectivity is valued alongside rationality as a means of knowledge acquisition. Although they have written extensively, their work has not been regarded with the same seriousness as that of their male counterparts and is less often acknowledged. For example, when defining critical thinking Johnson (1992) discusses the work of Ennis, McPeck, Siegel, Paul and Lipman but no mention is made of any woman's work. It may well be asked whether, if men are responsible for defining the concept of critical thinking, women's ways of thinking are adequately considered.

Throughout history women have been depicted as incompetent thinkers. According to Code (1991), Rousseau maintained that men and women should be educated quite differently because women's sensual nature led to inferior reasoning, while Kierkegaard regarded women merely as aesthetic beings incapable of higher reasoning. Wheary and Ennis (1995) suggest that the stereotyping of women as less competent thinkers compared to men has been a characteristic of our education system over the years. They claim that this stereotyping is found not only in higher education but throughout the entire education system, and cite research by LaFrance (1991) and Cooper (1987) which showed that boys were encouraged to participate in class to a much greater degree than girls, and that boys more frequently than girls were asked questions that required critical thinking. This stereotyping of women as less

competent thinkers than men has in turn reduced women's opportunity to demonstrate their critical thinking abilities. Wheary and Ennis (1995) address the question of why there is less acknowledgement of female efforts in the development of critical thinking theory and texts, and suggest that the standard content of critical thinking courses and literature may not be congruent with female ways of knowing.

Over the years there has been a lack of research into female ways of thinking. For example, Perry's (1968) study into intellectual development and Kohlberg's (1984) study into moral development reported only the experience of men. It was these studies which prompted Gilligan (1982) and Belenky et al (1986) to research the approaches women take to thinking and knowing. Their studies have shown that a number of characteristics of thinking generally thought to be more typical of female thinking are absent from traditional concepts of critical thinking. These include a linking between self and object of thought, attention to context, and emotions. The absence of these constructs, if indeed they are absent, from the traditional concept of critical thinking has serious implications for our understanding of critical thinking and requires further consideration.

The above constructs will be discussed in relation to both traditional approaches to critical thinking and the work of feminist scholars. The work of Thayer-Bacon, a feminist scholar, will be drawn on throughout this discussion with reference being made to her model of critical thinking, which she also refers to as constructive thinking. She critiques traditional concepts of critical thinking as presented by Ennis, Siegel and Paul, suggesting they are incomplete in that they do not allow for knower perception.

Linking between self and object.

A number of female scholars (Bailin, 1993, 1995; Belenky et al, 1986; Code, 1991; Condon, 1992; Gilligan, 1982; Martin, 1992; Thayer-Bacon, 1993) suggest that the traditional view of critical thinking is analogous to the scientific method. It is seen as a process based on logic in which thinkers must distance themselves from the object of thought. Code (1991) claims that traditional concepts of critical thinking have emphasised propositional knowledge where there is a clear distinction between the knower and the known. Knowledge gained through intimate relationships between self and the object of thought is ignored. Belenky et al (1986) and Gilligan (1982) suggest that the linking between self and object of thought is an essential part of female thinking and ways of knowing, while Thayer-Bacon (1993, p. 323) considers what a knower brings to the knowing is as important as the knowing itself "yet in my view it is impossible to get rid of one's views and be objective".

Thayer-Bacon presents a model of critical thinking which she calls constructive thinking to differentiate it from the traditional concept of critical thinking. It is constructive in the sense that it involves an integration of personal and expert knowledge, which she sees as lacking in traditional concepts of critical thinking. Ennis's theory, she claims, is so concerned with the rational that it has little place for subjective knowing. Thayer-Bacon considers that a constructive thinker would make a real effort to commune with the other person to ensure that understanding had taken place before applying the rational criteria and skills described by Ennis. She describes this communion as a real exchange of knowledge, with valuable contributions being made by all involved.

Thayer-Bacon challenges Siegel's claim that reality can be accurately represented by being impartial, consistent and non-arbitrary, suggesting that although we can check ideas for coherence there is a subjective component in all our thinking, developed through social interaction. It is through this subjective component that we filter all our thinking and knowing. Siegel does acknowledge the importance of subjective knowing but only because he considers it necessary to be psychologically healthy to be a good critical thinker.

Paul's strong sense critical thinking has many of the elements of constructive thinking. He emphasises the need to understand the other person's perspective and worldview and stresses interconnectedness and contextual relativism. Paul (1993, p.126) argues that "much of what is known is constructed by the thinker as needed from context to context, not prefabricated in sets of true statements about the world. "However, Paul stresses the need to distance oneself from the critical thinking process in order to understand the other person's point of view fairly. Thayer-Bacon criticises this position advocating the development of constructive thinkers in whom self-knowledge is integrated with objective knowledge. She argues that constructive knowing is based on the premises that knowledge comes from personal experience rather than from the received knowledge of authority. Constructive knowers hold judgement in abeyance and first try to understand the other persons position and way of thinking. Access is gained to other people's knowledge through empathy. Because ones own personality adds to the understanding in order to be a proficient constructive knower it is necessary to develop self-knowledge.

Attention to context.

Traditional approaches to critical thinking have been criticised (Code, 1991; Gilligan, 1982; Martin, 1992; Thayer-Bacon, 1993) for over-emphasising principled thinking but failing to take into consideration the particulars of the situation. Thayer-Bacon suggests that traditional paradigms for knowing leave little room for contextuality. In response to Thayer-Bacon's criticism, Wheary and Ennis (1995) argue for the importance of adhering to universal principles (such as not endorsing a hypothesis if we know of a plausible alternative) but acknowledge that principles have limitations. They cannot take into consideration all the factors that influence thought, action and decisions. Wheary and Ennis suggest that traditional views of critical thinking do in fact advise of the need to take into consideration the details of the situation. Thayer-Bacon's original criticism seems overstated, for later in her discussion she draws attention to the fact that Ennis suggests that we should seek reasons, try to be well informed, take into account the total situation, be open minded and be sensitive to the feelings, level of knowledge and degree of sophistication of the other person. Siegel also considers a critical thinker to be someone who is moved by reason, values other people's ideas and thoughts and is willing to listen to them and respond to them, while Paul urges examination of world views and considers situations should be approached from multiple perspectives. It seems that Thayer-Bacon's argument is with the *emphasis* traditional paradigms of critical thinking place on rationality, while understating the importance of context, relationships and emotions that she sees as fundamentally important. Thayer-Bacon considers that knowledge is contextual: how we think and the language we use are influenced by others

around us and the relationships we have with them. She suggests we develop our thinking skills in much the same way that we develop our communication and social skills, in relation with others.

Emotions and caring.

Although traditional concepts of critical thinking have sometimes allowed 'rational passions' Thayer-Bacon (1993) believes that many theorists have attempted to separate thought from feelings and either removed or diminished the importance of feelings. It has been suggested (Martin, 1992; Norris 1995; Thayer-Bacon, 1993) that feelings are an important part of critical thinking. Thayer-Bacon maintains that rational arguments cannot be devoid of feelings. When we think about something, doubts and concerns arise and reasons are sought. Feelings are involved because the person must make judgements and choices about which feelings to attend to and which to leave unattended. Caring is necessary in this process. She considers the ability to be caring is as important as the ability to be rational in order to be a good critical thinker, because caring is necessary to decide which ideas to attend to and to ensure ideas have been carefully considered. Caring is defined not as loving or even liking someone but as "being receptive to what another has to say and open to hearing the other's voice more completely and fairly" (Thayer-Bacon, 1993, p. 325). She goes on to describe this as an attitude of acceptance, trust and inclusion, a valuing of the other perspective. Although traditional critical thinking theories would all advocate an understanding of the other individual's point of view, they differ considerably from Thayer-Bacon's viewpoint. According to Ennis, critical thinking leads to belief whereas Thayer-Bacon

suggests the critical thinker should first attempt to believe the other person in order to ensure understanding has occurred before using rational skills to critique the other person's ideas. Siegel (1988) suggests critical thinking involves being appropriately moved by reason. However, Thayer-Bacon suggests that to be so moved requires caring. Contrary to Paul (1987) who advocates distancing oneself from the object of critical thinking in order to reason in a fair-minded and open fashion, Thayer-Bacon believes it is caring that makes it possible to be fair-minded.

Norris (1995) supports Thayer-Bacon's position and describes it as a narrative genre of discourse, characterised by a willingness to engage sympathetically rather than argumentatively with the other person. Norris is using the language of postmodernism, to suggest that in order to understand Thayer-Bacon's argument it is necessary to, temporarily, move from the position of reliance on universally valid knowledge to adopt a post-modern perspective which rejects universal reason and allows for a plurality of voices and narratives. He makes it clear that he is not advocating the rejection of rationality but rather arguing for the temporary suspension of judgement. He suggests that the narrative genre of discourse, rather than the argumentative mode, might be a more suitable form of initial engagement as it enables attention and empathetic understanding of the other person: "Please tell me your story. Tell me about your life and how the world looks through your eyes. Are you able to recall instances when you felt a bias?" (Norris, 1995, p.206). Norris suggests that engaging in this sort of dialogue before becoming engaged in an argumentative genre would be helpful in learning more of the motivation and origins of the other person's ideas. He

refers to the work of Jane Roland Martin as an author who writes from the perspective of both the argumentative and narrative genres.

Martin (1992) argues against the demand traditional concepts of critical thinking seem to make regarding the need to distance oneself from the subject matter. She suggests that there is a need to recognise a different type of critical thinking, one that requires a close identification with the object of thought, and cites the work of two female scientists, Barbara McClintosh (1983) and Ann Briton (1981). Both these scientists work at a cellular level and Martin acknowledges that it is generally assumed that when working at this level there is no alternative but to separate the thinker from the object of thought. Studies of these two women scientists suggest otherwise. Martin describes McClintosh's relationship with the corn cells with which she was working as a personal and intimate relationship. McClintosh is quoted by a colleague as saying:

When I was really working with them I wasn't outside, I was down there. I was part of the system. I was right down there with them, and everything got big. I was even able to see the internal parts of the chromosomes – actually everything was there. It surprised me because I actually felt as if I was right down there and these were my friends (Keller, 1983, p. 117)

Martin suggests that this intimate relationship McClintosh feels for the corn cells, this merging of self with the object of study, is also evident in the work of Ann Briton, a scientist working in the area of cancer research. Martin maintains

that this style of critical thinking which requires intimate merging of self with the object of thought is considered a female way of thinking and is not generally accepted in current concepts of critical thinking. She suggests that it is the caring, compassion and concern that stem from the intimate relationship of the knower with the known that should move the critical thinker to action. To illustrate her argument she cites several incidents. In one of these incidents she describes a situation where a lecturer was unable to understand why a group of black students in Mississippi in the 1960s should want to claim a particular, rather unappealing, beach for themselves. The lecturer was looking at the problem from a distant, theoretical aspect and was unable to appreciate the problem of racial oppression. He was unable to intimately relate to the students and therefore was unable to see the problem from their perspective. Lack of caring resulted in ideas not being properly understood. Both Thayer-Bacon and Martin argue that the ability to see the situation from the perspective of the other person is fundamental to critical thinking, and caring, concern and consideration are fundamental in achieving this process.

Munhill (1998) relates subjective knowing to nursing. She agrees, with Thayer-Bacon and Martin that the knower needs to see the situation from the perspective of the other person, the patient. However, she warns against reliance on the nurse's subjective view of reality and suggests that assumed knowing can lead to a potentially destructive relationship in which the nurse's assumptions are imposed upon the patient. She argues that a nurse cannot possibly know or understand a patient on their first encounter and describes awareness of this as a state of 'unknowing'. This awareness enables the nurse

to withhold conclusions and, ultimately, forge an authentic working relationship with the patient.

CHAPTER THREE

Methodology

Choosing a Method

The choice of methodological approach was largely influenced by the work of Guba and Lincoln (1994, p.107). Guba and Lincoln describe a paradigm as a set of basic beliefs, that represent a world view that " that defines for its holder, the nature of the 'world', the individuals place in it and a range of possible relationships to the world and its parts. "They claim that the beliefs are basic because "they must be accepted simply on faith (however well argued); there is no way to establish their ultimate truthfulness. "Guba and Lincoln (1994, p. 108) identify four paradigms: positivism (the received view), post positivism, critical theory and related ideological positions, and constructivism. They describe these paradigms as interpretative frameworks based on ontological, epistemological and methodological assumptions that represent a worldview for the holder. They claim that no one paradigm can be held as superior to any other as "any given paradigm represents simply the most informative and sophisticated view that its proponents have been able to devise, given the way they have chosen to respond to the three (ontological, epistemological and methodological) defining questions".

The paradigm used to guide this research was constructivism. as it represents the worldview of the researcher who believes that people construct their own social reality. Guba and Lincoln (1994, p 108) claim that the aim of inquiry using this paradigm is "understanding and reconstruction of the construction

that people (including the inquirer) initially hold". The aim of this study was to gain an understanding of the concept of critical thinking held by the nurse educators by studying this from the emic, or inside view, of the participants. According to Guba and Lincoln (1994) constructivism takes an ontological stance that social reality is assumed to be multiple and constructed, rather than singular and tangible, and dependent on the individual person's (or group's) holding of the construct. The investigation process creates epistemological knowledge:

Within this study a descriptive, interpretative approach was used to enable the concept of critical thinking to be studied from the emic perspective of the nurse educators. Denzin and Lincoln (1994) point out that traditional quantitative methods, with their emphasis on objectivity and efficiency, are but one way of telling a story. It was felt that the rich description of qualitative research would provide a more in-depth understanding of the nurse educators' conceptualisations of critical thinking as it relates to nursing judgement, the social constraints that have shaped their conceptions, and the effects these have on their professional teaching. The goal was to understand rather than control and the aim was to gain knowledge that would be both useful and empowering to the participants.

Throughout this study the tension between traditional critical thinking theories, with their emphasis on rationality and objectivity, and a feminist view point, which considers contextuality and affective components equally important, was constantly felt. This was experienced both in the method and the 'telling of the story'. Reinharz (1992, p. 17) suggests that some people have struggled for

the "right to be producers of knowledge without being trapped into the reproduction of patriarchal ways of knowing". Almost all of the participants in the study were female (two males were included) working in a predominantly female profession. Therefore the approach taken in this study seemed appropriate in order to 'hear the voices of the women'.

The method of data collection was by means of a semi-structured interview that was later analysed to discover patterns and themes. It was felt that this method would ideally suit the purpose of the present research because it provided a means of obtaining the information required while at the same time giving the informants freedom to respond and explain situations and concepts in their own words. Open-ended questions which arose from the aims of the study were used (Appendix 1) in order to encourage free discussion.

Appleton (1995) suggests that collecting data through interviews has the advantage of allowing the interviewer to put the interviewee at ease by the use of effective interpersonal skills and a willingness to reword questions as necessary. This was sometimes found to be necessary in the present research to prevent misunderstanding by the interviewees. Appleton also points out that a disadvantage of interviews as a means of data collection is that they are time-consuming and costly. Each of the interviews in this study took between forty-five minutes and one hour.

As an additional means of exploring the nurse lecturers' conceptions of critical thinking they were each asked to obtain consent from two students to bring to the interview an item of their work which the nurse educator considered

demonstrated critical thinking as it related to clinical judgement. Student nurses' written work was thought to be a useful way of exploring perceptions of critical thinking as it frequently required students to consider complex health care issues, often based on patients and families with multidimensional problems. The students are required to use reason, theory, evidence and fair-mindedness to present their arguments.

Role of the Researcher

Fontana and Frey (1994) suggest that when the goal of research is understanding it is essential for the researcher to establish rapport. Rapport means the participants are respected so that what they say is important because they are the ones saying it. For the purpose of this research rapport was already in place although occasionally it was necessary to remind participants that it was their ideas that were the focus of the study. The following dialogue illustrates this point.

Gail: It means that they can sort themselves out, sort out the situation. Be helpful to their clients. Is this the sort of thing you want?

Researcher: Whatever it means to you. That's what I want to know, what it means to you.

Because of personal involvement, knowledge and commitment to the degree programme on which the research participants and I taught, there was a strong desire to do justice to their ideas that they freely shared with me. Their

interests were respected, and there was open inquiry in which the researcher's views are not imposed on the participants. For this reason the nurse educators who took part in this study were referred to as 'research participants' rather than 'subjects or 'respondents' which could imply that they were passive objects of inquiry.

Congruent with the need to establish authentic relationships, deception was avoided and participants were encouraged to freely share their ideas. However, there is some debate about the advantages and disadvantages of conducting research from within one's own environment (Wilde, 1992). One advantage is the rapport that exists between the researcher and the participants.

Brookfield (1993) points out that a real disadvantage of doing research on critical thinking in one's own environment is the danger of committing 'cultural suicide', described as ostracising oneself from ones colleagues by taking a critical stance towards conventional assumptions, which may lead to colleagues feeling challenged and confronted. Brookfield suggests considerable sensitivity is required and advocates an attitude of inclusion rather than academic superiority.

Rigour

It has been suggested (Appleton, 1995; Lincoln & Guba, 1985; Koch, 1994; Morse and Field, 1995; Sandelowski, 1993) that qualitative research with its focus on the representation of individual reality and meaning requires its own framework for establishing rigour. Because in qualitative research "reality is

assumed to be multiple and constructed rather than tangible" (Sandelouski, 1993, p. 3) no two situations can be the same, therefore reliability in the positivist sense is unachievable. Validity in this sense is also difficult to achieve because what is measured is the participants' ideas and perceptions. Lincoln and Guba (1985), Morse and Field (1995) and Sandelouski (1993) suggest that 'trustworthiness' is a more appropriate term. They describe trustworthiness as consisting of four components: *credibility*, *applicability*, *consistency*, and *neutrality*, and suggest that these are the means qualitative researchers use to ensure rigour since they are more appropriate for this type of research than the internal and external validity, reliability and objectivity of mainstream, positivist research.

Credibility

As opposed to traditional research where only one measurable reality is recognised, in qualitative research reality is constructed and therefore multiple realities are recognised. A qualitative study is considered credible if it reveals descriptions of individual experiences as accurately as possible. Guba and Lincoln (1981) suggest that credibility in qualitative research can only be determined by taking data and interpretation to the source from which they were derived. In the present study transcripts were returned to participants prior to data analysis for verification. It was necessary to return to one participant in particular to seek clarification of what appeared to be a contradiction in the transcript. On completion of the text participants were presented with a copy to establish that they could recognise the description and interpretation as their own.

Applicability

Applicability in qualitative research parallels external validity of quantitative research. Guba and Lincoln (1981) have suggested that 'fittingness' or 'transferability' are more appropriate terms and should replace the term 'generalisability' when evaluating qualitative research. Fittingness is said to occur when the findings can be applied in other contexts or settings, or with other groups. From this definition the terms 'generalisability' and 'fittingness' or 'transferability' may seem very similar in meaning, however Lincoln and Guba (1985) claim that there are a number of fundamental differences. In quantitative research contextual effects unique to the study group are seen as a threat to external validity, however in qualitative research this is not the case; these factors are considered an integral part of the descriptive process in making judgements of transferability. They also argue that transferability is dependent on the degree of similarity between the two contexts and claim that it is the original researcher's responsibility to provide sufficient descriptive data to make such judgements possible. However, the onus of judging for transferability lies more with the person making the application rather than with the original researcher.

In this study interview transcripts were continually referred back to during data analysis to provide in-depth description. Furthermore using data from two sources, interview questionnaire data and discussion of students' work by the participants, increased applicability.

Consistency

The third criterion used to evaluate trustworthiness is consistency. Quantitative research aims for measurements capable of replication. However, Morse and Field (1995) remind us that qualitative research emphasises the uniqueness of human experience and suggest that variation in experience is to be expected rather than repetition. Guba and Lincoln (1981) suggest that the 'concept of auditability' be the measure of consistency in qualitative research. They propose that a study may be deemed auditable if the reader can follow the 'decision trail' or 'audit trail' of the research process. Morse and Field (1995) describe an audit trail as a clear documentation of the researcher decisions, choices and insights. In this study an 'audit trail' was clearly documented. Reasons for using the chosen methodology have been clearly discussed; methods of analysing data and insights gained clearly documented.

As the conceptualisations of critical thinking from the perspectives of the nurse educators were studied by means of interviews, the consistency of the data was partly dependent on the researcher's skills to establish rapport with the participants and to encourage them to share their ideas openly. A pilot interview was conducted in order to gain skills in the interview process, while a questionnaire was used in order to increase the consistency of the data collected. Consistency was further enhanced by the use of a tape recorder to record all interviews.

Neutrality

Neutrality is the final aspect of trustworthiness to be considered. Neutrality refers to freedom from bias in the research procedure and reporting of the results. In this study the researcher attempted to maintain a neutral stance during data collection. However, it is possible that interview bias may have been present in this research due to the fact that the researcher was a member of the Health Studies Department of the Institute in which the research was conducted. Guba and Lincoln (1981) argue that confirmability, which is achieved by establishing credibility, auditability and applicability, should be the standard by which neutrality is judged.

Ethical Considerations

The *Massey University Code of Ethical Conduct for Research and Teaching of Human Subjects* (Appendix 5) was adhered to throughout the research process. Before commencement of the research ethical approval was sought and gained from the institute in which the research took place.

Informed consent

Nurse educators who were invited to take part in the study were informed that the reason for the study was to examine their conceptions of critical thinking as it relates to nursing judgement. Respect for the participants was an important aspect of the study. Deception would have been counterproductive, creating

unease rather than trust. The participants were provided with clear written instructions as to what was required of them (Appendix 2). Written consent was obtained (Appendix 3). The students whose work was being used were also given written information regarding the nature of the study and a written consent was obtained from them (Appendix 4).

A transcript of the interview was shown to each participant for validation prior to analysis. Participants at this stage were invited to add any further information they wanted to share with the researcher regarding their conceptions of critical thinking.

Confidentiality

The institute in which the research took place has been referred to simple as the institute, or health studies department of the institute, in which the study took place. Pseudonyms were used during the interviews and in the written report. Because of the small number in the department it was acknowledged that any idiosyncrasy of speech would be easily identified and care was taken with any direct reporting to avoid this. Although the literature indicates that there are two broad views of critical thinking - a traditional view and a feminist view no attempt was made in this study to report any differences between the male and female participant's conceptions of critical thinking. Since there were only two male participants it would have been difficult to have maintained anonymity if this had been done.

The only people with access to the tape recordings of the interviews were the researcher and the transcriber. Both these people were aware of the need for confidentiality. The tapes and transcripts were kept in a locked cupboard to which only the transcriber had access. At the completion of the research the tapes were erased. The transcripts will be kept in the locked cupboard for ten years

The students were assured of confidentiality. The only person to know their identity was the lecturer who selected their work. It was not necessary for the researcher to know the students' identities. The students were reassured that their participation in the study would not in any way affect their grades on the course.

Minimising Harm

As well as confidentiality and informed consent, a further important ethical consideration is the requirement 'to do no harm'. This research went beyond the intent to do no harm. It sought to establish what Brookfield (1987) describes as peer learning communities. He discusses this as a positive outcome when nurses share with each other stories of their critical process. Early on in the research it was evident that this was happening. For example, several days after her interview one participant commented that as she freely talked during the interview she was able to clarify her thoughts on critical thinking and the relation she perceived it had to intuition. She came to a deeper self-understanding through discussion and was later able to include her students in this discussion. After the interviews groups of nurse educators were

heard freely discussing with each other their views on critical thinking as it related to nursing practice.

Selection of Participants

Patton (1990) and Coyne (1997) state that in qualitative research, sample selection has a profound effect on the ultimate quality of the research and suggest that purposeful sampling requires the selection of appropriate informants to fit the study. The criterion for participants in this study was that they must teach in both praxis and theory papers in the Bachelor of Health Science degree programme in the tertiary institution in which the study took place. At the original conception of the research project there were twenty-five nurse educators in the department who met this criterion. While it was felt desirable to give all staff members an opportunity to participate in the research as it was hoped the research itself would stimulate discussion within the department on critical thinking, this posed a dilemma as qualitative research typically focuses in-depth on smaller numbers of participants. There was a two-year time lapse between the original conception of the project and the actual carrying out of the research. During this time, due to attrition, the number of staff members who met the research criterion had fallen to eighteen. It was decided at this stage to use a total population sample, although it was thought that data from this number of participants would be difficult to manage. However, some staff members, for a variety of reasons, were unable to participate. It was considered that those nurse educators who did consent would be 'good' informants, i.e. articulate, reflective and willing to share their

ideas. Of the possible eighteen participants thirteen eventually agreed to participate. One subsequently withdrew before the interview, which left a total of twelve research participants - (ten women and two men), a number that was a fairly manageable number.

The Research Participants

The research participants were all senior nurse educators with a minimum of ten years lecturing experience. Prior to this all the participants had held responsible positions in a variety of health care organisations. All participants were very articulate people with a keen interest in the research topic and a willingness to share their views.

Data Collection

Morse and Field (1995) suggest that qualitative researchers have different opinions regarding the extent to which literature should be used to guide their research.. They describe three different approaches. .The first approach, used for grounded theory, recommends that the researcher does not consult the literature prior to conducting the research so as to ensure that the literature does not distract the researcher's ability to make accurate observations. The second approach suggests that the researcher should read all major literature and incorporate that into their literature review. .However, when beginning to collect data it is recommended that the researcher holds this knowledge 'in abeyance' or bracket other theories to minimise the threat to validity. The third approach recommends critical examination of previous research and selective

use of this. It is this last approach which was used in this study as the topic, critical thinking, was very broad and the purpose of the study was more focused, to gain an understanding of the nurse educators conceptions of critical thinking as it relates to nursing judgement. It was therefore necessary to be selective in the use of previous research. In addition, as each identified theme was explored it was necessary to extend the literature search in order to relate this to the findings.

All participants were articulate people with a keen interest to share their ideas, which made the process easier. With the very heavy work commitment of the nurse educators it was difficult to schedule time for the interviews. They were all conducted at the place of work over a ten week period commencing midway through the first semester of 1998, thus giving the academic staff time to assess the students in both the theory and praxis areas. This was important as lecturers were asked to bring to the interview, for discussion, samples of students' work, which the staff member thought demonstrated critical thinking. The nurse educators were given the information sheet (Appendix 2) which stated clearly what was expected of them, the question sheet (Appendix 1), together with the consent form (Appendix 3), the student information sheet and the student consent form (Appendix 4), at least three weeks prior to the interview process. This gave the staff time to reflect on the issues involved. Which, it was thought would be empowering for the lecturers as it gave them time to reflect prior to the interview and was seen as an important part of the research process. Unfortunately some staff took longer than others to select student's work and interviews had to be rescheduled. It should be emphasised

that the question sheet (Appendix 1) was intended as a means of promoting participant discussion on the topic. Participants were encouraged to explore further any issue that arose by such remarks as:

"That is interesting. Could you enlarge upon that?"

"What is it about this piece of work that makes you think it demonstrates a high level of critical thinking?"

"Could you tell me what you would do to further facilitate this student to think critically?"

The researcher conducted all interviews, tape-recorded and later transcribed.

Data Analysis

Denzin and Lincoln (1994) claim that qualitative researchers believe that rich descriptions of the social world are valuable, whereas quantitative researchers, with their emphasis on value free inquiry, are less concerned with such data. A large amount of rich data was generated in this study. Morse and Field (1995) and Rountree and Laing (1996) were used as resources to guide data analysis.

Each tape was transcribed by an independent transcriber. Each transcript was read three times in order to gain familiarity with the data. Initially, each segment, consisting of two to three sentences or a paragraph, had a number ascribed to it relating to the question on the interview sheet (Appendix 1). Some segments related to more than one question, therefore it was necessary to use several copies of each transcript plus an original copy which was used to

refer back to in order to place any extract within its context when writing the text.

On completion of the coding all the interview transcripts were cut up into the relevant questions. The data was further broken down into subheadings for each category according to the emerging themes:

- The critical thinking nurse as informed decision maker
- The critical thinking nurse as an autonomous carer
- The critical thinking nurse as a reflective practitioner

The categories and subheadings were glued together on large sheets of newsprint. This was a time of considerable questioning and reorganisation. Morse and Field (1995) suggest that there is a need to be open to alternative modes of sorting information and warn that premature closure can result in a lack of substance or even incorrect conclusions.

Data Display

The research data was written up in the form of narrative text centred around the emergent themes. Excerpts from the data were used to support this. Incorporating quotations from the interviews proved a challenge, as recorded, spoken English is quite different from written English text. The quotations included in the text were extracts from transcripts made from the interview tapes and edited to remove fillers such as “um” “ah” “you know” and repeated phrases.

The three themes that were identified will be examined in detail, starting with 'the critical thinking nurse as an informed decision maker'.

CHAPTER FOUR

The Critical Thinking Nurse as an Informed Decision Maker

It has been suggested by current nursing scholars (Benner & Wrubel, 1989, Dunlop, 1994; Tanner, 1993, 1997) that nursing is both a science and an art - it is both rational and intuitive. Nursing has a dual identity grounded in the disciplines of science, technology and medicine and a humanistic aspect of care, empathy and creativity essential to the artistic component of nursing. Watkins (1998, p.22) comments "...in virtually every field ... there are two approaches to knowledge, one intuitive and the other analytical or rational." Greenwood (1997) also suggests that nurse's clinical reasoning has its underpinnings in two distinct philosophical traditions - rationalism and phenomenology. In the rationalist approach reason is privileged over experience whilst the phenomenological approach seeks to explore the subjective experience of clinical reasoning from the individual nurse's point of view and includes both intuition and reflective activity.

Traditional views of critical thinking have emphasised rational, linear thinking (Ennis, 1987; Paul, 1987,1993; Siegel, 1988, 1992). The participants in this study work in a nursing programme with a curriculum that describes critical thinking as "the rational examination of ideas, inferences, assumptions, principles, arguments, conclusions, issues, statements, beliefs and actions. This examination covers scientific reasoning, includes the nursing process, decision-making, and reasoning in controversial issues (Bandman & Bandman 1995, p.5). It is not surprising, therefore, that all the participants in the study

viewed rational, logical thinking as a central feature of critical thinking for nursing judgement.

Aspects of logical thinking described by the nurse educators as being a part of critical thinking for nursing judgement were: information gathering, assembling evidence, information organisation, recognising patterns, linking theory to practice, analysing the situation, presenting arguments, and problem-solving. Many of the nurse educators emphasised the need to consider all aspects of the situation before taking action. In other words, information needed to be gathered from a wide range of sources before the situation could be analysed and a solution arrived at. Several of the participants commented that frequently inadequate data was collected before decisions were arrived at.

Lynda: Ok, it is human nature. You first see something and you automatically make a conclusion...but I think in nursing we have to go further and revisit what is happening.

This is acknowledged by Chenoweth (1998) who suggests that there is a human tendency to gravitate to a favoured side of an issue rather than exploring all aspects before taking action.

Although the nursing process, a rational problem-solving activity, has often been considered as synonymous with critical thinking in nursing, there is considerable debate regarding its usefulness as a tool to guide clinical decision-making and practice. The participants in the study had varying thoughts

regarding the relationship between critical thinking, the nursing process, and clinical decision-making. Six participants considered the nursing process and critical thinking to be very clearly related.

Researcher: ...How do you think critical thinking is related to the nursing process?

Rose: ...The nursing process is ... not just a problem-solving method but it is a form of decision-making where one needs to move from one point to another. If we think of critical thinking in that sense we are encouraging them (the students) to critique the problem.

Researcher: Do you see it [critical thinking] related to the nursing process?

Ester: Yes. I certainly do. In terms of the nursing process I think it actually has a part to play in each of the different steps...I can't see how it could be not present in all parts of nursing action.

These nurse educators clearly consider critical thinking to be an essential feature of the nursing process, which they see as intimately related to clinical decision-making. They very much relate critical thinking to rational scientific

reasoning with the clearly defined steps of a problem-solving process. However the other six nurse educators in the study expressed differing views.

Researcher: ...How do you see critical thinking related to the nursing process?

Betsy: Well I don't know that it does...with critical thinking I think that you can be quite lateral and quite innovative. Whereas with the nursing process...there can be restrictions, it is quite structured ... it doesn't allow for creativity.

Gail: Well I often wonder about the steps of the nursing process whether in fact it is a linear way of arriving at some sort of conclusion which doesn't allow for too much creativity and I think that creativity is a part of critical thinking.

All of the nurse educators who expressed a concern regarding the relationship between critical thinking, the nursing process, and clinical decision-making did so on the grounds that they felt the nursing process did not allow for creativity.

Gypsy: ...To me the nursing process would stifle it in a way. It would for me because it would put me in a framework that I had to stick to. Whereas I might have a better way of coming to the same conclusion.

Christensen (1995) sees creativity as very much a part of nursing decision-making. Although she does not mention the nursing process specifically she does emphasise that nursing decision-making is not a routine activity governed by a set of rules, but rather an activity requiring the creative use of nursing knowledge in order to consider multidimensional factors affecting people's lives. Christensen suggests that this approach is not congruent with a linear decontextualised cause and effect approach, which is how the nursing process has often been depicted (Birx, 1993; Chang & Gaskill, 1991; Gillmore, 1993; Jones & Brown, 1991; Miller & Rew, 1989; Tanner, 1993.).

Standardised care plans used in some hospitals were particularly mentioned as a threat to creativity. It is clear that the nurse educators in the study who felt the nursing process stifled creativity perceived creativity as being a component of critical thinking. In the literature creative thinking and critical thinking are often described as separate processes but there seems considerable debate as to how they interrelate. Berger (1984) suggests that critical thinking is the product of reasoning whereas creative thinking involved both reasoning and imagination. More recently, Bailin (1993) claims that creative thinking is a type of thinking often associated with synthesis, divergent, intuitive and generative thinking whereas critical thinking is associated with analytical, convergent, logical and evaluative thinking. However, she argues that the distinction is artificial as creativity requires not only a novel approach but also in-depth knowledge and skills in the area leading to a comprehensive understanding of the problem. This requires not only the generation of ideas but also the logical

evaluation of them. Creative thinking is perceived by Bailin as high level thinking in which critical thinking is essential.

Carper (1978) suggests that the selection and interpretation of information, which forms the basis of the nursing process, is influenced by moral and value considerations, which require more than scientific, empirical knowledge. Carper discusses the four fundamental patterns of knowing in nursing as being empirical knowing, aesthetic knowing, personal knowing and ethical knowing. Empirical knowing reflects the rational scientific basis of nursing. Aesthetic knowing, embodies the art of nursing and includes the expressive, creative aspects of nursing, while personal knowing, refers to self knowledge and identity and involves the interactions between the nurse and the patient, and finally the moral component of nursing. These ways of knowing, although described separately, are all interrelated and interdependent.

White (1995) sees these ways of knowing as inadequate in describing the nurse/patient relationship. She suggests the nurse's gaze needs to be raised to include the socio-political environment and extends Carper's ways of knowing to include a fifth dimension: socio-political knowing. When White refers to socio-political knowing she is not referring to learning about politics but rather to becoming critically aware of issues of power in relationships and social structures. This includes relationships between the nurse and the patient, nursing and society, and society and its politics.

All the nurse educators in the study considered that critical thinking for nursing judgement required multiple ways of knowing. Knowledge was considered to extend beyond empirical knowledge.

Betsy: Yes, but that body of knowledge could be personal life experience, personal knowledge or knowledge you gain with experience.

Charlotte: You need to have a considerable range of knowledge to think critically...you are bringing in nursing knowledge, you are bringing in professional knowledge, you are bringing in knowledge of the health care system, knowledge about people, knowledge of pathophysiology, pharmacology, and all of those aspects are used in the effective care of the person.

Benner (1984), who uses a phenomenological approach to describe nurses' clinical decision-making, suggests that nurse's knowledge gained with experience changes qualitatively. Rather than using a step by step problem-solving approach an expert nurse is able to draw on past situations to make sense of the current situation. Benner suggests the expert nurse learns to recognise subtle physiological changes. She gives as an example the ability of many expert nurses to recognise the subtle changes of impending shock and suggests that this ability develops through years of direct patient care and observation. Past experience allows the nurse to make a rapid perceptual

grasp of the situation. This is what Benner refers to as intuitive knowing. Jill gives an example of this:

Jill: I can think back to some of the really expert nurses who I have worked with and seen as role models. They use intuition...And I remember in intensive care, a very, very, expert practitioner saying "I am concerned about this mans oxygenation"...I was very new then_and I looked and his recordings were all right but there was a slight reduction in his respiratory gases. But she picked up more subtle things like there were slight changes in his skin which I certainly couldn't see. I was too anxious, too worried about the rules.

Because each person has a different history of experiences the personal knowledge that is brought to a new clinical situation is unique. Benner suggests it is the interaction between the personal knowledge and the clinical situation that determines decision-making and action. Gypsy cautions against the unexamined reliance on intuitive knowledge by suggesting that intuitive responses periodically need to be examined to ensure they are not an excuse for acting in an automatic, unexamined, habitual manner.

Gypsy: I think everyone has got intuition but I think if you want to trust your intuition then you want to make sure that you are getting practice at examining the intuitive responses, then, you have to be a critical thinker

because you have to know what you are doing intuitively and know you are doing it intuitively...you have to go through that exercise from time to time just to make sure you haven't got into just lazy habits...and pass them off as intuition.

All the ways of knowing described above - empirical, aesthetic, personal, ethical and socio-political - were interwoven in the stories the lecturers described as they discussed their student's work. One participant described a situation where a student nurse assisted a woman who had just had a post-partum haemorrhage. In order to assist in bringing about a positive outcome for this patient the student nurse was required to draw on a wide body of knowledge. She drew on nursing theory, knowledge of anatomy and physiology, and pharmacology. In addition she drew on nursing knowledge, personal and aesthetic knowledge. Utilising this knowledge she was able to empathise with the mother while at the same time assisting to handle the emergency situation. By drawing on this wide range of knowledge she was able to keep the whole situation in focus and assist in ensuring the birth experience was a positive one for the mother. The nurse educator concludes her description of the incident:

Mary: Again, it is that empathising with the woman. In all the melodrama the student did not lose sight of things which I think shows quite a high level of thinking and ability. To keep all that in focus.

Another nurse educator described a situation where a student nurse was caring for a postoperative patient who was requiring regular morphine to relieve pain. Some of the staff felt the patient's pain was not as severe as she said it was. The patient had been scheduled for a simple laparotomy. However, when the student nurse read the patient's notes it became clear that she had had a more extensive investigation, which would have required considerable handling of the bowel. The patient had not passed flatus but had started eating. This had resulted in considerable pain and discomfort. Furthermore on talking to the patient the student nurse discovered the patient felt isolated and avoided. This added to her distress. The student nurse was able to get more appropriate, regular, analgesic charted. She encouraged the patient to walk to the toilet with assistance [ambulation assists bowel mobility thus reducing the accumulation of flatus which was resulting in pain]. The student nurse wrote in her journal

I believe that if this nurse had realised the extent of the surgery and the handling of the bowel that she had had, then they might have been more sympathetic to her needs, as opposed to labelling her as a moaner.

In the situation described above the student nurse drew on knowledge from a wide range of areas including anatomy and physiology, pharmacology, psychology, pathophysiology, perioperative care, ethical knowledge, aesthetic knowledge and personal knowledge. She did not accept what seemed apparent but, as the nurse educator described it, "went behind the scenes" and was non-judgemental in her actions. She talked to the patient, she listened to

the patient, she revisited the patient's notes. Then she synthesised her previous knowledge with the new knowledge she had gained to bring about a more satisfactory outcome for the patient. The synthesis of knowledge is recognised by Paul (1993) as being essential for critical thinking. Ennis (1987), in his critical thinking dispositions, emphasises the need to be well informed, non-judgemental and to take into consideration the total situation. It is these elements the lecturer is commenting on when describing the student's critical thinking.

Many of the nurse educators suggested it was the integration of the knowledge that was important. Jill describes a student caring for a patient with congestive heart failure. Jill takes up the story:

Jill: He was very sick indeed and it was a very complex situation, but she was a very capable student. And I got her to work with him and then afterwards I got her to explain what she perceived was happening to him and to give me some rationale for the interventions that she was carrying out. She was able to describe the pathophysiology of congestive heart failure. She was able to implement appropriate care, for example, she realised the need to be sitting up, she gave him oxygen as prescribed. She weighed him daily. She understood and explained to me why his legs needed to be elevated. She noted each day his weight and recorded it and she noticed

that it wasn't coming down. And she actually suggested that perhaps the medication was not effective. She named the medication as being a diuretic...she knew he was on very high doses and was not responding... she was able to recognise the pattern. She was able to assemble the evidence and really come up with some conclusion. So I really thought of this as an example of a nurse using her critical thinking skills...she was constantly questioning why this was not working...she was integrating theory.

When discussing critical thinking, Charlotte also emphasised the integration of theory and practice. She describes an assignment that required the students to link a concept to their own personal philosophy of nursing:

Charlotte: ...and we pointed out to them they had to show how they were going to link and develop and integrate their ideas.

Charlotte goes on to describe how this linking of ideas is intimately connected with the student's awareness and ability to make critical nursing decisions. She describes a situation where a student was sponging a patient who had recently had a cerebral vascular accident. She describes the student as going through 'the motion of washing the patient without actually linking what she was observing to the pathophysiological changes the patient had experienced and

the implications these had for the patient'. She was therefore unable to ask the questions that needed to be asked - they were not within her awareness. Charlotte suggests this is frequently the case with inexperienced students.

Charlotte: they just haven't got the heightened level of awareness that they need to think more deeply about things.

It is clear that Charlotte regards critical thinking as a process that develops as the student progresses through the programme. Similar views were expressed by many of the participants who also considered life experience, age and education as important factors in the development of critical thinking. .

Mary: They (the younger students) want more concrete facts...rather than someone who has had a bit more life experience, they can reflect back. I think when you are young you are often in too much of a hurry, whereas possibly an older person or somebody with a bit more life experience or more education can perhaps stand back and look more peripherally rather than a younger person.

In the literature findings of Haffer and Raingruber (1988) and Maynard (1996) all support the ideas expressed by Mary and Charlotte suggesting that the experiential component of practice is the most significant factor in the development of critical thinking.

The nurse educators in this study considered that skills and knowledge were not adequate to make complex nursing decisions. They identified a third factor - disposition. They all referred to attitude as being essential if critical thinking was to occur.

Jill: Well I think just to bring an attitude of being open to what is happening here.

Ester: I think curiosity is an absolute fundamental to critical thinking.

Several of the participants took this further and suggested that critical thinking became an integral part of the person's actual being.

Joe: So first off I think they might not always be aware that they are doing it, but that approach as their approach to life. You have to want to be prepared to extend yourself.

Mary: You know to get into this way of being.

The ideas expressed here are very similar to those expressed by Siegel (1988) when he refers to a "critical spirit". The ideas are also supported by Facione and Facione (1996b) who suggest that nurses need not only the skills and knowledge to think critically but also the disposition to do so.

The nurse educators in this study perceived a broad body of knowledge, skills and disposition as being necessary for critical thinking in nursing decision-making. However, they saw that these were insufficient:

Jill: ...The art and science of nursing is what they have to look at, they have to understand, they have to have a depth of knowledge about nursing, about the theoretical and the practical application of nursing, to apply critical thinking.

Jill appears to be saying that there needs to be more than skills and knowledge in order to think critically in nursing. It is a particular way of thinking unique to the discipline. Gronya echoes this idea:

Gronya: Yes, I think what we are discussing here would be the person framing up of how they think critically and I believe that would need to fit the discipline of nursing.

This is very much in support of McPeck's (1981, 1990) position where he suggests each discipline has its own characteristic way of reasoning.

The nurse educators in this study saw critical thinking not just as a mental process. They saw it as being very much action orientated:

Betsy: If you critically think you have to follow this up with action...to me there is no point in critically evaluating

*something or analysing or reflecting on something
without following through with some action.*

Charlotte extends the action component of critical thinking to include emancipatory action.

Charlotte: Yes, it involves action and I think that is where I talk about the political, the personal and political level. It does involve action insofar as that you are wanting an outcome really. It is not just an intellectual exercise.

Charlotte seems to be talking about the interconnection between health care policy, political interests and nursing action. She is talking about a type of critical thinking, which asks whose interests are being served by this particular nursing action. These ideas form the basis of a model presented by Ford and Profeto McGrath (1994) who draw heavily on the work of Habermas (1979) and highlight the integral relationship between knowledge, action and critical reflection. They suggest that critical reflection allows nurses to develop a critical consciousness, which requires them to examine the assumptions, which guide their practice. Tanner (1997) suggests this allows nurses to recognise when they are being used to support the interests of "the powerful others" and suggests that this draws nurses' attention to moral issues and requires challenging the hegemony (powerful social forces which demand conformity) within the health care system. In this study only three participants extended

their concept of critical thinking and nursing decision-making to incorporate a political knowing. Gronya provides a possible reason for this:

Gronya: ...but it takes energy to make change and it seems a lot of nurses' energy is taken up in their one to one or in their nursing intervention and they haven't always got the energy to be political, even in their work setting, let alone in the political arena.

The nurse educators in this study considered that knowledge in its many forms was essential in order for quality, professional nursing care to occur. In the next chapter the critical thinking nurse as an autonomous carer will be discussed.

CHAPTER FIVE

The Critical Thinking Nurse as an Autonomous Carer

Many professions use the concept of caring, however nursing appears unique in using it as a theoretical foundation for practice. In order to understand the connection the participants in this study drew between caring and critical thinking it is necessary to understand the background in which their concept of professional care is embedded. The nurse educators work with a curriculum that bases its approach to professional practice on the work of such caring theorists as Benner and Wrubel (1989), and Watson (1979). Their curriculum defines caring in the following manner:

Caring includes both attitude and action. Watson (1979) views the practice of caring as being central to nursing, guided by a service of ethics and moral imperative. It is expressed through the transpersonal caring relationships between the nurse and the client. It has as its goal the preservation of human dignity, healing and health. Benner and Wrubel (1989) state that the primacy of caring is essential to healing. Caring gains significance in the context where the and the person or group find themselves and what shows up as a concern (Bachelor of Health Science (Nursing) Curriculum, 1995, p. 11).

The curriculum also incorporates Leininger's definition of care in its philosophy.

Leininger defines care in the following manner:

Care means to be emotional present with people and to personalise one's actions and interactions reflecting professional commitment to enhance their well being in some way. 'Care' refers to phenomena related to assistive, supportive or enabling behaviour towards of for another individual of (group) with evident or anticipated needs to ameliorate or improve a human condition or lifeway (Leininger, 1984, p. 201).

For Leininger professional nursing care is an enabling process including both scientific and humanistic caring. It has both an objective component based on empirical knowledge and a subjective component based on creative, intuitive cognitive processes. Watson's (1979) theory of transpersonal caring highlights the need to gain personal knowledge and self-awareness as a necessary step in helping others to become more productive human beings. Benner and Wrubel (1989, IX), who see caring as fundamental to nursing, link it with connecting and enabling; "the enabling condition of connection and concern is what we mean by the primacy of caring". They then proceed to link knowledge and caring in relation to nursing practice: "The nurse is both a knowledgeable worker and one who cares. Knowledge is dangerous if it is divorced from caring" (Benner and Wrubel, 1989, p. 399).

A number of similarities can be drawn between Thayer-Bacon's (1993) concept of caring and that of the nursing theorists described above. All write from a phenomenological perspective and view the person as a self-interpretative being whose knowledge is constructed through interpretation. They all conceive of caring as a connecting process that enables the carer to gain an

empathetic understanding of the other person's view point. For Thayer-Bacon, a fundamental outcome of caring is understanding, deemed essential for critical thinking, for it is only through caring that we are able to fully understand and appreciate the other's position. All the nursing theorists view caring as essential in order to gain knowledge and understanding. However, for them the primary outcome of caring is enabling.

All the participants in the study considered critical thinking for nursing decision-making and caring to be very much interrelated. Knowledge and the autonomy to use that knowledge were the common factors mentioned by all the participants who linked critical thinking and caring. Dunlop (1994, p. 38) who describes nursing caring as "a thinking feeling mode of being that gives rise to action" also draws a clear relationship between knowledge and professional caring. She suggests that by drawing on supporting disciplines such as anatomy, physiology, sociology and psychology it is possible to develop a science *for* caring whereas a science *of* caring is more difficult to operationalise as it is embedded in the practice of nursing and more appropriately understood by using a hermeneutic methodology rather than a traditional empirical approach. "...a science of caring thus challenges the male hegemony of science in a way that a science for caring does not" (Dunlop, 1994, p. 40).

While caring and critical thinking were seen as being closely related by the nurse educators, one of them, Jill warns of the need for a clear understanding of the concept of caring.

Jill: I think for a nurse to provide caring they have to have the knowledge of caring, not just intuitive caring. More of a theoretical notion of caring. Now I know that caring has been researched a good deal, there is a lot of literature that talks about caring.... And I think if you are a critical thinker you are questioning a lot, you are inquiring and therefore you are more likely to be wanting to know how and why you are able to influence your nursing practice.

Jill is suggesting that nurses need a clear understanding of the concept of caring in order to bring about a positive outcome for the patient. Benner and Wrubel (1989), Dunlop (1994) and Watson (1979, 1990) describe nursing as a process of empowering others through the means of professional caring. However, Caffery and Caffery (1994, p. 14) present a different viewpoint. They warn of the danger of developing co-dependent caring which they see as destructive rather than enabling and incompatible with autonomous practice. They define co-dependent caring as "caring for others at the expense of caring for oneself . It involves the enmeshment of one's own personal identity, needs and feelings in caring for the needs of others ." Caffery and Caffery suggest that nursing is historically and culturally founded on a value system which encourages co-dependent caring and suggest that the current bureaucratic, patriarchal health care system fosters co-dependency in nursing.

In order to grasp the argument present by Caffery and Caffery it is necessary to understand the evolution of caring in nursing. Reverby (1987) sketches an

historic view of caring, womanhood and nursing. She informs us that historically women were given the responsibility of nursing family members. This responsibility was binding and far reaching in its effects; "the family's 'long arm' might reach out at any time to a woman working in a distant city, in a mill, or as a maid pulling her home to take care of the sick, infirm or new-born. No form of woman's labour, paid or unpaid, protected her from this demand" (Reverby 1987, p. 6). Nursing care was a duty and a responsibility expected of women by society.

The expanding economy brought about by the industrial revolution made it possible for middle-class women to hire working class women to carry out their caring duties for them "Caring as labour was separated from love" (Reverby, 1987,p. 7). Paid employment enabled these working class women to combine caring with a degree of independence and autonomy. By the later part of the nineteenth century nursing was well -established in hospitals where obedience rather than autonomy was stressed. "Absolute and unquestioning obedience must be the foundations of the nurse's work, and to this end complete subordination of the individual to the work as a whole is as necessary for her as for the soldier" Dock, 1966 (cited in Reverby, 1987, p. 7). Women as a group had neither the socialisation, skills nor economic resources to maintain their autonomy within the bureaucratic, patriarchal organisation they found themselves in, thus "the duty to care became translated into the demand that nurses must follow doctors' orders" (Reverby, 1987, p. 6).

Increased scientific knowledge was introduced into nursing training as an attempt to professionalise nursing. However, this was met with some

resistance. It challenged the traditional male/female, doctor/nurse relationship. It was also seen as a threat to the economy of the institutions where cheap nursing labour was an important consideration. Caffery and Caffery suggest that the current health care system, which is driven largely by economic concerns, fosters, co-dependency. "Caring, free of co-dependency actually may be considered threatening in a health care system in which economic well being is the goal and all decisions are carefully monitored for their contribution to this goal. A system that cares for and empowers others loses its ultimate control over their decision" (Caffery and Caffery, 1994, p. 15).

Caffery and Caffery suggest that while nurses endeavour to empower patients they themselves are disempowered by physicians, administrators and other nurses who have become part of the patriarchy. They suggest that a feeling of powerlessness results when nurses perceive a disharmony between their goals for patient care and the economic goals of the organisation. Nursing care is a collaborative process between the patient and the nurse but collaboration may not occur if nurses are caught in a task-driven process in order to meet the economic goals of the organisation. Collaboration requires critical reflection and often there is little time for this.

Lynda: There is not a lot of time to reflect. So decisions are made on the hoof, running up and down the ward.

As a means of coping, some nurses "identified with the oppressor and became part of the patriarchy" (Caffery and Caffery, 1994, p. 15). Reverby (1987, p. 9) presents a vivid example of this in the person of a well educated nineteenth

century nurse, Annette Fiske, who argued against increasing the educational standards for nursing and emphasised the need for a greater degree of service in order for nursing to receive greater "love and respect and admiration." This fear of rejection results in the co-dependent carer engaging in conforming behaviour in an attempt to gain respect, thereby being unable to act in an autonomous manner. Gail discusses this conforming pattern of behaviour in nursing.

Gail: I think it is the power structure of the organisation. I think as women we tend to be in a more subservient role, or have been and we are trying to get out of it. We have been conditioned. Although we talk about speaking up I think often we slip back into our old habits without realising it. We don't like to be disapproved of...

Although the term 'co-dependent' caring is not mentioned specifically, nine of the nurse educators in this study discussed the relationship of the role of caring in nursing, autonomy and nursing decision-making.

Francis : I think that nurses as a group don't have a culture of autonomy. There is a history, tradition...the hand maiden to the doctor...And I also believe that nursing is largely a female thing to do... women as a group are not used to being autonomous. They respect authority far too much rather than questioning it.

Jill: I think that this has been something which has slowed nursing down...particularly in hospitals because of the historical background where nurses have been sort of hand maiden to the doctors, that sort of historical background. And I think there are the structures of the organisation with its background of hierarchy.

Jill and Francis are suggesting that the cultural socialisation of women in nursing and the organisational structures of hospitals in which a large number of nurses work affects their ability to not only think, but also function autonomously. Jill and Francis's arguments are supported by Yarling and McElmurry (1986) who suggest that nurses are not free to practice in a professionally autonomous manner. They justify their argument with examples of a number of situations where the nurse was not free to act on behalf of the patient when conflict arose between the patient and the physician and /or hospital bureaucrats. One example involved a nurse being harassed by senior hospital personnel and finally being forced to resign when she tried to find out the facts behind an apparent drug overdose from which a patient died.

Bishop and Scudder (1990) criticise Yarlying and McElmurry's stance for being too confrontational; noting that Gilligan (1982) has attacked this view and regards it as a typical male way of thinking. They present a more relational viewpoint suggesting that nurses frequently make decisions in the context of a multidisciplinary team. A caring relationship is formed when the patient seeks the professional help of the physician or nurse and this requires that they (along

with other health professionals) work together as a team to help the patient to achieve their goals. Ester words it in the following manner:

Ester: I don't see independent action meaning that one works alone and not in co-operation with others...what a good team may value is the ability of a person to be independent, to be themselves whilst being a member of a team. Certainly as a member of a team the nurse's views should be heard and given serious regard but in order for this to occur there needs to be a relationship of professional respect.

Francis expressed a similar view.

Francis: But you have to have a relationship of equality with the people who were making the decisions. You have to have an approach that says everybody's opinion counts.

Bishop and Scudder (1990) claim that while nurses do not have the same authority as a physician they have their own particular type of authority, which stems from their day to day care of the patient. They discuss what they describe as "the in-between position of nursing". By the in-between position they suggest the nurse practices from a position between the physician, patient and hospital bureaucrats. Rather than viewing this as a powerless position they

view it as a very advantageous one from which to exercise judgement and promote a positive outcome for the patient.. They give as an example a patient dying of metastatic lung cancer. The physician was undecided whether to aspirate his lungs. The nurse, through her daily contact with the patient, found he had a strong desire to live to celebrate Christmas with his family. She was able to share this knowledge with the physician, who acted upon it and aspirated the patient's lungs. He died, fulfilled, after having lived to share Christmas with his family. Bishop and Scudder see this as an example of a nurse exercising autonomy by working from a privileged 'in-between position' to bring about a positive outcome for the patient. In this scenario a positive outcome for the patient was achieved only because the physician and the nurse recognised and respected each other's expertise. Bishop and Scudder (1990, p.134) suggest that "professional autonomy comes from competence duly recognised by others."

Gypsy: I think if we can't think critically we can never claim that autonomy...but once you can stand up as a professional person and you can support your opinion I think then that you get that respect [and autonomy].

Critical thinking needs to be valued in a team member but if a nurse is to have her decisions regarded seriously they need to be presented in a professional manner. But in spite of this there are many incidents when a professional nurse's opinions are not given due regard. A very experienced haematology nurse told the following poignant story. She was caring for a Maori woman

dying of leukaemia. The patient was receiving chemotherapy. During the course of her treatment she told her nurse that she lived by the sea and loved the smell and the sound of the sea. Her family no longer came to visit her because they found the sterile hospital environment foreign and threatening. She longed to go home but as her condition deteriorated she could no longer speak for herself.. Her nurse begged her doctors to allow her to go home, explaining what it meant to her. But treatment could not be stopped as long as there was a slight chance of cure. The patient died in hospital, away from her home, away from the sea she loved so much. As she told this story the anguish of the nurse was only too obvious. She had not been able to act as an advocate for her patient, she had not been heard. It is not hard to understand how incidents of this kind could lead to burnout and an unwillingness to engage in critical thinking as it relates to nursing decision-making for the hurt and pain in doing so becomes just too great. Lack of autonomy to care militates against critical decision making.

The in-between position described by Bishop and Scudder can be a very powerful position. It can also be a very difficult, distressing one from which to practice. However nurses need to be heard if they are to continue to be motivated to think critically in they're decision-making and allow that decision-making to guide their practice.

Yarlying and McElmurry (1986) emphasise that there are situations in their practice where nurses make independent, autonomous decisions that do not involve conflict with authority. A number of the participants gave examples to illustrate this; most suggesting that working in the community area offered

opportunities for a greater exercise of autonomy. However, Charlotte cites an example of a nurse working in a critical care unit, which she describes as a situation 'highly governed by protocols'. In spite of this she sees it as an area in which 'the nurse needs to be highly creative and work autonomously to keep families connected and to help them deal with what is often not a very good prognosis'. Charlotte's description of autonomy is very similar to that of Boughn (1995) who argues that women manifest autonomy through caring and affiliation rather than through the traditional male model based on power and separation.

Charlotte suggests that integrating knowledge from a variety of sources is necessary in order to demonstrate caring in nursing action.

Charlotte: You may be confronted with a very complex situation – part of your caring in that situation will be to know all the various influences that impact on the situation. You have got to have a willingness to investigate the situation so that you can act most effectively in that situation.

Charlotte is talking about critical thinking in relation to caring, not in an abstract sense, but contextualising it to the situation in which the caring occurs. Lynda also expresses similar ideas.

Lynda: You can't apply the same sort of caring in every situation to every individual. It has to be

individualised caring. And by using skills you can work out what is more appropriate for the person. So you have to be critical about your caring.

Lynda is implying that critical thinking skills are necessary to gain knowledge to be an effective carer while Charlotte points out that a willingness to investigate in order to gain knowledge is part of caring. Mayeroff (1971, p. 9) expresses it in the following manner "To care for someone I must *know* many things. I must know for example who the other is, what his power and limitations are, and what is conducive to his growth; I must know how to respond to his needs, and what my own powers and limitations are." Thayer-Bacon takes this openness to consider the other person's point of view to be an essential element of critical thinking, alongside rational thinking and problem solving.

Charlotte extends her discussion of caring into the political arena:

Charlotte: And I also see caring as something on a political level. For example if we are really caring about people in our society, we should be interested in what is occurring in our health care system. To be concerned about people and how they are faring in today's world is something that we need to care about, not only on a personal level, but also on a political level. And I see critical thinking as part of that because you have got to make the links and relate.

Charlotte is of the view that to care we need to be able to critically think in order to recognise the inequalities in the social systems that affect people's health and lead to them receiving unequal access to health care, for as Freire (1993, p. 2) observed "to surmount the situation of oppression, people must first critically recognise its cause, so that through transforming action they can create a new situation; one which makes possible the pursuit of a full humanity." A number of nursing scholars (Melesis, 1992, 1992; Schuster 1990; Tanner, 1997; White 1995) describe socio-political awareness and action as part of nursing's caring practice.

Several of the participants emphasised personal knowledge and related this to critical thinking.

Researcher: Do you think that caring and critical thinking are related?

Joe: Well my belief is that with caring they are closely related because what we are doing is finding how people become more productive human beings who function better by assisting them to mobilise things in themselves that can change in themselves, or look after health better.

Joe, like Watson (1979, 1990), emphasises the act of helping others to become productive human beings as an essential part of caring in nursing and

suggested that growth in personal knowledge and self-awareness is very much a part of this process and related to critical thinking.

Gronya also places emphasis on personal knowledge and connected knowing in her discussion of critical thinking, caring and nursing decision-making.

Gronya: ...it is the linking with the person for their meaning in life and also it is the connecting with someone and the caring. This is connecting, helping people with meaning...and to do this we need to be thinking critically about how we do it, how we live our lives.

When Gronya discusses caring as a means of connecting self with others and the need to see the situation from the point of view of the other person, we are once again reminded of Watson's (1979) phenomenological approach to care. Watson suggests that two persons in a caring transaction, the nurse and the patient, present an opportunity for each to learn from the other and to be human. Gronya and Watson both see this coming together of the nurse and the patient as a spiritual endeavour. Gronya recognises that spirituality may include religious beliefs but it does not necessarily do so. For Gronya it is the linking with the person for their meaning in life that is important. It is this connecting with others for meaning that many feminist writers, including Thayer- Bacon, consider essential for understanding and critical thinking.

Although Thayer-Bacon (1993) does not describe her model of critical thinking in spiritual terms it is possible to draw a parallel between her concept of caring

(pivotal to her model of critical thinking) and the description of spirituality offered by Reed (1992) and Burkhardt (1989), both of whom move away from the traditional practice of perceiving the concept of spirituality as being synonymous with religion, but rather see the concept in terms of connectedness. They describe spirituality as a unifying force that is perceived as a relatedness between all human dimensions, intrapersonally as a connectedness with oneself, interpersonally, in the context of others and nature, and transpersonally as a relatedness with God or a Powerful Other. It is in this area of connectedness that Gronya makes her links between critical thinking, caring and spirituality and relates this to nursing decision-making. For Gronya, the relational nature of perceiving knowledge was an essential feature of both caring and critical thinking and this was very typical of what Gilligan (1982) describes as a female way of knowing.

Eight of the participants in the study commented on gender differences in critical thinking. Three participants commented that males generally were more confident and analytical than females, while another three suggested that women as a group had issues with autonomy which affected their critical thinking ability. Two participants suggested that women's desire to be connected affected their conception of critical thinking. Although the participants in the study did not mention specific stages of development they frequently referred to a level of thinking very similar to Belenky's (1986) stage of 'constructive knowing'. Frequent references were made to the importance of context and 'connecting' in relation to women's thinking.

Charlotte: They think much more globally. Whether it is to do with our femininity insofar as we are always looking to be connected and related...whereas a male, to me anyway...is very much outcome orientated.

As these are fairly advanced stages in thinking it is not surprising that some participants found that some students had difficulty in coping with this level of thinking at an early stage in the programme. All of the nurse educators emphasised the need to contextualise critical thinking when making nursing decisions.

Ester: ...I think critical thinking in terms of nursing judgement, nursing action is very, very contextualised and I think that the person who is making a good critical judgement is taking on a lot of cues from the context of the situation.

*Lynda: Nothing exists to me outside of its context.
The key thing is the context.*

Benner (1984) suggests the ability to evaluate the context of the situation and recognise and interpret relevant cues is a quality of an expert nurse. Miller and Malcolm (1990) emphasise the contextual nature of nursing decision-making. Belencky (1986), Haynes (1991), and Thayer-Bacon (1993), who have shown that critical thinking requires a contextual framework support these views.

Gail extends this discussion by emphasising the importance of self in relation to the context. She expresses very similar views to Thayer-Bacon (1993) who acknowledges the intimate relationship of the knower and the known:

Gail: I think what we actually bring to the situation ourselves has a huge bearing on what we actually see and therefore how we think.

The participants described a number of ways they thought they were able to facilitate in the growth of the caring professional nurse. Although their methods varied somewhat, they all centred round some form of reflective practice. This is the focus of the next chapter.

CHAPTER SIX

The Critical Thinking Nurse as a Reflective Practitioner

The nurse educators consider reflection to be central to the process of critical thinking. Their views are supported in the literature by a number of learning theorists (Boud, Keogh, & Walker, 1985; Dewey, 1933; Habermas, 1971 and Schon, 1983, 1987). Dewey (1933) states that critical thinking is developed through reflecting on both experience and knowledge. Like Dewey, the nurse educators linked critical thinking, reflection, knowledge and experience.

Rose: I believe we teach them [the students] how to reflect and to think deeper into the action thinker therefore questioning how they do things. I probably link it [critical thinking] very closely to reflection.

Although all the nurse educators discussed reflection and described instances where they had encouraged students to reflect on their practice, they did not offer a clear definition of the term. This is not surprising as nursing literature (Atkins and Murphy, 1993; Mackintosh, 1998; Scanlan and Chernomas, 1997) suggests that although reflection has become an important concept in nursing, the process lacks a clear definition. They suggest that many nurse educators attempt to encourage the ideology of learning from experience through reflection, however, frequently they are the products of education programmes in which reflective strategies have not been explicitly identified, with the result that the nurse educator's understanding of reflection is likely to be based on

their experience with students and reading of the literature rather than their own conscious experience with reflection. Betsy expresses it in the following manner:

Betsy: And reflection, I think all nurses reflect on their practice even if they don't write it down in a journal. But I think you do need some direction in how to perhaps be aware of it, to utilise it better. And so like in my clinical practice I wasn't aware of reflective journalling. I wish I had kept a reflective journal.

Murphy (1993) suggests that the skills needed for reflection include self awareness, ability to describe, ability to critically analyse, ability to develop new perspectives and an ability to evaluate the learning process. Joe emphasises self-awareness as a step in the reflective process:

Joe: Nurses need to be able to have confident interpersonal skills and awareness of themselves in order to mobilise this in others. Critical thinking is bringing things from the unconscious to the conscious. Things we weren't quite aware of ourselves. ...Bring them into conscious awareness.

Joe describes the process analysis of a student who was caring for a patient, Mark, in a psychiatric ward. The process analysis illustrates the development of all the skills listed by Murphy. Joe relates how the student describes her

attempt to build a therapeutic relationship with Mark. She wanted to provide an opportunity for informal conversation about Mark's thoughts, moods and feelings so she decided to engage Mark in a game of pool. Mark misinterpreted the situation and invited her upstairs to his room. The student recalled how confused she felt. Her pulse was racing, she was perspiring and she felt herself blushing. She could not understand how she could have been misunderstood. Her intentions had been right but as there had been few staff around at the time she came to the realisation that she might have inadvertently placed herself in an unsafe environment. The student regretted that she had been more assertive with Mark.

Rather than saying "No, I don't think going upstairs would be a good idea," I should have been clear and more confident and said "No, Mark, you are a client and your suggestions are inappropriate".

The student noted that her body language had let her down. She did not withdraw when she realised that her heart was racing and she was blushing.

The student continued the process analysis by saying:

I am now able to convert my previous weaknesses to strengths. I was able to use new skills to be far more clear, assertive and confident and more important, the ability to recognise inappropriate and potentially manipulative behaviour or discussion and to consciously make an effort to nip it in the bud.

Joe describes this student as “making a quantum leap in awareness.”

All the nurse educators required the students to keep a praxis journal in which they recalled specific instances from praxis which had significant meaning for them, tease out the learning from the situation and reflect on how it might lead to practice modification. It has been suggested (Callister, 1993; Fonteyn & Cahill, 1998) that the use of a praxis journal increases reflective and metacognitive skills

Lynda: We should always be thinking what is happening here. Always go behind the scenes, always think about what is going on behind. And the only way to do this, I think, is to revisit it, revisit what has happened.

Lynda is encouraging the students to develop knowledge and understanding out of practice. This concurs with Benner's (1984) view that knowledge is embedded in practice. Gail provides an example of this when she recalls an entry in a student's journal which describes an interaction between a student and a patient who was to have his wound irrigated. The student noticed that he was frightened and she said “a big man like you”. Gail tells us that the student reflected back in her journal on the incident and recorded that we all have our fears and that her remark had been less than helpful. This student was able to use the insight she had gained from reflecting back on the seemingly insignificant incident to modify her future nursing practice. Her knowledge and understanding had grown out of her reflection on her practice.

Mary provides another illuminating example when she describes a student nurse helping a midwife with a mother who was haemorrhaging. The student described to Mary how the midwife handled the situation, empathising with the woman, as she used her nursing knowledge gained through years of experience to ensure, in spite of the emergency situation, that the labour was a positive experience for the mother. Mary concludes the story by stating:

In all the melodrama the student did not lose sight of things which showed quite a high level of thinking ability to keep all that in focus.

Mary is describing a good deal more than the rational scientific knowledge the student gained from this situation. She is describing the artistry embedded in practice. Smith (1998, p. 892) laments that such “nursing knowledge grounded within a curative, biomedical framework, which fails to take into account how nurses engage emotionally in their work and respond in a sensitive and meaningful way, is in danger of being lost because nurses themselves have not seen the practical worth of documentation or of communicating to colleagues”. Probably Schon (1983, 1987) is the educationalist who has made the most important contribution in nursing to the recognition of the artistry component of practice. Schon argues that because professional problems are complex and unique, they require solutions based not only on an applied science view of practice, characterised by an objective, detached, analytical stance but also the artistry embedded in professional practice. Schon is critical of the dominance of the theory application approach to professional practice. He describes a ‘high ground’ where research-based theory could easily be applied, but

suggests that the most challenging problems tend to occur in the 'swampy lowlands of practice'. He considers that it is through reflection that the tacit knowledge embedded in practice can be made explicit.

Shoen (1993, 1987) considers that reflective practice is composed of two components - reflection-in-action, which refers to thinking about what one is doing while one is doing it, and reflection-on-action, where the practitioner considers aspects of practice following action in order to explain the experience, to bring about a change of understanding which will in turn be used to improve practice. When earlier Rose stated that she taught students to think deeper 'into the action thinker' she is describing reflection-on-action. Most of the nurse educators provided examples of reflection-on-action. No doubt the reason for this is that it is retrospective and easier to assess. Mallik (1998) described similar findings when she was investigating reflective practices of nurses in Australia and the United Kingdom.

The reflective process encouraged by the nurse educators was unstructured with little evidence of the application of any formal framework being used; however, the nurse educators asked questions which required students to reflect on the rational component of practice as well as the artistic aspects of practice. Most of the questions the nurse educators posed to the students centred round:

- Empirical knowledge - what knowledge informed your decision making?
- Aesthetic knowledge - how was the patient feeling?
- Personal knowledge - how were you feeling in the situation?

These questions encourage what Greenwood (1998) describes as single looped learning . Greenwood indicates that in nursing literature two approaches to reflective practice predominate, each generating different frameworks for reflective practice. The first approach encourages single looped learning while the second approach encourages double looped learning. These approaches are based on Argyris and Schon's (1976, 1978) theory of action. According to these writers people do not act in an arbitrary fashion but rather design their actions to achieve a certain end result based on the manner in which they construct the context in which they live. These constructions of context and prescriptions for action are known as action theories. These theories may be either espoused theories, which are theories that people profess to maintain which, may or may not guide action, or theories-in-use, which are theories that underpin action. When theories-in-use do not achieve a desired end the person may seek other means to achieve the same end. This is referred to as single looped learning. Double looped learning occurs when the practitioner is not satisfied with searching for alternative actions to achieve the same end but reflects on the values and norms that underpin action.

Only two of the participants gave examples of questions which required students to examine the assumptions and values, which underpin their actions.

Gypsy expresses this to the students in the following way:

Gypsy: You are going to have to think through the issue...You are going to have to justify to yourself .why you are doing a particular thing or not doing a particular thing.

It is this type of reflection that can lead students to challenge the cultural norms of the work place, and this can be difficult. Gypsy recalls a situation where she had a discussion with a student who was working in an area where the patients were immunocompromised. The staff were doing a good deal of invasive work so the risk of cross infection was high. The student observed that she was wearing gloves more often than the staff nurses and was washing her hands more often. She questioned whether she was being overcautious or whether the staff nurses were not being cautious enough. Gypsy takes up the student's story:

Now am I washing my hands too often, are they not washing their hands enough? I would wear gloves when I am doing certain things, but they don't. Am I being over cautious or are they not being cautious enough? And she is thinking through all of that. At the very end of it she comes out and she said "No, I am not. I am doing the right thing. I am protecting myself as well as my patients." And she went on and said she found out what the cost of gloves were, because that was an issue for her, was she wasting ward funds? And she found that they were less than a cent each glove and she said that this was negligible compared with the patient getting an infection, the extra hospitalisation. And to me that was really good critical thinking.

Foster and Greenwood (1998) warn that when reflection leads to the challenging of cultural norms resentment may be experienced. It is through such reflection that the discrepancies between ideal practice and the social,

political and economic constraints, which may impede practice, become evident. Foster and Greenwood suggest that nurse educators who teach reflective practice have a responsibility to accept some accountability for 'opening the eyes' of the student, while Mackintosh (1998) discusses the potential psychological damage that prolonged reflection of this type may produce.

The participants were emphatic that highly developed questioning skills were required by the nurse educators to encourage the students to probe more deeply into the meaning of the incident for them.

Rose: Well in the clinical setting I am very good at putting questions to them to move along a path.

Although the majority of the nurse educators emphasised the need for highly developed questioning skills in order to encourage the students to reflect, it is not clear what they meant by this. The questions posed to the students seemed to be of a very high level of complexity across all three years of the programme, with a large number of the questions requiring analysis, evaluation and synthesis. For example, the questions Gypsy posed to her students exemplified the type of questions a number of the nurse educators used:

Gypsy: Let's think about what happened, what was the outcome, what were you not happy about and what was really good?[evaluation]. Then we think about

the implications of what happened. Do you think they need changing? [analysis].

Lynda poses similar questions to her students.

Lynda: ...and get them [the students] to look at it from a different perspective. How might they have been feeling? [affection]. What might the person have been thinking? Why do you think that happened? [analysis].

These findings were unlike the findings of Sellappah, Hussey, Blackmore and McMurray (1998) who found in their study that questions asked by clinical teachers involved mainly the recall of knowledge, and to a lesser extent comprehension and application, with very few questions focusing on analysis, evaluation and synthesis. They suggested that the reason for this could be that the clinical teachers were unfamiliar with the curriculum. This was not the case in this study where the nurse educators taught in both the theory and praxis components of the programme. Sellappah *et al* concluded that high level questioning, analysis, evaluation and synthesis are congruent with the development of critical thinking skills and decision making ability, and that clinical teachers can assist student development by asking questions in a structured format, moving from the simple to the complex. It is clear that the nurse educators in the study guided student practice by asking many questions, some very complex in nature. However, it is not clear if there was any differentiation in the complexity of the questions asked of first, second and third

stage students. For example, first stage students were asked fairly complex questions requiring them to link theory to practice. Mary, who teaches in the third stage of the programme, considers that even at this stage the students sometimes have difficulty linking theory to practice. She was, however, able to give several examples where the students were able to do this and reflect on the effect it had on their nursing practice.

Mary: ...the same student again is able to link particularly the nursing theorists through to actual clinical practice and I think this is quite hard in many instances to do. For example in the obstetric area, she [the student] made comments about 'Christensen acknowledges that patients are required to become exposed in body to others and to accept intrusive procedures'.

Mary does not specify in what way this experience helped shape this student's practice, however it is clear that, by relating Christensen's work to her reflection on practice, the student gained a recognition of the vulnerability of women in childbirth. Knowledge gained from this reflection would influence her future thinking and practice. Mary's observation that neophyte students have difficulty in applying theories they have been taught in nursing school to practice is echoed in literature by Foster and Greenwood (1998), Hallett (1997), and Smith (1998). Smith suggests that theoretical ideas cannot be unthinkingly applied but need to be revisited and adjusted, while Hallett (1997) claims that practice comes before understanding. It was not until the later stage of their praxis

experience that the students were able to utilise “academic theories” to make sense of their practice, however Callister (1993) suggests that journal writing is a means by which students can be encouraged to link classroom theory to practice.

It cannot be assumed that all students will naturally be able to reflect. The nurse educators described a number of variables that influence the student’s ability to reflect on, and question, practice. Several of the participants suggested that some cultures found it unacceptable to question. The argument was presented that students who were brought up in a culture that found questioning unacceptable found it difficult to develop as a critical thinking, professional nurse.

Rose: Well I suppose it is about how acceptable it is to question. So there may be some cultures that find it rude to question in that you are questioning the authority of an elder. So that may hold back some students.

While some participants were clearly referring to the norms of certain ethnic cultures other participants broadened their discussion to consider the environment the student grew up in regardless of ethnicity.

Charlotte: So if you have been brought up in a home that has not...encouraged you to question anything...it is not going to...promote a way of thinking for this person to

question...And it is the school system as well...the teacher has the authority to have all the answers...that is not going to encourage you to question at all.

Doll (1973) addresses the teacher/student relationship and contends that we cannot engage in reflective relationships with students unless we give up our position as the authoritative knower. He suggests that teachers need to work together with students to uncover the meaning of the situation for the student. Betsy talks about the openness that is required on the part of the nurse educator:

Betsy: And I make sure I never get defensive with their inquiring questions.

However for much of their practical experience students are 'buddied' with practitioners from within the clinical areas. The attitude and skill of these practitioners can be a highly influential determinant of the ability of the student to develop as a reflective professional. Literature suggests (Foster & Greenwood, 1998; Hallet, 1997; Heath, 1998; Mallick, 1998; Sellappah, Hussey, Blackmore and McMurray, 1998) that it is difficult for nurses to learn nursing for themselves without the help of a knowledgeable, empathetic supervisor who is willing to play a key role in enabling the student to reflect critically on their experiences. Cultural norms and economic constraints of the work place were common factors discussed by the nurse educators, which impeded reflection. Students work in busy clinical areas where 'doing' is often

valued over 'reflecting' and although the students are supernumerary in the clinical area they are expected 'to be seen to be busy'. The influence of practitioners in these situations is critical in either encouraging student's development as reflective professionals or in stifling the process.

CHAPTER SEVEN

Conclusions, Recommendations and Implications

Introduction

This study used semi structured interviews to explore the concept of critical thinking as it relates to nursing judgement and decision making held by the nurse educators in the institute in which the study took place. Congruence between the department's definition of critical thinking and methods the nurse educators used to facilitate, measure and evaluate its development were explored. In this last chapter an overview of the study, in its entirety, is presented and then significant findings from each data chapter are drawn out and followed by a general discussion. From this discussion conclusions were drawn to answer the research questions which guided the study. The chapter concludes with a statement regarding the limitations of the study, recommendations for further research and implications for nursing education.

Findings

Although critical thinking is a significant issue in nursing education, there is no clear definition of the concept as it applies to nursing judgement and decision making. Definitions have been borrowed from philosophy and education. In the general literature critical thinking is not well defined; nonetheless two broad accounts are evident, one firmly based in traditional views, the other embracing feminism. In the nursing literature definitions have moved from a rational, linear, problem-solving approach to include areas in the affective domain. Many of the characteristics generally thought to be typical of 'women's ways of

thinking, including, intuition, attention to context and emotions and a strong linking between the self and object of thought are now being included.

The research findings are inconclusive regarding the correlation between critical thinking and nursing judgement. A number of reasons have been suggested for this, which include an inadequate conceptualisation of critical thinking as it relates to nursing judgement and the use of inadequate measuring instruments. Recent nursing literature suggests that there is a need for nursing education programmes to define critical thinking in such a way that it clearly reflects the programme goals and to develop indicators that enable the concept to be measured in a meaningful manner.

In this study the nurse educators provided a clear and rich description of their conceptions of critical thinking. They considered critical thinking to be essential for engaging in multidimensional decision making which nurses encounter in their every day professional nursing practice. The most common reasons given by the nurse educators for regarding critical thinking as both desirable and necessary for nursing judgement focused on the complexity of today's nursing care. Complex situations, both sociological and physiological, were mentioned. Patient expectations and the trend for nursing to move into the community where nurses were expected to practice more autonomously, accept more responsibility, and demonstrate a greater degree of accountability were further reasons given for the need to encourage critical thinking in nursing. It was suggested that nurses need to extend their critical thinking not only to the clinical area but also to management, professional issues, nursing literature, nursing ideas and nursing philosophy.

In chapter four the critical thinking nurse was viewed as an informed decision-maker. The nurse educators agreed that nurses needed to be widely informed, with a good knowledge base, in order to be proficient critical thinkers when making nursing judgements. Most of the participants considered the knowledge base should include both rational, empirical knowledge, characteristic of traditional concepts of critical thinking and subjective, intuitive knowledge, which is generally thought more typical of female ways of thinking and knowing. Intuitive knowledge was generally referred to as the ability to make sense of a current nursing situation by drawing on past experience to recognise subtle contextual cues. Only one of the participants considered that intuition had no part to play in critical thinking. A number of the participants referred to gender differences in ways of thinking and made either direct or indirect reference to 'connected knowing', suggesting that this may be an important component of nursing decision-making. All of Carper's (1978) ways of knowing - empirical, aesthetic, personal and ethical - were referred to while several participants made reference to political knowing. The ability to integrate knowledge was thought to be an important aspect of critical thinking as it relates to nursing caring. It is clear that the nurse educators perceive that critical thinking for nursing judgement is more than a set of generic skills.

Chapter five examined the critical thinking nurse as an autonomous carer. Most of the nurse educators described critical thinking as having an action component. They thought that autonomy was necessary in order for nurses to action critical thinking decisions in their professional practice. Most of the participants described 'caring' as synonymous with 'good nursing practice'. The

bureaucratic structural organisation of hospitals, economic constraints and the cultural socialisation of women were considered factors that had militated against the development of autonomous nursing practice. A number of the participants felt that as nurses increased their professional knowledge base their voices were being heard and they were being accorded the autonomy to care in an enabling manner, both within the traditional health care system and in a wider range of health care settings. Autonomy to care was discussed not so much as individual autonomy but in terms of having their professional expertise recognised, as it was acknowledged that nurses frequently work in multidisciplinary teams. A number of factors were identified in relation to the development of critical thinking in nursing students. These included life experience, educational background and gender. However both personal and professional socialisation which encouraged autonomy of thought and action was thought to be the most significant factor.

Chapter six examined an overriding theme that was evident in this study - the critically thinking nurse as a reflective practitioner. All of the nurse educators closely linked reflective practice with critical thinking. They described a variety of methods used to encourage students' reflection, including assignment writing in which students were required to investigate nursing theory and relate this to practice, examine ethical issues, problem solve, engage in process analysis and role play. However the most common methods described by the participants were dialogue and the requirement that student nurses keep a praxis journal.

Although reflective practice has been extensively discussed in nursing literature as a means of encouraging the development of the professional practitioner, it has received criticism for lack of clear definition and the infrequent use of reflective frameworks by nurse educators (MacKintosh, 1998). The nurse educators in this study offered no recognised framework for encouraging reflective practice and frequently the questions asked encouraged what Argyres and Schon (1974, 1978) describe as single looped learning rather than double looped learning which requires examination of values, norms and social structures. When discussing praxis journal writing only two of the nurse educators indicated that they asked questions that would guide student's reflection in this direction.

Discussion and Conclusion

In this study the nurse educators considered that, because of the complexity of today's society and nursing practice, nurses were often confronted with multidimensional problems, which required the use of critical thinking. A number of perceived, interdependent assumptions were made regarding the relationship between knowledge, reflective practice, critical thinking and professional caring (Fig. 1).

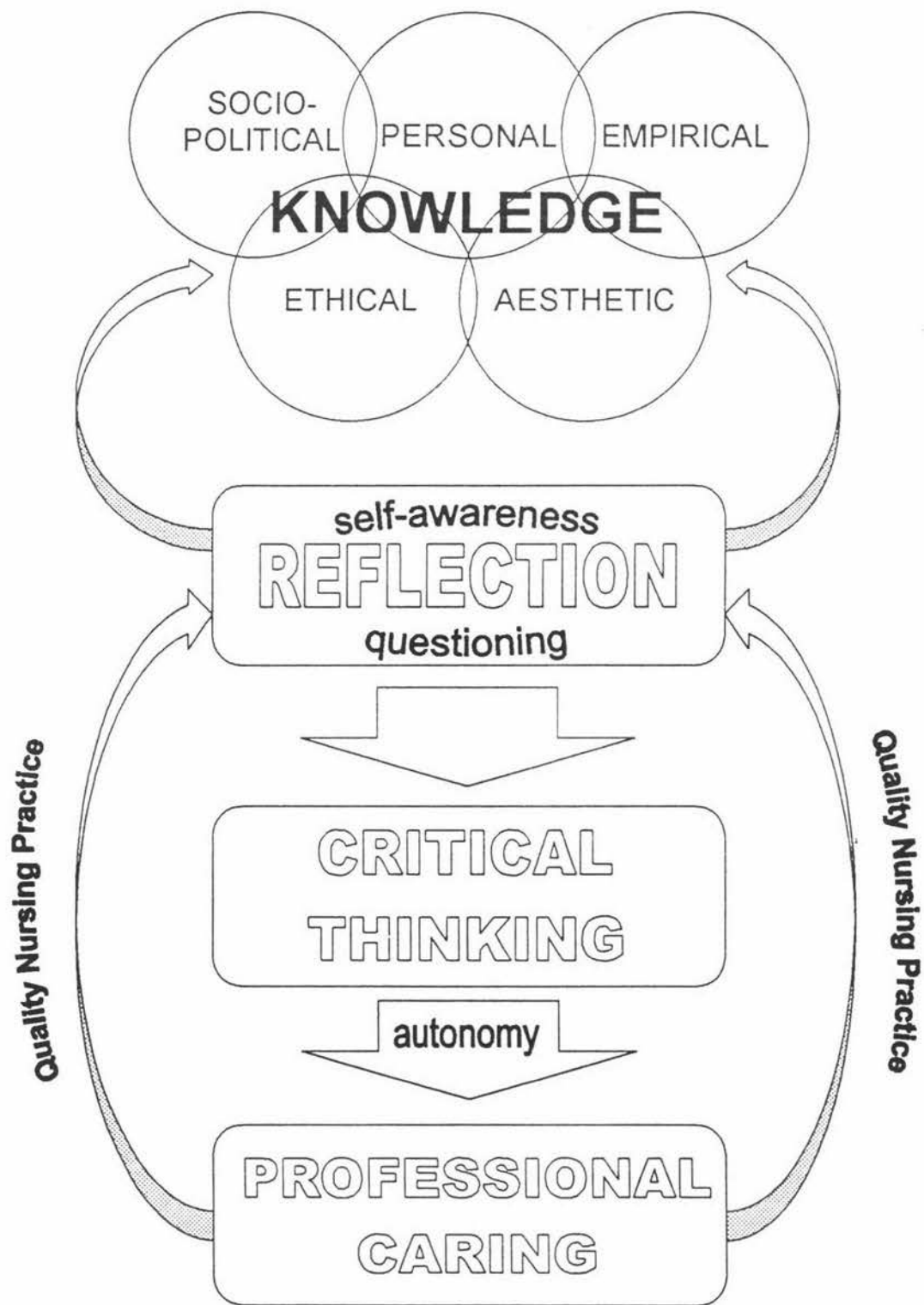


Figure 1: Nurse educators' assumptions regarding knowledge, reflective practice, critical thinking, professional caring

A sound knowledge base was thought to be essential in order to practice professionally. Knowledge was thought to be acquired by both rational/logical methods more typical of traditional views of critical thinking, and by intuitive methods more typical of what is considered to be women's ways of knowing and thinking and often 'embedded in practice' (Benner, 1994). All of Carper's ways of knowing - aesthetic, empirical, ethical and personal - were discussed along with socio-political knowing. Clearly the nurse educators perceived that critical thinking for nursing judgement required more than a set of generic skills. It required both rational and intuitive knowledge and a specialised frame of reference in the utilisation of that knowledge.

In order to develop professionally and give quality-nursing care it was assumed that a nurse needed to reflect on practice. In order for this to occur curiosity, questioning skills and self-awareness were necessary. It was also assumed that reflective practice led to critical thinking and through critical thinking the nurse was able to bring to bear knowledge necessary to engage in professional caring. This was described as the essence of quality nursing practice and reflection on this practice increased understanding and awareness of what it is to be a professional nurse.

It is not surprising that reflection on practice was identified by the nurse educators as a means of developing critical thinking, as their curriculum is based on a phenomenological, hermeneutical approach. Reflection offers a means of integrating theory into practice and identifying knowledge embedded in practice, a point espoused by Benner (1994), a key caring theorist used in

curriculum development. However the definition of critical thinking in the curriculum was adapted from the work of Bandman & Bandman (1985) and more closely reflects the analytical/rational ideology generally associated with more traditional, scientific means of problem solving. Videbeck (1997b) discusses the importance of consistency between definitions of critical thinking and programme goals. The curriculum is a living document and changes are being made in the curriculum to address this issue.

Limitations

This research was conceived, data collected and interpreted and the research report written from the point of view of a nurse educator working within the institute in which the research was conducted. Whilst this has certain advantages in facilitating the development of rapport between the researcher and the participants, it is acknowledged that it inevitably creates a certain degree of research bias. In this study all the steps of the research process were carefully described. Interpreting the data alone with minimal guidance was seen as a further potential threat to the validity of the study. It is accepted that it is possible that some themes may yet be unidentified and unexplored.

As a means of data collection the researcher relied on self-reports by the participants. This allowed the researcher to gain insight into what Argris and Schon (1976, 1978) describe as the 'espoused theories' of the participants. Knowledge was gained of what the participants maintained guided their professional decision-making and educational practice. Argris and Schon suggest that this may sometimes differ from 'theories-in-use', which are personal theories that underpin action.

Throughout the course of the conduct, interpretation and writing of the study the researcher was in full time employment. This reduced the continuity of the writing. It is acknowledged that a curriculum is a living document with changes being made over time. Midway through the research process the department in which the research was conducted undertook a curriculum review. It was felt that the department would have benefited by having access to these research findings at that time, had they been available

The findings of qualitative studies cannot be generalised in the same way as the findings of quantitative studies as they are considered to be unique to the study (Guba & Lincoln, 1995). The context and circumstances are difficult, if not impossible to reproduce. Guba and Lincoln assert that it is the responsibility of the person wishing to make an application of the findings elsewhere to seek empirical evidence regarding context similarity. Although the nurse educators in the study have all developed their concept of critical thinking as it relates to nursing decision making through unique experiences, it is suggested that they have experiences, which tend to be common to all nurse educators.. This claim is supported by similarities between the data gathered in this study and reports in the literature. Being mindful of these considerations the researcher suggests that the findings of this research are of use to a wide range of nurse educators in other institutions.

Implications for Nursing Education

- Critical thinking is a complex process. Many of the standardised tools which measure critical thinking are inadequate to measure the concept as it relates to nursing decision making and clinical judgement. Although all the nursing

education programmes in New Zealand seek to develop nurses who are competent to practice, there are variations within individual nursing programmes related to philosophies and goals, which gives the programmes their uniqueness. In order to measure critical thinking the definition should clearly reflect the individual programme's goals and the indicators, when applied to nursing situations, should be meaningful and useful to both students and nurse educators. This poses a challenge for curriculum development which nurse educators need to address. Without a clear, meaningful definition the nurse educator is unlikely to be able to make any statement regarding the student's ability to function as a critical thinker in the practice area.

- The nurse educators considered that reflective practice is the primary means of facilitating critical thinking as it relates to clinical decision making. Many of the participants suggested that students varied in their ability to use a reflective process. This claim is supported by the literature (Aitkins & Murphy, 1993; Baker, 1996; Durgahee, 1998; Mackintosh, 1998). It is important that nurse educators are cognisant of this when introducing neophyte nursing students to reflective practice so as not to burden students with expectations beyond their capabilities. Nurse educators involved in clinical supervision should be aware of the cognitive development of individual students. Failure to appreciate this can lead to student frustration (Fowler & Chevannes, 1998; Durgahee, 1998).
- Reflection on practice is an activity that involves more than just thinking about an incident. It involves purposeful contemplation, which leads to behavioural change. Nurse educators need to be highly skilled and

knowledgeable in order to be able to facilitate this. They need to be aware of reflective frameworks and utilise these effectively to guide student reflection at the appropriate level. There was no mention of the use of reflective frameworks in this study and several of the participants expressed the desire for more guidance in this area of professional development. A recommendation for quality practice is that reflective frameworks be appropriately used.

- A finding of this study relates to ethical issues surrounding reflective practice. It is recommended that clear ground rules be established in relation to access to journal material and the sharing of reflective experiences. In addition, clinical supervisors need to be aware of their responsibility to support students when their reflection leads them to challenge the 'status quo' (Wellard & Bethune, 1996).
- It was reported that some clinicians see reflection as time wasting and 'academic'. Nurse educators have an obligation to support students when they are confronted with this attitude. Evidence-based practice is currently an important concept in nursing. Empirical research into reflective practice that demonstrates the benefits of reflective practice from the patient's perspective could assist in diminishing resistance to reflective practice.

Recommendations for Further Research

The following recommendations are derived from the findings of the study:

- An action research study be initiated within the Department of Health Studies where the study was conducted, with the aim of developing a model of critical thinking as it relates to nursing decision making which matches the

programme's goals, and a means of measuring the concept is developed. If the model is to be successfully implemented all members of the department need to be more involved in clarifying this key curriculum concept. Inherent in engaging in action research is the acknowledgement that one's ideas will change as the concept is explored and meaning refined.

- Reflective practice within the department is explored and models of reflective practice are examined.
- Further qualitative research be conducted in other educational institutions in New Zealand to examine nurse educators' conceptualisations of critical thinking as it relates to nursing decision making. In the published literature there is no record of any such study being undertaken.
- Research is conducted to examine models of clinical supervision in New Zealand that are based on reflective practice.
- The ultimate aim of reflective practice is to improve the quality of patient care. There is little empirical evidence to validate the belief that reflection influences patient care (Burnard, 1995; Peirson, 1998). It is suggested that research be conducted into clinical nursing practice in New Zealand to ascertain the effects of reflective practice from the patient's perspective.

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Appendix One

INTERVIEW SHEET

The purpose of the interview is to gain an understanding of your conceptualisation of critical thinking for nursing judgement. The interview will be semi-structured with the questionnaire intended only as a prompt to encourage you to share fully your thoughts on the concept. The questions may not necessarily be asked in the order they appear in this form. Your discussion will dictate which questions are asked and when they are asked in the interview.

Thank- you for agreeing to come here today and share your ideas with me on critical thinking as it relates to nursing judgement. You are aware that critical thinking is an important issue in nursing education today.

1. As an outcome of our degree we state that our graduates have the ability to think critically.

What do you understand by this statement?

2. What do you think the role of critical thinking is in relation to nursing judgement?
3. What do you think the role of critical thinking is in relation to the nursing process?
4. How do you think critical thinking relates to problem solving in nursing?
5. Do you think there is any relationship between critical thinking and intuition?
6. Do you think there is any relationship between critical thinking and 'caring'?
7. How important do you think context is in relation to critical thinking.
8. Some educationalists regard critical thinking as a generic set of skills capable of being applied across a range of domains. Others suggest that each discipline has its own body of knowledge which determines the nature of critical thinking in that discipline.
9. What are your views on this issue?
What do you think the implications are for nursing education?

10. How important do you think disposition is in relation to critical thinking?
Do you think disposition for critical thinking is generic or domain specific?

11. In our degree we have students from a variety of backgrounds. Do you consider that critical thinking is effected by:
- socio-economic background
 - educational background
 - age
 - gender
 - life experience

Can you think of any other factors which might effect critical thinking?

12. In the paper you teach in can you describe how any of the evaluation items for the paper assess the student's critical thinking ability?

13.. What do you do in your teaching to encourage your students to think critically?

14. You were asked to bring to this interview two pieces of student work that you consider demonstrates critical thinking.

What is it about these pieces of work that makes you think the students demonstrate of critical thinking?

15. How would you further encourage the students whose work you have been discussing to think critically?

16. Now can you think back to when you supervised these students in the praxis area.

Can you think of an incident that demonstrated to you something about the students level of critical thinking in relation to clinical judgement?

Can you describe this incident to me?

INFORMATION FOR PARTICIPANTS

My name is Pat Walthev and I am enrolled in a Masters of Education programme at Massey University. I am inviting you to participate in a research project which is part of my qualification for the degree. My research project is entitled "Conception of Critical Thinking for Nursing Judgement Held by Nurse Educators."

The development of critical thinking has become an increasing concern to nurse educators. Tanner (1993, p99) suggests that it is essential that attention is given to how "we define critical thinking, what educational methods support its development and how we can be assured that students have achieved some acceptable level of skill." As you know we state that critical thinking is an attribute of our graduate nurse.

I am inviting you to share with me your conception of critical thinking as it relates to nursing judgement. This will involve you taking part in an individual semi structured interview lasting approximately one hour. You are requested to bring to the interview two pieces of student work (from two different students) that you think demonstrated critical thinking. You will also be asked to discuss an incident that demonstrates to you something about the students critical thinking in relation to clinical judgement in the praxis area. In order to do this please select work from a student you have also supervised in praxis.

It is planned that I will audiotape and transcribe the interview. The tapes will be stored in my home. The transcriptions from each individual interview will be discussed with the person concerned before information from them is used as data.

Once approved some verbatim accounts will be used in the research report. On completion of the research a report will be placed in the library at Massey University Institute of Technology.

CONSENT TO PARTICIPATE IN RESEARCH

Title of Project:

CONCEPTIONS OF CRITICAL THINKING FOR NURSING JUDGEMENT HELD BY NURSE EDUCATORS

RESEARCHER: PAT WALTHER

I have been given and have understood an explanation of this research project. I have had an opportunity to ask questions and have them answered. I understand that I may withdraw myself or any information I have provided from this project (before data collection is completed), without having to give reasons and without penalty of any sort.

I agree to take part in this research.

Signed	
Name (Please print clearly.)	
Date:	

APPROVED BY THE INSTITUTE OF TECHNOLOGY RESEARCH AND ETHICS COMMITTEE

on for a period of years, from/...../..... Reference/.....

As participants you have the right to:

- a) Ask any questions about the process.
- b) Refuse to discuss anything you don't want to.
- c) Withdraw from the study at any time.
- d) Expect confidentiality at all times.
- e) Give approval to own transcribed data before it is used for analysis.
- f) Expect anonymity in the reporting of the findings by the use of pseudonyms for individual references.
- g) Access to the results of the study.

Please contact me at any stage if you have any question.

Pat Walthew

Lecturer

Department of Health Studies

Phone:

APPROVED BY THE

INSTITUTE OF TECHNOLOGY RESEARCH AND ETHICS
COMMITTEE

on for a period of years, from/...../..... Reference/.....

Appendix four

INFORMATION FOR STUDENTS & CONSENT TO USE WORK

My name is Pat Walthew. I am a lecturer in the Health Studies Department at I am conducting research in the area of critical thinking as it relates to nursing judgement as part of my Masters of Education program at Massey University. As a result of my research I hope, as a faculty, we will gain a greater understanding of the concept of critical thinking.

The development of critical thinking has become an increasing concern to nurse educators. Tanner (1993), p99) suggests that it is essential that attention is given to how "we define critical thinking, what educational methods support its development and how we can be assured that students have achieved some acceptable level of skill".

My research requires nurse lecturers to comment on critical thinking they perceive in students work. You are invited to take part in this research by consenting to your lecturer using a photocopied sample of your work for this purpose. It will be work this has previously been marked. Your grades will in no way be affected. Confidentiality will be maintained at all times. your name and number will be deleted from your work. Your lecturer will be the only person who knows to whom the work belongs.

You are in no way obliged to have your work used in this way. There is no penalty what so ever for not consenting. If you do consent I would like to thank you for your co-operation.

I agree to take have my work used in this research.

Signed:

Name:
(please print clearly)

Date:

MASSEY UNIVERSITY COLLEGE OF EDUCATION ETHICAL GUIDELINES

These ethical guidelines and principles for the conduct of educational research are based on similar guidelines developed by the New Zealand Association for Research in Education and the Code of Ethical Conduct developed by the Massey University Human Ethics Committee.

Ethical Responsibility

Responsibility for establishing and maintaining ethical practices in the conduct of thesis research lies with the student, who should discuss fully with his/her supervisor all the ethical implications of the study. For many projects this process will provide a sufficient ethical evaluation and, where required, appropriate modifications to procedures should be made.

There are four circumstances, however, where an application through the supervisor, must be made to the University Human Ethics Committee:

- (i) When participants are to be subject to procedures which are potentially harmful to their physical or mental health.
- (ii) When specific advice is needed on the nature of ethical problems and their solution in a particular project.
- (iii) When, after discussion with the supervisor, unresolved ethical issues are apparent.
- (iv) When an external agency requires certification of ethical approval as a prerequisite for funding or for screening by their own ethical committee.

General Principles

Ethical principles are not to be confused with ethical rules. Rules are specific and prescribe or forbid certain actions. Principles, on the other hand, are very general and need to be interpreted before being applied in a context.

The major principles in the conduct of research are:

- (i) **informed consent** (of the participants)
- (ii) **confidentiality** (of the data and the individuals providing it)
- (iii) **minimising of harm** (to all persons involved in or affected by the research)
- (iv) **truthfulness** (the avoidance of unnecessary deception)

- (v) **social sensitivity** (to the age, gender, culture, religion, social class of the subjects)

In all cases research subjects have rights that supersede those of the investigator, irrespective of the age of the subjects.

The interests of society in general, and the welfare of research subjects in particular, takes precedence over the interests of the researcher.

Specific Rights and Responsibilities

- (i) Research subjects, or those who act **in loco parentis** have the right to refuse to participate in the research without penalty, and the right to withdraw from the research without penalty.
- (ii) The researcher has a responsibility to ensure that no research procedure is used which may cause physical or psychological harm to the subject (research proposals involving time-out or punishment procedures should be referred to the Human Ethics Committee).
- (iii) The researcher has a responsibility to ensure that the demand made upon the time of participants does not adversely affect their educational progress.
- (iv) The rights of particular ethnic or cultural groups should be acknowledge and respected. (For instance, in Maori and Polynesian culture, "knowledge" is regarded as the property of the group, and while it may be borrowed or shared, it may not be taken. Thus researchers must ensure that they do not use such knowledge as if it were their own; access to it must remain in the control of the appropriate group who will continued to determine who has access, under what conditions, and for what purposes).

Consent and Confidentiality

- (i) Before commencing the research, consent should be obtained from all participants. Where it is practicable, a written form should be used for this purpose. To ensure that such consent is **informed**, the researcher should:
- provide all participants with a comprehensible explanation of the nature and purpose of the research, including any features that may affect subjects' willingness to participate;
 - answer all questions from participants to their satisfaction, and in terms that are appropriate to their comprehension;
 - inform and obtain consent from parents, guardians and/or those who act **in loco parentis** where such consent is appropriate;

- ensure that participants understand that they may decline to participate or withdraw from the activity at any time without penalty of any sort and that their privacy and confidentiality will be protected.
- (ii) Where the research entails gaining access to institutional records the researcher should gain the consent both of the participants and of the institution concerned.
 - (iii) Participants should be assured that their identity will be concealed during the processing and reporting of the research, and should be informed of the measures taken to ensure confidentiality of information, including video and audio recording. Please note here that **non-identifiability** is a more stringent requirement than non-identification. For example, even though the identity of the locale, school, and research subjects can be made anonymous, consideration should now be given to the fact that such identifications can be made from the researcher's name on the final report.

Feedback and Reporting

- (i) At an appropriate time (i.e. when there is sufficient data and analysis to permit it) participants should be given feedback on the research and the opportunity provided for any misconceptions to be clarified and questions answered.
- (ii) Researchers should acknowledge the co-operation and contribution of all concerned in the conduct of the research.
- (iii) Normally a thesis is a public document and should not contain any confidential or personal material unless permission has been verifiably obtained.
- (iv) Researchers have a responsibility in reporting their research to ensure that due regard is given to the role and interests of all parties concerned, and the social, political and human implications.

This may necessitate:

- acknowledging any assistance received;
- stating the particular ethical concerns that have been considered and the principles that have been followed;
- reporting research even if the results conflict with the researcher's expectations.