

WORK ENGAGEMENT, MORAL DISTRESS, EDUCATION LEVEL, AND  
CRITICAL REFLECTIVE PRACTICE IN INTENSIVE CARE NURSES

by

Lisa Ann Lawrence

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As members of the Dissertation Committee, we certify that we have read the dissertation prepared by Lisa Ann Lawrence entitled 'Work Engagement, Moral Distress, Education Level, and Critical Reflective Practice in Intensive Care Nurses' and recommend that it be accepted as fulfilling the dissertation requirement for the Degree of Doctor of Philosophy

\_\_\_\_\_  
Date: July 27, 2009  
Pamela G Reed, PhD, RN, FAAN  
Professor

\_\_\_\_\_  
Date: July 27, 2009  
Elaine Jones, PhD, RN  
Associate Professor

\_\_\_\_\_  
Date: July 27, 2009  
Cathleen L Michaels, PhD, RN, FAAN  
Clinical Associate Professor

Final approval and acceptance of this dissertation is contingent upon the candidate's submission of the final copies of the dissertation to the Graduate College.

I hereby certify that I have read this dissertation prepared under my direction and recommend that it be accepted as fulfilling the dissertation requirement.

\_\_\_\_\_  
Date: July 27, 2009  
Dissertation Director: Pamela G Reed, PhD, RN, FAAN  
Professor

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## DEDICATION

To all the nurses who have come before, are now, and will follow.

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## ABSTRACT

The purpose of this study was to examine how nurses' critical reflective practice, education level, and moral distress related to their work engagement. This is an area of study relevant to nursing, given documented United States Registered Nurse (RN) experiences of job related distress and work dissatisfaction, and the nursing shortage crisis. Nurses are central players in the provision of quality health care. There is need for better understanding of RNs' work engagement and factors that may enhance their work experience. A theoretical framework of critical reflective practice was developed and examined in this study.

A non-experimental, descriptive, correlational design was used to examine the relationships among four study variables: critical reflective practice, education level, moral distress, and work engagement. The purposive sample consisted of 28 intensive care unit RNs (ICU-RNs) from three separate ICUs (medical, neonatal, and pediatric) in a 355-bed Southwest magnet-designated hospital. Measures of the key variables were as follows: (1) *Critical Reflective Practice Questionnaire (CRPQ)* developed for this study; (2) a subscale of Mary C. Corley's *Moral Distress Scale*; (3) *Education level* measured as the highest nursing degree earned to practice as a RN; and (4) the *Utrecht Work Engagement Scale*. All instruments demonstrated adequate reliability and validity.

Pearson correlation and multiple regression analyses indicated support for the theoretical framework: There was a negative direct relationship between moral distress and work engagement, a positive direct relationship between critical reflective practice and work engagement, and moral distress and critical reflective practice, together, explained 47% of the variance in work engagement. Additionally, in the NICU, results indicated a positive direct

relationship between increased educational level and critical reflective practice. Results also indicated that moral distress was a clinically significant issue for ICU-RNs in this sample. Strategies to promote critical reflective practice and reduce moral distress are recommended. Additionally, the findings support continued study of critical reflective practice and moral distress, and the role of education level, in nurses' work engagement. Research goals include continued study of the theoretical framework in larger study samples and in reference to additional explanatory factors.

## CHAPTER I – STATEMENT OF THE PROBLEM

Registered Nurses (RNs) are important to a nation's well-being, for nearly every healthcare experience, from birth to death, involves the contribution of a RN (Joint Commission on Accreditation of Healthcare Organizations (JCAHO), 2002, p. 5.). The current and increasing RN shortage in the United States (U.S.) represents "one of the most serious threats to quality care facing the healthcare system" (Quinn, 2002, p. 3). Within the U.S. and Canada college-aged women historically interested in pursuing nursing education now demonstrate a dwindling attraction to the profession (Clarke & Connolly, 2004; Miller & Cummins, 2009) and RNs currently in practice experience greater demands in constrained environments, i.e. increased patient acuity, technology changes, nursing shortages, shorter lengths of stay, and financial pressures (Kurtzman & Corrigan, 2007, p. 26). As the profession's goal of providing care that promotes healing and prevents complications is challenged, RNs are at risk to experience job-related distress and dissatisfaction, with resultant potential exit from the profession (Lang, 2008).

Clinical research has studied patients and illnesses, but it is now time, especially given the growing shortage of RNs, to include the professional well-being of RNs in scholarly work. For in view of the "increasing shortfall of qualified and competent workers...it is crucial to retain and motivate...personnel... [and] to examine the conditions and processes that contribute to the optimal functioning and happiness of [nurses]" (de Lange, De Witte, & Notelaers, 2008, p. 201). This dissertation, therefore, endeavors, in part, to examine and expand the nursing knowledge base in regards to nurses' work engagement and factors that may enhance this work experience for nurses.

### Purpose of the Study

The purpose of this study is to examine how nurses' educational level, moral distress, and critical reflective practice relate to their work engagement. Personal and environmental factors of educational level, moral distress, and critical reflective practice are proposed to be potentially significant correlates of work engagement among nurses. These terms and how they may be related to each other are described in the Theoretical Framework. The theoretical framework may be refined as a result of this study. Therefore, a secondary purpose is to further develop theory on significant correlates of work engagement.

### Definitions

Nurses' educational level, moral distress, critical reflective practice, and work engagement are four primary terms presented in this dissertation. An introductory definition of each of these terms follows.

*Nurses' Educational Level:* A representation of the educational avenue utilized to obtain a current RN licensure-to-practice degree. Nurses' educational level is usually represented in one of the three ways: (1) two-year associate degree in nursing (AD or ADN), (2) three-year diploma degree, or (4) four-year baccalaureate of science degree in nursing (BSN).

*Moral Distress:* "The psychological disequilibrium and negative feeling state experienced when a person makes a moral decision but does not follow through by performing the moral behavior indicated by that decision" (Wilkinson, 1987/88, p. 16).

*Critical Reflective Practice:* Being mindful of self within or after professional practice situations, (i.e., *processing* the cognitive, behavioral, and affective components of professional practice situations), so as to continually grow, learn and develop, personally, professionally and politically.

*Work Engagement*: “The positive, fulfilling, work-related state of mind that is characterized by vigor, dedication, and absorption” (Schaufeli, Salanova, González-Romá, & Bakker, 2002, p. 74).

### Background and Significance

The United States (U.S.) is experiencing a disturbing nursing shortage (Buerhaus, 2009; Buerhaus, Auerback, & Stalger, 2009), providers from around the country report “growing difficulty in recruiting and retaining the number of nurses needed in a range of settings” (United States General Accounting Office, 2001, p. 3) and workforce nurses report high levels of job dissatisfaction (Sochalski, 2002; United States General Accounting Office, 2001, p. 13). There are indications “by 2011 the number of nurses leaving the profession will exceed the number of new nurses entering the profession” (Hart, 2005, p. 174) and by 2020 hospitals will face “a 20% nursing shortage” (Bell & Breslin, 2008, p. 95). In fact, nursing shortages and job dissatisfaction are being reported worldwide, 69 nations report their countries are experiencing a nursing shortage (Blaum, 2002) and a high percentage of nurses in Canada, England and Scotland report job dissatisfaction (Aiken, Clarke, Sloane, Sochalski, Busse, Clarke, Giovannetti, Hunt, Rafferty, & Shamian, 2001, p. 45).

### *Work Engagement*

An approach to gaining better understanding of nurses’ work experiences and possible explanations for dissatisfaction with work is through study of factors that may influence nurses’ *work engagement*. Work engagement is important because recent and in press findings suggest engaged employees experience (1) happiness, joy, and enthusiasm, (2) better physical and psychological health, (3) improved job performance, (4) increased ability to create job and personal resources, (e.g., support from others), and (5) an ability to transfer their engagement to

others (Bakker, Schaufeli, Leiter, & Taris., 2008, pp. 193-194). The variables of moral distress, years of education, and critical reflective practice will be investigated in relationship to work engagement.

### *Moral Distress*

Moral distress is proposed as one potential factor in the complex and worldwide trend of decreased nursing recruitment, retention, and work satisfaction. It is experienced by RNs in the following variety of care provision settings: *medical surgical/acute care* (Corley, Minick, Elswick, & Jacobs, 2005; Storch, Rodney, Pauly, Brown, & Starzomski, 2002; Rice, Rady, Hamrick, Verheijde, & Pendergast, 2008; Verhaeghe, Vlerick, De Backer, Van Maele & Gemmel, 2008; Wilkinson, 1987/88, Zuzelo, 2007), *home care* (Liaschenko, 1995), *occupational health* (Corley, Elswick, Gorman, & Clor, 2001), *military* (Fry, Harvy, Hurley & Foley, 2002), *cardiology and hematology* (Kälvemark, Höglund, Hansson, Westerholm, & Arnetz, 2004), *psychiatry* (Forchuk, 1991; Liaschenko, 1995), *peri-operative* (Von Post, 1998), *palliative care* (Georges & Grypdonck, 2002), *pediatrics, diabetic educators, rehabilitation, and nephrology* (Redman & Fry, 2000), *dialysis, skilled/long term care, maternity, acute rehabilitation, and telemetry* (Zuzelo, 2007) and *critical care/neonatal intensive care* (Corley, Elswick, Gorman & Clor, 2001; Hamric & Blackhall, 2007; Cronqvist, Theorell, Burns & Lützén, 2004; Gutierrez, 2005; Hefferman & Heilig, 1999; Meltzer & Huckabay, 2004; Mobley, Rady, Verheijde, Patel & Larson, 2007; Sundin-Huard & Fahy, 1999; Verhaeghe, Vlerick, De Backer, Van Maele, & Gemmel, 2008, Zuzelo, 2007).

Moral distress may be pertinent to various members of the inter-disciplinary healthcare team (Bell & Breslin, 2008; Hamric, 2000; Kälvemark et al., 2004). However, it is particularly prevalent amongst registered nurses (RNs) who report more moral distress than medical doctors

(Hamric & Blackhall, 2007, p. 424). Greater than 50% of critical care unit RNs are reported to experience moral distress (Mobley, Rady, Verheijde, Patel & Larson, 2007), general staff RNs report experiencing moral distress at least one time per week (Wilkinson, 1987/88), and 33% of nurses in four specialty practice areas (diabetes education, pediatric nurse practitioner, rehabilitation and nephrology) experience moral distress (Redman & Fry, 2000). Because this phenomenon is associated with “traditional negative stress symptoms, such as feelings of frustration, anger and anxiety, which might lead to depressions, nightmares, headaches and feelings of worthlessness” (Kälvemark et al., 2004, p. 1077), RNs who experience moral distress are increasingly likely to be dissatisfied with their work, leave a position, exit the profession, or avoid patients.

#### *Years of Education*

For many years RNs did not require a college education for RN licensure. However, in 2003, after it was identified the care provided by four-year or higher degree educationally prepared RNs was potentially related to lower mortality and failure-to-rescue rates in hospitalized patients, there became an increased interest in “whether and how educational levels of nurses are *causally related* to patient outcomes” (Clarke & Connolly, 2004, p. 16). Although advancing the existing knowledge base regarding RNs educational preparation and its relationship to quality of care (Kurtzman & Corrigan, 2007, p. 27) is important, the intent of this dissertation is to extend the knowledge base in regards to how RNs educational preparation may relate to work engagement. There currently is no identified research study which examines this relationship.

### *Critical Reflective Practice*

Critical reflective practice (CRP) is a concept developed for this study by the investigator as another element that may be a significant factor in nurses' work experiences and work engagement. Critical reflective practice is similar to the familiar concept of reflective practice. It is defined as being mindful of self within or after professional practice situations, of *processing* the cognitive, behavioral, and affective components of professional practice situations, so as to continually grow, learn and develop personally, professionally and politically. Critical reflective practice is 'critical' because it encourages RNs to develop an awareness of their personal beliefs, some of which may be "unconsciously held beliefs" (Tate, 2004, p. 9), and encourages RNs to become aware of how hegemonic conditions influence their decisions and work experience.

Although reflection definitions are ambiguous many nurses believe, theoretically, that because reflection promotes greater self-awareness and an integration of theoretical concepts to practice, reflection enhances self-esteem, empowers nurses, and improves practice (Gustafsson, Asp, & Fagerberg, 2007; Ruth-Sahd, 2003). The notion of 'reflective practice', for example, is so popular in the United Kingdom that the government now requires post registration nurses, (e.g., RNs practicing in work environments), to include 'reflective practice' as part of their ongoing education (Gustafsson et al., 2007, p. 156). At the same time, nurses acknowledge additional outcomes research is necessary to validate these beliefs (Gustafsson et al., 2003; Peden-McAlpine, Tomlinson, Forneris, Genck & Meiers, 2005). Much of the current literature related to reflection is either theoretical or qualitative-research based.

It is perhaps important to note that the dearth of quantitative CRP research is due, in part, to the fact that measurement and assessment of reflection is a difficult task and the concept of 'reflective practice' is "under theorized" (Rolfe & Gardner, 2006, p. 595). "Reflective practice is

based on a notion that theory is created at the moment of action through a complex, and as yet inadequately understood, process of reflecting in action. [This] is very different from the underpinning of competence-based practice which says that nurses act on the basis of theories that are preset without reference to the practitioner and the context” (Clarke, James, & Kelly, 1996, p. 176).

Reflection within a rational or cognitive, competence-based approach may be easier to assess and research, (e.g., evaluate an *academic* work for “the quality of the student’s argument and the skillfulness of their structure, style and use of reference materials”) (Hargreaves, 2003, p. 198). However, reflective practice or critical reflective practice (CRP) are of a different kind, they represent a more complex ethical, professional, and personal work aspect. Stated otherwise, assessments often focus upon simple, technical skills because they are easy to observe and measure, “whilst ignoring more complex aspects of practice such as critical reflection” (Clouder 2004, as cited in Tate & Sills, p. 96). Historically, perhaps unfortunately, the more straightforward aspects of practice are made to seem more important (Clouder, 2004, p. 96). This dissertation examines CRP, a more complex type of reflection, and its relationship to work engagement.

#### Philosophic Perspective: Pragmatism

The philosophical perspective underlying this thesis is pragmatism. Pragmatism originates from the Greek word ‘action’, from which our current word ‘practice’ comes. It is a philosophical stance which refers to our beliefs and rules for our actions (Menand, 1997, p. 94), which are largely interpreted and understood through the “practical consequences” (Polifroni & Welch, 1999, p. 8) of our social actions. Pragmatism, stated otherwise, is a method which

integrates “mind with action” (Kuklick, 2001, p. 97), it represents “*praxis* or purposeful action” (Ozmon & Craver, 2003, p. 250) within society.

A pragmatist, in response to a unique situation, examines traditional ways of doing and thinking, (e.g., appreciates current ‘practice’ theories, and, where possible, seeks to incorporate these into every day life in order to respond to a situation), but also is supportive of creating “new ideas to deal with the changing world in which people live” (Ozmon & Craver, 2003, p. 127). Pragmatist William James (1842-1910), Medical Doctor and Philosopher, put it this way: the pragmatic method means there is “an attitude of looking away from first things, principles, ‘categories’, supposed necessities; and of looking towards last things, fruits, consequences, facts” (James, 1997, as cited in Menand, p. 98). When the pragmatic method is utilized individuals form *new opinions*, based upon past experiences and current problems:

- The individual has a stock of old opinions already, but [she] meets a new experience that puts them to a strain.
- Somebody contradicts them; or in a reflective moment [she] discovers that they contradict each other; or [she] hears of facts with which they are incompatible; or desires arise in [her] which they cease to satisfy.
- The result is an inward trouble to which [her] mind til then had been a stranger, and from which [she] seeks to escape by modifying [her] previous mass of opinions.
- [She] saves as much of it as [she] can, for in this matter of beliefs we are all conservatives. So [she] tries to change first this opinion, and then that (for they resist change very variously), until at last some new idea comes up which [she] can graft upon the ancient stock with a minimum of disturbance of the latter, some idea that

mediates between the stock and the new experience and runs them into one another more felicitously and expediently (James, 1997, p. 101).

Old opinions and new facts, then, are married to each other and ideas are held to be *true* just in proportion to their success in solving problems. Truth, therefore, within the pragmatist stance, is not absolute. Rather, it is “*made* in actual, real-life events...is found in *acting* on ideas – [and] in the *consequences* of ideas” (Ozmon & Craver, 2003, p. 135). According to pragmatist Charles Sanders Peirce (1839-1914), Chemist and Lecturer in Logic, “true knowledge of anything depends on testing one’s ideas in actual experience because, in and of themselves, ideas are little more than hypotheses until tried upon the anvil of experience” (Ozmon and Craver, 2003, p. 135).

Pragmatism accepts the universe as an open-ended, pluralistic reality. According to John Dewey, Educational Philosopher and Pragmatist, because the universe is open ended and its existence is precarious and uncertain “people cannot expect to locate enduring solutions; instead, [they] have to take each human problem as it arises” (Ozmon & Craver, 2003, p. 138). People must balance the subjective and objective qualities of an experience and this “*transactional* relationship” (Ozmon & Craver, 2003, p. 139) between individuals and society must be maintained. In fact, according to Dewey, the purpose of education is to help students acquire “vital ideas” (Ozmon & Craver, 2003, p. 141) so that they can share effectively in social life. Dewey indicates the participation in “social life is the school’s chief moral end” (Ozmon & Craver, 2003, p. 141).

Richard J. Bernstein, Professor of Philosophy and Contemporary Pragmatism, and neopragmatist (Bernstein, 1997, as cited in Menand), also identifies the moral aspect inherent within the philosophy of pragmatism when he utilizes the terms “civility” and “mutual respect”

(Bernstein, 1997, as cited in Menand, pp. 400-401). Bernstein identifies five characteristic themes of pragmatism, e.g. five “ēthos” (Bernstein, 1997, p. 384): (1) *Anti-foundationalism*, knowledge does not rest upon fixed foundations, i.e. neither simply the subjective nor simply the objective are privileged, (2) *Fallibilism*, all beliefs and writings are open to further interpretation and criticism, (3) *Community*, each self is social in character and there is a need to nurture “a critical community of inquirers” (Bernstein, 1997, p. 387); hypotheses must be submitted to public critical discussion so that individuals can become aware of what is and is not valid within a claim, (4) *Radical contingency and chance*, we live in an “open universe” (Bernstein, 1997, p. 389) that is always a source of threat and opportunity; individuals must develop “critical habits...[or]...reflective intelligence” (Bernstein, 1997, p. 389) in order to respond to unforeseen contingencies, and (5) *Plurality*, there will always be a variety of perspectives, philosophic orientations and traditions.

Bernstein identifies “*engaged fallibilistic pluralism*” (Bernstein, 1997, p. 397) as an important responsibility of each individual in the pragmatist tradition. Engaged fallibilistic pluralism suggests pragmatic individuals must take their own fallibility seriously ; however much each individual is committed to their own styles of thinking, they must be “willing to listen to others without denying or suppressing the otherness of the other” (Bernstein, 1997, p. 397). Pragmatists should participate in a “dialogical encounter” (Bernstein, 1997, p. 399) (i.e., should be willing to talk, share prejudgments, listen, and explore differences and conflicts, etc.), for these activities, referenced as “*doing philosophy*” (Warms & Schroeder, 2004, p. 1), enable individuals to “respond to others with responsiveness and responsibility” (Bernstein, 1997, p. 401). In other words, pragmatic persons are very open minded and willing to listen to as many

ideas or versions of the ‘truth’ as possible in order to better solve problems, their actions are creative, complex and expansive (Warms & Schroeder, 1999, p. 2).

Consistent with Warms & Schroeder (1999), this thesis suggests RNs prefer to utilize the philosophy of pragmatism in clinical practice, (i.e., RNs appreciate an opportunity to engage in dialogical encounters with others in order to achieve “mutually determined clinical outcomes”) (Warms & Schroeder, 1999, p. 7) in unique patient care situations. It is proposed that an environment which encourages *engaged fallibilistic pluralism* (e.g., a critical reflective practice environment), allows an opportunity for RNs to experience high levels of work engagement. For RNs, clearly, “are interested in doing what works” (Warms & Schroeder, 1999, p. 7) (e.g., “their decisions are ideally made after reasoned discourse... framed within the context of patients’ preferences and belief systems”) (Zuzelo, 2007, p. 344).

However, and unfortunately, this thesis also acknowledges the possibility that perhaps the “unshackled communication and tolerance for diversity” (Warms & Schroeder, 1999, p. 8) necessary for nursing pragmatism is absent, or significantly diminished, in a majority of hospital work environments. This environmental context may contribute to the existence of moral distress, work dissatisfaction and decreased work engagement amongst a broad range of practicing nurses from various specialty areas. The traditional, hierarchical hospital work environment maintains an overwhelming belief in the notion of “universal laws” (Warms & Schroeder, 1999, p. 7), where nurses are “told” (Warms & Schroeder, 1999, p. 9) how to act, which perhaps constrains RNs from moving to a higher, and perhaps “better” (Warms & Schroeder, 1999, p. 2), level of clinical practice.

## Theoretical Framework

The theoretical framework for this study proposes relationships among the variables of work engagement, moral distress, educational level, and critical reflective practice. The term moral distress has been a topic in the nursing literature since the 1980s. As of 2008, in contrast, “research on work engagement has just begun to emerge” (Bakker et al., 2008, p. 188), (e.g., there is limited nursing work engagement literature). Initial work engagement findings indicate resources, both job and personal, are antecedent predictors of work engagement. Job resources (i.e., autonomy, supervisory coaching, job control, performance feedback and departmental resources) (Bakker et al, 2008; De Lange, De Witte, & Notelaers, 2008; Van den Broeck, Vansteenkiste, De Witte, & Lens, 2008) and personal resources (i.e., optimism, self-efficacy, self-esteem, sense of coherence, and organization-based self-esteem [OBSE]) (Bakker et al., 2008; Mauno et al., 2006, Naudé & Rothman, 2006), are found to predispose and/or predict employee work engagement. In this study, three nursing factors not yet studied will be examined for their relationship to work engagement: the personal factors of moral distress and educational level, and the personal-work environmental factor of critical reflective practice. These factors have been implicated in the literature as relevant to nurses’ work experience and satisfaction.

### *Work Engagement*

Work engagement, “certainly something worth promoting” (Taris, Cox, & Tisserand, 2008, p. 185), is defined as the “positive, fulfilling, work-related state of mind that is characterized by vigor, dedication and absorption” (Schaufeli et al., 2002, p. 74). *Vigor* is characterized by high levels of energy, mental resilience while working, a willingness to invest effort in one’s work, and persistence even in times of difficulty. *Dedication*, an affective-cognitive dimension, is characterized by a sense of enthusiasm, inspiration, pride, and challenge

in regards to one's work; it is a particularly strong level of work involvement that goes one step further than the usual level of work identification. *Absorption* is characterized by being deeply engrossed and fully concentrated in one's work, whereby "time passes quickly and one has difficulties with detaching oneself from work" (Schaufeli et al., 2002, p. 75). Absorption comes close to what has been referred to as 'flow,' "a state of optimal experience that is characterized by focused attention, clear mind, mind and body unison, effortless concentration, complete control, loss of self-consciousness, distortion of time, and intrinsic enjoyment" (Schaufeli et al., 2002, p. 75). However, flow is a more complex concept that refers to a rather particular, short-term 'peak' experience versus a more persistent and pervasive state of mind, "as is the case with engagement" (Schaufeli et al., 2002, p. 75).

The positive, work-focused, psychological state of work engagement differs from work embeddedness, (e.g., different resource bases distinguish the two constructs). Work embeddedness represents a collection of forces keeping an employee in a job, (i.e., links within an organization, sacrifices associated with leaving a job, etc.) (Halbesleben & Wheeler, 2008, p. 242). Embeddedness resources are restricted to the organization, e.g. links with other people, and when an individual moves to another organization these resources cannot move with the individual. In contrast, work engagement resources "are more specific to the nature of work" (Halbesleben et al., 2008, p. 244), a faculty member engaged in research and teaching, for example, can move from university to university and remain attached to the resources associated with these work-related activities. Rather than a momentary and specific state, work "engagement refers to a more persistent and pervasive affective-cognitive state" (Schaufeli et al., 2002, p. 74).

Work engagement also differs from workaholism (Bakker, Schaufeli, Leiter & Taris, 2008). “Workaholics spend a great deal of time in work activities when given the discretion to choose whether to do so” (Bakker et al., 2008, p. 190), they are excessively hard workers (e.g., compulsive workers), who persistently think about work when not at work. Engaged workers, in contrast, lack the typical compulsive drive. Work for them is fun, not an addiction:

‘Engaged employees work hard because they like it and not because they are driven by a strong urge they cannot resist. For workaholics, their need to work is so exaggerated that it endangers their health, reduces their happiness, and deteriorates their interpersonal relations and social functioning’ (Bakker et al., 2008, pp. 190-191).

Work engagement and burnout are often cited together, as direct opposites. Burnout, “a metaphor that is commonly used to describe a state of mental weariness” (Schaufeli & Bakker, 2004, p. 294), is considered a measurable, three-dimensional “syndrome of *emotional exhaustion*, *depersonalization*, and *reduced personal accomplishment*” (Demerouti, Bakker, Nachreiner, & Schaufeli, 2001, p. 499). The fatigue measure *emotional exhaustion* “refers to feelings of being overextended...by the emotional demands of one’s work” (Demerouti et al., 2001, p. 499). *Depersonalization*, or *cynicism*, reflects “indifference or a distant attitude towards work” (Schaufeli & Bakker, 2004, p. 294), it is “characterized by a detached and cynical response to the recipients of one’s service or care” (Demerouti et al, 2001, p. 499). Finally, *reduced personal accomplishment*, or *efficacy*, represents the “self-evaluation that one is no longer effective in working with recipients and in fulfilling one’s job responsibilities” (Demerouti et al, 2001, p. 499).

Authors originally perceived work engagement to be the direct opposite, (e.g., an antipode), of burnout: low scores on *emotional exhaustion* and cynicism (*depersonalization*), and high scores on efficacy (*personal accomplishment*) represented engagement. However, subsequent literature identifies engagement and burnout as distinct constructs “that should be measured independently with different instruments” (Schaufeli et al., 2002, p. 74); “when an employee is not burned-out, this doesn’t necessarily mean that he or she is engaged in his or her work. Reversibly, when an employee is low on engagement, this does not mean that he or she is burned-out” (Schaufeli & Bakker, 2003, p. 4). First, the burnout component of *personal accomplishment* (*efficacy*) has been identified to develop largely independently from exhaustion and cynicism. *Efficacy*, therefore, seems to be an engagement element instead of a burnout component (Schaufeli et al., 2002, p. 87). Second, *absorption*, found to be a relevant aspect of work engagement after some “30 in-depth” interviews (Schaufeli et al., 2002, p. 74), is *not* found to be the direct opposite of *reduced efficacy*. *Absorption* as well as *efficacy*, then, may be “subsumed under the broader concept of engagement” (Schaufeli et al., 2002, p. 87).

Work engagement represents a “motivational process that is driven by the availability of resources” (Schaufeli & Bakker, 2002, p. 310). Both *job resources* (i.e., supervisory coaching, financial rewards, performance feedback, autonomy, career opportunities, etc.) and *personal resources* (i.e., optimism, self-efficacy, self-esteem, etc.) may engage employees, who then “work hard (vigour), are involved (dedicated), and feel happily engrossed (absorbed) in their work” (Bakker, Schaufeli, Leiter, & Taris, 2008, p. 190). In contrast, burnout represents an “effort-driven energetic process” (Schaufeli & Bakker, 2002, p. 310) that is driven by high *job demands*. *Job demands*, (i.e., quantitative workload, job insecurity, and role ambiguity) (Mauno, Kinnunen, & Ruokolainen, 2007, p. 152), over tax and wear out employee’s energy backup

(Schaufeli & Bakker, 2002, p. 296), when these physical, social, and organizational job aspects (*job demands*) require sustained physical and mental effort, certain physical and psychological costs, including exhaustion and cynicism, can occur.

Negative...states, (i.e., burnout), and positive...states, (i.e., engagement), play similar roles in quite different processes. The former plays a mediating role in an effort-based energetic process that is driven by high job demands and that may eventually lead to health problems, whereas the latter plays a mediating role in a motivational process that is driven by available resources and that might lead to organizational attachment (i.e., low turnover tendency) (Schaufeli & Baker, 2002a, p. 310).

As can be identified, work engagement represents a positive process that aligns with ‘positive psychology’. ‘Positive psychology’ holds the belief that “positive phenomena in the work context...not only negative outcomes such as burnout...merit consideration” (Mauno, Kinnunen, & Ruokolainen, 2007, p. 150). An assumption of this perspective is that “positive experiences or resources are likely to accumulate, creating a spiral of resources, which, in turn, [are] likely to have positive health-promoting effects” (Mauno et al., 2007, p. 150). Positive psychology, as such, aims to gain an understanding of the meaning and effects of work so that positive qualities can be built upon (Bakker et al., 2008, p. 187). Its philosophy, arguably, is to “develop what is right” (Taris, Cox, & Tisserand, 2008, p. 185). Human strengths (Schaufeli et al., 2002, p. 71), optimal functioning (Schaufeli & Bakker, 2002, p. 293), and “positive experiences at work” (Mauno et al., 2007, p. 150), are its main focus. Admittedly, current publications on negative states exceed those of positive states by a ratio of 14:1 (Bakker et al., 2008). However, positive psychology is an emerging and exciting trend.

### *Moral Distress*

Moral distress is defined “as the psychological disequilibrium and negative feeling state experienced when a person makes a moral decision but does not follow through by performing the moral behavior indicated by that decision” (Wilkinson, 1987/88 p. 16). Andrew Jameton (1984), a philosopher, who coined the term moral distress in nursing, indicates it arises when institutional constraints make it nearly impossible for nurses to pursue a course of action they believe is right (Jameton, 1984, p. 6). For example, nurses believe it is important to protect patients from harm (Corley, 2002, p. 637) yet, in neonatal intensive care units (NICUs) where advanced technology capabilities and extremely premature infants born at 23-24 weeks co-exist, there is an expectation of a “no holds barred” (Hefferman & Heilig, 1999, p. 174) approach to resuscitation and pharmacological treatment. In this environment nurses begin to wonder whether it is appropriate to pursue such aggressive treatment when chances for intact survival are dismal. According to one nurse with 16 years of NICU experience:

“I have serious concerns regarding the prolonged use of high frequency, high pressure ventilation in the extremely premature 23-24 week gestation. I feel the care concerning Baby Girl H. is an example in part of this kind of trauma in the NICU. This baby was extremely premature and her prognosis poor at birth. Three weeks of high pressure only proved to prolong her death rather than improve viability...Being one of the nurses at the bedside every day was frustrating and often agonizing. I definitely feel that even with all our technical expertise, we failed to give good and sensitive care...” (Hefferman & Heilig, 1999, pp. 174-175).

This example demonstrates how an environment may constrain and/or violate the values of professional nurses. Nurses may no longer see themselves as healers but as faceless technicians who perform futile care, (e.g., “senseless tasks to a body of an infant”) (Rushton, 1995, p. 367). Moral distress is experienced because the nurses’ integrity to protect a patient from harm is compromised, and feelings of remorse, shame and/or guilt ensue (Rushton, 1995, p. 369). For nurses this is arguably “a contributing factor to...dissatisfaction with their work” (Nathaniel, 2006, p. 419).

Integral to an understanding of moral distress are two terms: ethics and morality (Jameton, 1984). *Ethics* is a theoretical, formal term which “refers to the systematic study of principles and values” (Jameton, 1984, p. 5) deemed important to a profession. It is common to see ethics presented in a public format, such as the presentation of a “professional code of ethics” (Jameton, 1984, p. 4), ethics are publicly stated rules valued by a profession. A code of ethics for nurses may include the following principles: (1) respect human dignity, safeguard a patient’s right to privacy, maintain competence, protect the public from misinformation, collaborate with other members of the health professions to promote health, maintain conditions of employment conducive to high quality nursing care, participate in activities that contribute to the ongoing development of the profession’s body of knowledge, act to safeguard the patient, alleviate suffering, assume accountability for nursing judgments and actions, and exercise informed judgment in seeking consultation with others (American Nurses Association, 1985); (2) do good (act with beneficence), practice with autonomy, avoid deception, and prevent killing (Forchuk, 1991); and/or (3) act as a patient advocate (e.g., support the meaning of the illness to the patient and family) (McSteen & Peden-McAlpine, 2006).

*Morals*, in contrast, “refers to a set of values or principles to which one is *personally* committed” (Jameton, 1984, p. 5), these are values that *individuals* defend on a daily basis. In order to make their work meaningful, and to avoid “burning out” (Jameton, 1984, p. 5), individual nurses “need their work to express their values” (Jameton, 1984, p. 5). Moral distress occurs when individual nurses are aware of (committed to) a right course of action (a value) but are “unable to *act* [italics added] in the correct moral way” (Schluter, Winch, Holzhauser & Henderson, 2008, p. 305), due to, for example, institutional constraints.

The following terms are related to the meaning of moral distress: *moral dilemma*, *moral outrage*, *initial distress*, and *reactive distress*. Definitions and examples of these terms are presented in the following paragraphs.

A nursing *moral dilemma* arises “when two (or more) clear moral principles apply, but they support mutually inconsistent courses of action” (Jameton, 1984, p. 6). For example, the commitment to maintain life leads nurses to want to put a young child with kidney disease on dialysis, but the commitment to avoid suffering leads nurses to think that the child may be “better off dead” (Jameton, 1984, p. 6). Or, another example, “a mentally competent patient strongly opposes getting up and walking around after surgery, but this refusal appears to be an extremely unwise choice for the patient’s life and health” (Jameton, 1993, p. 542), the nurse is torn between two principles: (1) acting as a patient advocate (by respecting the patient’s autonomy) or (2) doing good by committing the patient to walk (safeguarding the patient from the potential harm of pneumonia or embolism). Moral dilemmas, sometimes referred to as ethical dilemmas, highlight how it is that individual nurses owe a duty to various sources – “to her own values, her profession, the patient, the physician...the hospital” (Helm, Mazur, Bliton & Holaday, 1992, p. 214). Some argue the increasing demands of moral/ethical dilemmas can cause

moral distress and it is, therefore, important for health care organizations to provide “structures of ethical support for their staff members who are to carry out [ethical judgments]” (Kälvemark, et al., 2003, p. 1076).

*Moral outrage* happens when nurses see others, i.e. physicians, students, other nurses, etc., do things considered immoral. For example, if nurses see others perform abortion or intubate a dead body they may experience moral outrage; yet, “nurses do not believe they, themselves, have done anything wrong” (Wilkinson, p. 24). Although moral outrage is different than moral distress “the effects are probably very similar” (p. 24), painful feelings and psychological disequilibrium may result. Pike (1991) indicates “moral outrage is characterized by energy-draining frustration, anger, disgust, and a sense of powerlessness” (p. 351).

*Initial distress* and *reactive distress* represent parts of moral distress, and these terms distinguish *when* nurses react to moral issues. The presumption in the late 1980s was that nurses chose “inaction when faced with potential conflict with others” (Jameton, 1993, p. 544). However, subsequent ‘moral distress’ literature recognizes nurses may immediately face conflict with others over moral issues and, in such cases, “bureaucratic obstacles and/or disagreeable colleagues” (Kälvemark, et al., 2003, p. 1077) may prevent the nurses’ immediate resolution of the moral issues, which results in *initial distress*. At the time moral issues arise, for example, nurses may immediately attempt to implement actions to relieve and/or resolve the issues, they may try to “influence the physician, call in the head nurse, submit an incident report or discuss the problems with the medical head of the unit” (Kälvemark, et al., 2003, p. 1077). Organizational or societal level obstacles, however, such as a “lack of time, supervisory reluctance, an inhibiting medical power structure, institutional policy or legal considerations” (Corley & Minick, 2002, p. 7) may prevent the nurses’ action(s), thus preventing resolution of

the moral issues. *Initial distress* involves the feelings of frustration, anger, and anxiety nurses' experience "when faced with institutional obstacles and conflict with others about values" (Jameton, 1993, p. 544, Källemark, et al., 2003, p. 1077).

*Reactive distress* is the distress nurses feel when there is inaction at the time of moral issues, it occurs when nurses are faced with the situation where "one's moral judgment cannot be acted upon" (Austin, Lemermeyer, Goldberg, Bergum & Johnson, 2008, p. 4). Consequences of *reactive distress*, e.g. moral distress experienced over time, include depression, nightmares, headaches, feelings of worthlessness, crying, loss of sleep and loss of appetite (Källemark, et al., 2003, p. 1077; Lützén, Cronqvist, Magnusson & Andersson, 2003, p. 314). According to Corley & Minick (2002), "moral comfort" (Corley & Minick, 2002, p. 7) (e.g., resolution of the distressing problems), may best be achieved when moral issues are immediately acted upon. However, organizational or societal level obstacles, as noted above, may prevent immediate action.

#### *Relationship of Moral Distress to Work Engagement*

Aiken, et al. (2001) confirm U.S. nurses' level of job dissatisfaction is "higher than in other groups of workers" (Aiken, et al., 2001, p. 45), more than 40% of RNs working in hospital environments report being dissatisfied compared to "10% of professional workers and 15% of workers in general" (Aiken, et al., 2001, p. 46). While the common reasons given for job dissatisfaction are low staffing and perceptions of unresponsiveness by hospital management, moral distress may play a broader role in this dissatisfaction and diminish work engagement, (e.g., it is possible "the burden of [moral] distress and its associated...needs may be unaddressed within many health care organizations") (Zuzelo, 2007, p. 345). No research has been found in

which the relationship between moral distress and work engagement was studied. However, the dynamics of moral distress support the idea that it may negatively relate to work engagement.

Nurses desire to have a real influence over the issues concerning their work and if they experience empowerment, which includes working in an environment where values are shared and individuals are treated with respect, there is a significant positive correlation to job satisfaction and commitment (Kuokkanen, Leino-Kilpi, & Katajisto, 2003, pp 188-189). Unfortunately, in regards to the management of ethical/moral issues, powerlessness (versus empowerment) is an experience common to nurses (Erlen & Frost, 1991; Georges & Grypdonck, 2002; Gutierrez, 2005; Holly, 1993; Sundin-Huard & Fahy, 1999; Zuzelo, 2007). Eighty-four percent of medical surgical and critical care nurses describe themselves as ineffective and “powerless” (Erlen & Frost, 1991, pp. 400), unable to use their clinical knowledge and expertise to “effect resolution” (Erlen & Frost, 1991, p. 403) to ethical situations. Likewise, surgical intensive care unit RNs excluded from patient care decision making feel powerless “to make a difference in moral conflicts” (Gutierrez, 2005, p. 237) and palliative care nurses, “because of their low position in the hierarchy” (Georges & Grypdonck, 2002, p. 160), feel unable to act as patient advocates. For RNs, a perceived lack of collaborative decision making, (e.g., “physician dominance in decision-making”) (Erlen & Forst, 1991, p. 404), leads to “anger, frustration and exhaustion” (Erlen & Forst, 1991, p. 403).

Curtin (1993) indicates it is important for institutions to allow a social “moral space” (Curtin, 1993, p. 19) where nurses can go to express their different moral perspectives, (e.g., a space for “respectful dissent”) (Curtin, 1993, p. 18). If institutions do not provide “some means for nurses to address their ethical concerns” (Curtin, 1993, p. 19) “forced obedience” (Curtin, 1993, p. 18) results, which represents a situation whereby persons in more powerful positions

stifle the “consciences of subordinates” (Curtin, 1993, p. 18). Forced obedience leads, unfortunately, to the loss of a most valuable asset, “a man or woman of integrity” (Curtin, 1993, p. 18).

Bureaucratic constraints (institutions) force obedience (perceived immoral action) upon nurses (valuable assets), who then may experience moral distress, which then contributes to nurses’ decisions to (1) *leave a position*, (2) *exit the profession* or (3) *avoid patient care* (loss of valuable assets) (Corley, Elswick, Gorman & Clor, 2001; Corley, Minick, Elswick & Jacobs, 2005; Georges & Grypdonck, 2002; Gutierrez, 2005; Hamric & Blackhall, 2007; Millette, 1994; Wilkinson, 1987/88). In relation to moral distress, 15-50% of nurses decide to leave a *position* (Corley, et al., 2001, 2005; Wilkinson, 1987, 1988), 17-50% leave (or consider to leave) the *profession* (Hamric & Blackhall, 2007; Millette, 1994) and some nurses implement the common, but unsuccessful, coping behavior of avoiding patients (Georges & Grypdonck, 2002; Gutierrez, 2005; Wilkinson, 1987/88).

Nurses distance themselves from patient care so that moral issues “are no longer perceived as difficult” (Georges & Grypdonck, 2002, p. 160), which leads to nurses’ emotional unavailability, avoidance of patient rooms, decreased frequency of physical cares, and less personalized care (Corley et al., 2005; Gutierrez, 2005, p. 236). Although there is currently limited evidence to directly link nurses’ moral distress to patient satisfaction, quality of care, or patient outcomes, it is perhaps appropriate to suggest distancing (or disengagement) caused by moral distress contributes to the abundance of evidence which suggests “nurses do not always practice in ways persons cared for consider helpful” (Mitchell & Bournes, 2006, p. 118). According to a 2002 Joint Commission on Accreditation of Healthcare Organizations report,

81% of the American public is aware of the nursing shortage, 93% believe the shortage threatens quality of care, and 65% view the shortage as a major problem (JCAHO, 2002, p. 5).

Factors contributing to the development of moral distress may best be categorized into two broad categories: *environmental* and *clinical care*. Both categories are briefly summarized in the following paragraphs. *Environmental* factors represent the work structures, processes and relationships in which nurses practice and *clinical care* factors represent the junctures where nurse, patient and technology meet when direct nursing care is provided.

#### *Environment and the Dynamics of Moral Distress*

Primarily two *environmental* factors, or bureaucratic constraints, broadly categorized as follows, contribute to nurses' moral distress: (1) *lack of a collaborative-ethical work environment, (i.e., decreased participation in care provision decision-making and differing RN and Medical Doctor [M.D.] philosophical perspectives in regards to care provision)* (Corley, Minick, Elswick & Jacobs, 2005; Cronqvist, Theorell, Burns & Lütznén, 2004; Erlen & Frost, 1991; Fry, Harvey, Hurley & Foley, 2002; Georges & Grypdonck, 2002; Hamric & Blackhall, 2007; Hart, 2005; Hefferman & Heilig, 1999; Källemark, Höglund, Hansson, Westerholm & Arnetz, 2004; Martin, 1989; Penticuff & Walden, 2000; Redman & Fry, 2000; Storch, Rodney, Pauly, Brown & Starzomski, 2002; Sundin-Huard & Fahy, 1999; Von Post, 1998) and (2) *hierarchical work structures, (i.e., distrust of and fear of retribution from hospital leadership)* (Erlen & Frost, 1991; Gutierrez, 2005; Hefferman & Heilig, 1999; Martin, 1989; Millette, 1994; Penticuff & Walden, 2000; Redman & Fry, 2000; Storch, et al., 2002; Sundin-Huard & Fahy, 1999; Wilkinson, 1987/88). Both of these are briefly summarized in the following paragraphs.

Registered nurses, especially during times of heavy workloads, have limited time to meet with physicians (or each other) in order to discuss patient care management decisions (Cronqvist,

et al., 2004; Hamric & Blackhall, 2007; Storch, et al., 2002) and this lack of collaborative decision-making contributes considerably to RN feelings of powerlessness and moral distress because RNs are often left to carry out orders with which their values conflict (Erlen & Frost, 1991; Georges & Grypdonck, 2002; Martin, 1981; Zuzelo, 2007). For example, NICU RNs report concern with treatment and resuscitation of extremely premature infants born at 23-25 weeks gestation, (e.g., infants on the “edge of viability”) (Hefferman & Heilig, 1999, p. 174). From the RN perspective, to “poke, prod, and torture” (Hefferman & Heilig, 1999, p. 176) these extremely premature infants is ethically the worst part of their practice. Yet, neonatologists continue to write unilateral treatment and resuscitation orders for these infants. Therefore, when the RNs carry out the orders they experience moral distress, (i.e., frustration, agony, anger, and emotional detachment). This example exemplifies how it is that RNs perceive significantly less collaboration in the work environment than medical doctors (MDs) (Hamric & Blackhall, 2007).

According to Rushton (2006), certain RN phrases (i.e., “why are we doing this?”, “they don’t get it”, or “I can’t stand to watch the patient’s response”) and postures (e.g., one hand on hip with the elbow turned outward) are symptoms of RN moral distress. Unfortunately, as these symptoms increase and intensify they communicate defiance and aggressiveness, which may intensify “resistance by other healthcare professionals or families” (Rushton, 2006, p. 162).

Moreover, in the midst of diminished collaboration within work environments, there is the fact that RNs and MDs operate from different philosophical bases (Redman & Fry, 2000), (e.g., they lack a shared value system) (Cronqvist, et al., 2004; Fry, et al., 2002; Källemark, et al. 2004, Von Post, 1998). Registered nurses’ believe they value “patient autonomy more highly than do physicians” (Redman & Fry, 2000, p. 365) and state deep ethical concern in regards to

institutionalized medicines' focus upon cure of "disease" (Liaschenko, 1995, p. 188), versus care of the patient (Cronqvist, et al., 2004), as the most relevant factor for patients.

For example, in reference to the following morally distressing situation there is a large difference in perspective between MDs and RNs; RNs find the situation much more distressing than the MDs: "Let medical students perform painful procedures on patients solely to increase their skill" (Hamric & Blackhall, 2007, p. 424). Ethically, within the healthcare environment, "physicians think about future patients when they practice new techniques and the nurse focuses on the patient who is being operated on here and now" (Von Post, 1998, p. 86). Registered Nurses mention how patients are used by medical "students and physicians to improve their technical skills" (Zezelo, 2007, p. 356). Unfortunately, because RNs are reduced to "artificial persons" (Liaschenko, 1995, p. 192), (e.g., viewed as persons who merely carry out instrumental actions), they suffer. As one staff nurse puts it, "what became hard was to be at the bedside and not be part of the decision-making – just be there and have to supply all this physical and emotional care" (Liaschenko, 1995, p. 192).

Finally, RNs operate in hierarchical systems where they interpret that the hospital leaders (i.e., physicians and nurse supervisors), ignore their needs (Eizenberg, Desivilya & Hirschfeld, 2009, p. 890; Sundin-Huard & Fahy, 1999; Zuzelo, 2007, pp. 354 - 356). For example, when RNs act as patient advocates they commonly struggle with, and fear, retribution from hospital leaders. "Being an advocate can result in being moved out of one's preferred area of employment, being scapegoated, or 'voluntarily' leaving (sometimes referred to as 'burning out')" (Sundin-Huard & Fahy, 1999, p. 12). The following examples represent how critical care RNs fear retribution (or backlash) within their work environments:

“The hierarchy of the medical field with the doctors above nurses (prevents moral action). None of the nurses want to go out on a limb” (Gutierrez, 2005, p. 234).

“(A patient) was dying and (the physician) refused to make him a no code. (The nurse caring for the patient) wanted to call the ethics committee and (the physician) said if the nurse called the ethics committee she will do whatever she has to do to make (the nurse’s) life so miserable she’ll quit” (Gutierrez, 2005, p. 234).

“The doctor’s not going to change his mind (if the nurse suggests a different plan of care.) He may retaliate and do the exact opposite of what I suggest” (Gutierrez, 2005, p. 234).

Unfortunately, such a hierarchical system exacerbates RN moral distress. Registered Nurses report the lack of recourse to MD orders creates considerable moral and ethical distress on the front lines of care (Storch, et al., 2002).

A further contributor to moral distress is that RNs do not believe *nurse* leaders “‘rock the boat’ enough” (Storch, et al., 2002, p. 9), they describe “nurse leaders as reluctant to raise ethical concerns or to advocate for clients or staff... [nurse leaders are] described...as invisible” (Storch, et al., 2002, p. 10). This situation, regrettably, further delimits, within an already existent situation of RN short staffing, the necessary collaboration and communication important to quality care delivery. Only 10% of obstetric and NICU RNs report they will “go outside their unit to talk with hospital administration” (Penticuff & Walden, 2000, p. 70) and 67% of critical

care and surgical intensive care unit nurses name their sole support for moral distress as “other staff nurses” (Gutierrez, 2005, p. 234).

What perhaps exists, then, is a very difficult situation for RNs, (i.e., they are not free to be moral but are “forced to choose between...moral integrity and professional survival”) (Yarling & McElmurry, 1986, p. 65). With this ‘forced obedience’ moral distress ensues: RN actions, consistent with values, cannot be expressed and although RNs desire to act as patient advocates their fear of retribution prohibits this. A resultant factor is that RNs become tired of the “whole system” (Wilkinson, 1987/88, p. 23), stew in anger (Pike, 1991, p. 357), “withdraw from patients and families” (Gutierrez, 2005, p. 237) and, eventually, decide to leave their positions or exit the profession, (e.g., disengage with nursing work), “which has significant implications for quality of care” (Gutierrez, 2005, p. 237), (e.g., as environmental resources are reduced patients are at increased risk for “fragmented care” [Gutierrez, 2005, p. 238]).

*Moral Distress and Futile Care.* A major clinical care factor which contributes to RN moral distress is *futile care* (Cronqvist, Theorell, Burns, & Lützén, 2004; Georges & Grypdonck, 2002; Gutierrez, 2005; Hefferman & Heilig, 1999; Holly, 1993; Liaschenko, 1995; Martin 1989; Meltzer & Huckabay, 2004; Mobley, Rady, Verheijde, Patel, & Larson, 2007; Rice, Rady, Hamrick, Verheijde, & Penergast, 2008; Wilkinson, 1987/88). Futile care occurs when patients are subjected to painful and invasive procedures even though the outlook for recovery is, at best, poor (Holly, 1993, p. 112). Perceptions of futile care contribute greatly to the development of moral distress in RNs because RNs believe such aggressive medical treatment, often carried out by their own hands, increases the suffering of patients and families (Cronqvist, et al., 2004; Gutierrez, 2005; Hefferman & Heilig, 1999; Holly, 1993; Mobley, et al., 2007; Rice, et al., 2008; Wilkinson, 1987, 1988; Zuzelo, 2007).

For RNs there is discomfort in seeing suffering, but this becomes a moral issue when nurses are forced to engage in practices considered unethical. Nurses report particularly high levels of moral distress when aggressive medical treatment is provided, again primarily by their hands, to the terminally ill (Georges & Grypdonck, 2002,; Holly, 1993; Rice, et al., 2008) and extremely premature patients (Hefferman & Heilig, 1999; Martin, 1989). According to one NICU nurse with 11 years of experience:

“It is understandable for parents to want to resuscitate their baby but it is generally a very ethically hard situation for us...I have memories of going home, hating my job, mad at the MDs, etc. after spending many nights with a 23-weeker...Knowing what I know, I would not save my 23-week preemies (if given the choice)” (Hefferman & Heilig, 1999, p. 176).

As this scenario exemplifies, when there is a lack of “*genuine*” (Peter & Liaschenko, 2004, p. 220) collaboration and recognition between disciplines the energy nurses have for the emotional work of compassionate care is decreased (Meltzer & Huckabay, 2004). Couple this with chronic short staffing and mandatory overtime, which places nurses in continual close proximity to morally distressing care situations, without perceptions of adequate time or resources to provide the quality of care deemed appropriate, and one finds that RN moral distress is enhanced. For RNs, when compared to physicians, it is more morally burdensome to carry out orders and “live closely with their consequences” (Peter & Liaschenko, 2004, p. 221) in morally difficult situations than it is to give orders. “Nurses may desire to flee, but their place in the system, both geographically and politically, prevents it” (Peter & Liaschenko, 2004, p. 222). Unfortunately, such conditions, far too common, contribute to moral distress, and perhaps to

decreased work engagement (i.e., the conditions are “perilous to both nurses and patients”) (Peter & Liashchenko, 2004, p. 220).

It is not known how moral distress may influence work engagement. No published research could be found in which the relationship between work engagement and moral distress was explored. However, it is possible that moral distress negatively impacts work engagement, given research findings that relate moral distress to other negative work experiences (Corley, et al., 2001; Georges & Grypdonck, 2002; Gutierrez, 2005; Hart, 2005; Hamric & Blackhall, 2007; Zuzelo, 2007).

#### *Educational Level*

Within the U.S. individuals pursue essentially one of three major educational avenues to obtain an initial RN licensure degree, a degree required to practice independently: (1) three-year hospital based diploma program, (2) two-year associate degree nursing program (ADN), and (3) four-year bachelor of science degree in nursing program (BSN) (Kurtzman & Corrigan, 2007, p. 26). The most recent U.S. Department of Health and Human Resources 2004 National Sample Survey of RNs (as cited in Reed & Lawrence, 2008) indicates educational degrees amongst the nearly 3 million RNs in the U.S. are distributed as follows: “Doctoral in nursing or related field, 0.9%; Master’s 12%; Bachelor, 32%; Associate, 34%; Diploma 17.5%; with the remaining unknown” (Reed & Lawrence, 2008, p. 423).

In regards to nurses’ educational preparation and outcomes, (i.e., quality of care, moral distress, etc.), there is a limited, but growing, volume of research available (Kurtzman & Corrigan, 2007, p. 27). Much of the research, initiated as recently as 2003, focuses upon *patient* outcomes, (i.e., health care and safety). For example, a September 2003 report, essentially the first empirical study to tie nurse education to patient outcomes (Clarke & Connolly, 2004, p. 12),

indicates surgical patients in hospitals with “higher proportions of nurses educated at the baccalaureate level or higher “ (Aiken, Clarke, Cheung, Sloane, & Silber, 2003, p. 1617) experience lower mortality and failure-to-rescue rates. Likewise, a state of the science investigation, which examines the relationship between nurses’ educational preparation and quality, finds: (1) hospitals with higher proportions of BSN-prepared nurses are associated with lower adjusted 30-day mortality rates, (2) RNs with BSN and higher-education less frequently have disciplinary action taken against them, and (3) higher levels of RN educational preparation are associated with better professional behavior and leadership skills, (i.e., “greater focus on psychosocial care, patient teaching, continuity of care”) (Kurtzman & Corrigan, 2007, p. 30).

An aim of this thesis is to expand the nursing knowledge base in regards to RNs’ educational preparation and *nursing* variables (i.e. moral distress, critical reflective practice, and work engagement). Each of these relationships are presented in following sections.

#### *Relationship Between Educational Level and Moral Distress*

Research which examines the relationship between nurses’ educational preparation and moral distress is limited and inconclusive. Some studies indicate advanced RN educational preparation, (i.e., BSN or higher), is related to increased levels of moral distress (Meltzer & Huckabay, 2004; Nathaniel, 2006), while another study indicates educational preparation does not predict moral distress (Corley, et al., 2001). One intent of this research is to expand the current knowledge base, the relationship of RN educational preparation to moral distress (and work engagement, and critical reflective practice) will be examined.

#### *Relationship Between Educational Level and Work Engagement*

Currently, no published research directly examines how RNs’ educational preparation relates to work engagement. A Belgian, all-sector, workforce study on work engagement

identified that a more highly educated workforce, along with job autonomy and work environment resources, (e.g., adequate staffing), predicted an intention to stay within a position (DeLange, DeWitte, & Notelaers, 2008). Although substantial evidence is lacking, it appears higher education may relate positively to work engagement. An identified intent of this study is to expand the *nursing* knowledge base in regards to the relationship between RN educational level and work engagement.

### *Critical Reflective Practice (CRP)*

In this study, a synthesis of reflection, reflective practice, and critical reflection literature led to the development of a new concept named ‘critical reflective practice’. Critical reflective practice includes cognitive, affective and behavioral components. It is defined as being mindful of self within or after professional practice situations, (i.e., *processing* the cognitive, behavioral, and affective components of professional practice situations), so as to continually grow, learn and develop, personally, professionally, and politically. Critical reflective practice is ‘critical’ because it encourages nurses to develop an awareness of their personal beliefs, some of which may be “unconsciously held beliefs” (Tate, 2004, p. 9). Both internal and external experiences are included in CRP.

Because this is a new concept, literature regarding reflective practice was used in part to describe and hypothesize about CRP. Although the concept of reflective practice is not sufficient for representing the concept of CRP, it is logically congruent with this new concept (CRP) and thus, the literature was used to support the significance of CRP, proposed theoretical propositions, and development of the measure of CRP.

*Reflection (Rational or Cognitive Process)*

Reflection may best be defined as a process of reviewing an experience that is of central importance to self, with the intent to create and clarify the meaning of the experience so as to inform learning (Boyd & Fales, 1983; Reid, 1995). It has been a term of interest since the early 1900s when John Dewey, Philosopher, Educational Reformer and Psychologist, introduced *learning* as ‘reflective thinking’, an internal process whereby *thoughts* are “focused and controlled” (Teekman, 2000, p. 1126) in order to transform a situation of doubt or obscurity into a situation that is clear and harmonious. Dewey defined ‘reflective thought’ as:

‘... active, persistent, and careful consideration of any belief or supposed form of knowledge in the light of the grounds that support it and further conclusions to which it leads...it includes a conscious and voluntary effort to establish belief upon a firm basis of evidence and rationality (Dewey 1933, as cited in Boud, Keogh, & Walker, 1985, p. 21)

‘Reflective thinking,’ then, represents an “individual’s deliberations” (Clarke, James, & Kelly, 1996, p. 172). When a person is perplexed she will search for material, (e.g., ideas dependent upon past experiences), to “dispose of the perplexity” (Teekman, 2000, p. 1126). Social experience, (i.e., a problem or perplexing situation), *and* an individual’s “insight” (Dewey, 1915, p. 13) (e.g., “interpretation given to it ...through...thinking”) (Dewey, 1915, p. 61), represent learning and reflection. Problem solving is an important aspect of reflection.

Immediate action is postponed as thinking occurs, (i.e., there is an “internal control of impulse through a union of observation and memory, this union being the heart of reflection”) (Dewey, 1938, p. 64). Some may refer to this as “experiential learning” (Clarke, et al., 1996, p. 172), which suggests “all learning begins with experience that students must then reflect on, that

is think about, and on the basis of this gain new information, understanding and ways of solving problems” (Kolb 1984, cited in Lauder, 1994, p. 92).

*Reflective Practice (Action Process)*

In contrast to reflection with its focus upon problem solving, (e.g., a reactionary approach), *reflective practice* is defined as “something more than thoughtful practice. It is that form of practice which seeks to problematize many situations of professional performance so that they can become potential learning situations and so the practitioners can continue to learn, grow, and develop in and through practice” (Jarvis 1992, as cited in Tate, 2004, p. 8). *Stated otherwise, reflective practitioners anticipate situations and are both shaped by and the shapers of their world, they participate in an empowering process with practice problems* (Teekman, 2000, p. 1133).

Donald Schön (1983), a social scientist, introduced ‘reflective practice’ as a process focused upon problem setting versus problem solving (Schön, 1983, p. 40). According to Schön, a reflective practitioner is an *artist* (perhaps a nurse) who deals with an interesting or troubling phenomenon and then tries to make sense of this phenomenon by surfacing and criticizing personal understandings in order to embody future action (Schön, 1983, p. 50). These practitioners exhibit ‘reflection-in-action’, they think about what they are doing “even while doing it” (Schön, 1983, p. 50), thereby integrating “theory and practice [*action*]” (Duke & Appleton, 2000, p. 1557). “Competent practitioners do not simply apply...principles and solutions to a given problem” (Lauder, 1994, p. 92), their knowledge is “inherent in the action” (Clarke et al., 1996, p. 172):

“When someone reflects-in-action, [she] becomes a researcher in the practice context. [She] is not dependent on the categories of established theory and

technique, but constructs a new theory of the unique case. [Her] inquiry is not limited to a deliberation about means and ends separate, but defines them interactively as [she] frames a problematic situation. [She] does not separate thinking from doing, ratiocinating [her] way to a decision which [she] must later convert to action. Because [her] experimenting is a kind of action, implementation is built into [her] inquiry. Thus reflection-in-action can proceed, even in situations of uncertainty or uniqueness” (Schön, 1983, pp. 68-69)

At times, according to Schön, “the situation talks back” (Schön, 1983, pp. 131-132) and the reflective practitioner has to reframe the situation again and act in a different way.

“In this reflective conversation...the reframed problem yields new discoveries which call for new reflection-in-action. The process spirals through stages of appreciation, action, and reappreciation. The unique and uncertain situation comes to be understood through the attempt to change it, and changed through the attempt to understand it” (Schön, 1983, p. 132).

In this respect, a reflective practitioner’s relation to a situation is *transactional*: the practitioner shapes a situation and converses with it so that her own appreciations “are also shaped by the situation” (Schön, 1983, p. 151).

This *transactional* process, similar to the process referenced in the previous section titled ‘Philosophical Perspective: Pragmatism’, has “caught the imagination of [nursing] professionals” (Clarke, et al., 1996, p.172) who appreciate the *art* of nursing practice (e.g., how unique problems, or patient care situations, seek “innovative and creative actions”) (Lauder, 1994, p. 92). Gary Rolfe (2002), for example, nurse scholar, practitioner, and philosopher, in his exceptional book titled “Closing the Theory-Practice Gap: A New Paradigm for Nursing,” agrees

with and extends Schön's notion of 'reflective practice' *for nursing*. He indicates because nurses are integrally involved in "interpersonal relationships" (Rolfe, 2002, p. 13), and because they desire to act in the best interest of individual patients in unique situations, reflection-in-action is seen as a relevant representation of the *art* of nursing:

"The alternating from theory to practice to theory and so on, is so fast, as to become a single integrated process...and it is this entire process of reflection-in-action which is central to the *art* by which practitioners sometimes deal with situations of uncertainty, instability, uniqueness and value conflict" (Schön 1983, as cited in Rolfe, 2001, p. 27).

Rolfe (2002), however, identifies when nurses practice artistically their practice is often named intuition, frequently referenced as mysteriously knowing the right thing to do (Rolfe, 2002, p. 28). To counter the notion that nursing art is solely mysterious and raise awareness of nursing practice expertise, Rolfe argues for a new nursing epistemology, (e.g., a "science of the unique") (Rolfe, 2002, p. 53), where nurses' *process* their practice experiences into knowledge by first stepping away from practice and generating their own theory of practice, (e.g., "informal theory") (Rolfe, 2002, p. 62), then returning to practice and applying the theory back to practice (Rolfe, 2002, p. 41). Instead of conversing with the problem situation reflective nurse-practitioners converse with others, first, to generate their knowledge, (e.g., nurses undertake reflection-on-action). Rolfe writes: "the goal of the nurse-practitioner is reflective practice, of reflection-in-action informed by reflection-on-action" (Rolfe, 2002, p. 29).

Eventually, according to Rolfe, after practice with reflection-on-action, (i.e., keeping a reflective diary of individual therapeutic relationships, having reflective conversations with friends, participating in debriefing sessions, talking with a clinical supervisor or supervisors,

formally documenting and publicly disseminating informal theories generated by reflection-on-action, etc.), a state of “mindful attention” (Rolfe, 2002, p. 121), or quality advanced nursing practice, develops. Stated otherwise, “nursing practice” (Rolfe, 2002, p. 36) develops, (e.g., a unity of theory and practice that successfully *engages* nurses with the problems of the profession without traditional recourse to external direction). This *mindful attention* characterizes advanced nursing practice, as distinguished from skilled performance:

“Whereas the aim of a skilled performance is to act intuitively and without conscious thought..., the advanced nurse-practitioner requires a particular sort of mindfulness which involves an intense concentration on the task at hand. Even with very...simple tasks such as wound dressing...the advanced nurse-practitioner would think about every move, every decision, relating them to this patient in this situation...would be learning from her performance, thinking about how it could be done differently, constructing theories, testing hypotheses, and modifying her actions in the here and now...this requires mindful attention”

(Rolfe, 2002, pp. 121-122)

According to Rolfe, it is important that research, “in the form of reflective practice” (Rolfe, 1994, p. 975), become a part of everyday activity for nurses, for this allows nurses an opportunity to engage in practice and continually modify nursing interventions accordingly.

#### *Critical Reflection and Reflective Practice (Affective and Socio-Political Process)*

In contrast to reflective practice, which emphasizes an epistemological, (i.e., a cognitive-rational), perspective about an individual’s action in practice, *critical reflection* emphasizes an ontological perspective, (i.e., focus is placed upon “being” or the “self Itself” in practice) (Rolfe & Gardner, 2006, p. 595). Stated otherwise, critical reflection emphasizes an affective or

personal value component (Boud, Keogh, & Walker, 1985; Johns, 2006) in practice, it is defined as being mindful of *self* [italics added] in order to confront, understand and move toward resolving contradiction between one's vision and actual practice; its aim is to realize desirable practice (Johns, 2006, pp. 2-3). Critically reflective RNs, for example, examine why they make certain practice choices and *how hegemonic conditions influence their decisions*, (i.e., there is concern with an examination of "ethical and moral issues related to justice and equality") (Teekman, 2000, p. 1127).

David Boud (teacher to university professors), Rosemary Koegh (curriculum advisor for technical educational programs), and David Walker (priest responsible for adult education and spiritual development) state (critical) "reflection...is a generic term for those intellectual and affective activities in which individuals engage to explore their experiences in order to lead to new understanding and appreciation" (Boud, et al., 1985, p. 19). Critical reflection involves: (1) *a return to an experience* (i.e., recollection of salient events), (2) *attention to feelings* (i.e., utilization of positive feelings and removal of obstructing feelings) and (3) *re-evaluation of the experience* (i.e., associating new knowledge with that which is already processed, integrating knowledge into a conceptual framework, and planning subsequent activity to apply this knowledge in one's life) (Boud, et al., 1985, pp. 26-27). Consistent with reflective practice, critical reflection proposes "one of the most important ways to enhance learning is to strengthen the link between the learning activity and the reflective activity which follows it" (Boud, et al., 1985, p. 26). However, in comparison to reflective practice there is a greater emphasis placed upon the affective component.

Instead of the sole learning intent to improve practice, it is proposed that the affective component of critical reflection leads to the positive attribute of "self-organized" (Boud, et al.,

1985, p. 11) and “goal directed” (Boud, et al., 1985, p. 11) learning, or responsible action.

According to Boud et al. (1985):

“...we can see the need for students to process the information they have been given, relate this to their previous experience, and test their understanding.

However, much of the reflective element in these cases has been formalized and procedures have been established which, although they keep students on the task by giving them tests, assignments, and tutorial exercises to do, can tend to relieve them of the responsibility for fully relating to their own framework the inputs they receive. While this may maximize the amount of cognitive learning as defined by end-of-course examinations, it may inhibit the development of self-organized learning” (Boud et al., 1985, p. 11).

With self-organized or “deliberate learning” (Boud, et al., 1985, p. 18), “personal synthesis” (Boud, et al., 1985, p. 20) is achieved – thoughts, feelings and actions are integrated, which contributes to a new affective state or the decision to engage in some further activity. *Deep learning* is achieved, which represents holistic being and practice (Johns, 2006; Tate, 2004).

According to Christopher Johns (2006), Nurse Scholar and Buddhist, critical reflection includes the affective component of “feelings” (Johns, 2006, pp. 30-31), and the development of feelings culminates in “voice” (Johns, 2006, p. 10), or personal vision for practice, which empowers RNs to take caring action based upon insight. From the perspective of Johns (2006), RNs: (1) experience a “creative tension” (Johns, 2006, p. 7) between personal visions of nursing practice and current reality, (e.g., nurses are concerned with the process of care whereas the healthcare system is concerned with productivity), and (2) are exposed to limited support availability (Johns, 2006, p. 201) (i.e., inadequate staffing, limited meeting space and meeting

time, transactional leadership, limited study time allocation, etc.), which socializes them to be an oppressed group (Johns, 2006, p. 65). To enhance and develop critical reflection (e.g., to surface voice), clinical supervisors (Johns, 2006, p. 68) or guides (Johns, 2006, p. 81) within highly supportive environments (Johns, 2006, p. 79), (e.g., learning organizations) (Johns, 2006, p. 236), stoke conflict within practitioner RNs (Johns, 2006, p. 79).

Practitioners are asked to share feelings about experiences and this critical reflective process helps RNs develop a vision for practice, it provides the impetus for practitioners to take action, perhaps socio-political action (Heath, 2008), in order to resolve contradiction between their caring vision and “work as a lived reality” (Johns, 2006, p. 79). Some scholars reference this as double-loop learning (developing practice) versus single-loop learning (an academic exercise) (Duke & Appleton, 2000). With double-loop learning the agent does not merely search for alternative actions to achieve some ends, *she also examines the appropriateness and propriety of her chosen ends* (Greenwood, 1998, p. 1049). Salient factors within critical reflection include the affective, moral (or ethical), and political dimensions of practice.

In this study, a synthesis of reflection, reflective practice, and critical reflection literature led to the development of a new concept named ‘critical reflective practice’. Critical reflective reflection practice includes cognitive, affective and behavioral components. It is defined as being mindful of self within or after professional practice situations, (i.e. *processing* the cognitive, behavioral, and affective components of professional practice situations), so as to continually grow, learn and develop, personally, professionally, and politically.

#### *Relationship Between Critical Reflective Practice and Work Engagement*

Critical reflective practice (or reflective practice), although ambiguous to define, is identified as both an internal and external process (Durgahee, 1998; Gustafsson, et al., 2007;

Ruth-Sahd, 2003). The following RN *internal* and *external* characteristics represent reflective practice (or critical reflective practice): (1) *internal* – flexibility, mindfulness, introspection, self-awareness, and an honoring attitude towards care and (2) *external* – safe, open, honest, collegial, and trusting environments (Ruth-Sahd, 2003).

When the internal and external processes of reflective practice flourish various positive work-related outcomes occur (much of these outcomes stem from qualitative research with nursing students): *tacit knowledge surfaces, preconceived ideas are reframed, and strategies to create a more caring environment are implemented* (Peden-McAlpine, Tomlinson, Genck & Meiers, 2005.), *nursing expertise is articulated* (Crandall & Getchell-Reiter, 1993), *challenges to the status quo and institutional power happen and nurses move away from routines to a state of mental arousal and intellectual curiosity* (Durgahee, 1996), *increases in clinical reasoning and intrinsically motivated learning develop* (Murphy, 2004), *academic self-concept is enhanced (e.g., a determination to continue with education)* (Mountford & Rogers, 1996), *increases in confidence and ability to provide the rationale for patient care are demonstrated* (McCaugherty, 1991), *intentions to engage learned strategies in future, similar care situations are exhibited* (Briggs, 1995), *an ability to integrate theoretical concepts to practice occurs* (Ruth-Sahd, 2003) and *specific changes to practice develop* (Paget, 2001). In only one study was it identified that reflection had no statistically significant effect on a learning outcome (Low & Kerr, 1998).

In this study, it is recognized that magnet-designated hospital environments are known to implement ongoing strategies, (e.g., behavioral, cognitive and affective strategies), to encourage RN critical reflective practice: (1) “collegiality with physicians” (*behavioral*) (Dendaas, 2004, p. 14), (2) RN involvement “in decision-making bodies in the organization” (*cognitive*) (American Nurses Credentialing Center [ANCC], 2005, p. 36), and (3) a leadership structure that fosters and

supports RN “personal and professional growth” of RNs (*affective*) (ANCC, 2005, p. 63).

These findings support the theoretical idea that critical reflective practice, particularly within a magnet designated environment, may be related to increased work engagement and professional well-being. It is a magnet-designated hospital that is included in this research study.

#### *Relationship Between Critical Reflective Practice and Moral Distress*

The following critical reflective practice-related activities have been found to potentially alleviate the moral distress experienced by hospital RNs: storytelling (Nathaniel, 2006), RNs gathering together to share and talk about ethical clinical care happenings (Storch, Rodney, Pauly, Brown & Starzomski, 2002), one-and-a-half hours of clinical supervision per week (Berggreen & Severinsson (2000), availability of support services so that RNS can talk about feelings (i.e., educational programs, staff meetings, availability of other staff) (Åström, Jansson, Norberg, & Hallberg, 1993; Raines, 2000; Verhaeghe, Vlerick, De Backer, Van Maele, & Gemmel, 2008), and continuing, in-house ethics education (Grady, Danis, Soeken, O’Donnell, Taylor, Farrar, & Ulrich, 2008).

Interestingly, Nathaniel (2006) identifies that moral distress, itself, actually represents a component within a reflective process, (e.g., a moral reckoning process). When RNs are within moral distress, and by extension within the moral reckoning process, they are already critically and emotionally reflecting on choices, actions and consequences of particularly troubling patient care situations. Unfortunately, in respect to direct patient care, when RNs are unable to discuss living with the prolonged consequences of situational binds they are likely to leave bedside nursing. However, the positive side is that they then seek further education to prepare for more autonomous roles to be better able to address the moral wrongs with the intention of correcting the moral wrongs (Nathaniel, 2006). To maintain bedside nurses it is suggested that RNs come

together to share their stories so that they can explore their distressing situations and perhaps identify alternative methods to move beyond it.

#### *Relationship Between Critical Reflective Practice and Educational Level*

A limited amount of research in regards to the relationship between reflection and educational level has been completed. Preliminary findings suggest there may be a positive relationship between increased nursing education and reflection. Powell (1989) indicates a diploma degree does not prepare RNs to develop new knowledge (Powell, 1989), three-year degree nursing students are not familiar with formal reflection (Mountford & Rogers, 1996), and critical reflection is perhaps “more indicative of higher level study such as that at Master’s level” (Duke & Appleton, 2000, p. 1566). Lützn & Nordin (1995) conclude post-basic nursing courses significantly increase reflection on values underpinning actions.

#### *Theoretical Model*

The clinical, conceptual, and empirical literature suggests that there are dynamic relationships between moral distress, educational level, and work engagement. This proposed research adds the critical reflective practice variable. Critical reflective practice is conceptualized as an independent variable that relates to work engagement and moral distress. Additionally, it is postulated that critical reflective practice may positively moderate the negative relationship between moral distress and work engagement. A *moderator* affects the strength of the relation between an “independent or predictor variable and a dependent or criterion variable” (Baron & Kenny, 2004, p. 1174).

The theoretical model for this study, developed by the investigator, is depicted in Figure 1. It is based upon a review of nursing educational level, moral distress, critical reflective

practice (or reflective practice) and work engagement literature. This theoretical model suggests there is:

- (a) a negative relationship between moral distress and work engagement, which may be positively modified by critical reflective practice;
- (b) a posited negative relationship between critical reflective practice and moral distress; and
- (c) a posited positive relationship between increased RN educational level and critical reflective practice, and work engagement;
- (d) a posited negative relationship between increased RN educational level and moral distress.

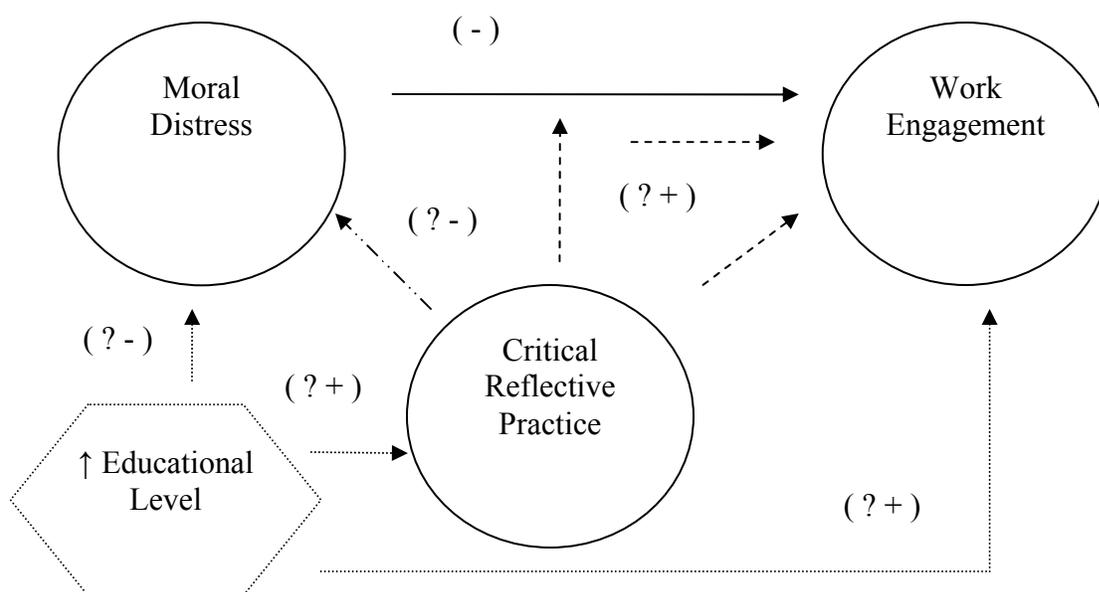


FIGURE 1. Theoretical Model: Proposed Relationships Among Registered Nurse Educational Level, Moral Distress, Critical Reflective Practice and Work Engagement.

## Research Questions

The following research questions are proposed in this study:

1. What are the levels of each variable (work engagement, moral distress, education, reflection and critical reflective practice) among RN's working in a southwest magnet-designated hospital?
2. What are the bivariate correlations among all of the variables?
  - a) What are the relationships among moral distress, educational level, reflection, critical reflective practice, and work engagement?
  - b) How does RN educational level relate to moral distress, reflection, critical reflective practice and work engagement?
  - c) How does moral distress relate to reflection, critical reflective practice and work engagement?
3. What variables taken together (educational level, moral distress, reflection and critical reflective practice) best explain the variance in work engagement?
4. What role does critical reflective practice or reflection play in the relationship between moral distress and work engagement?
  - a) Does critical reflective practice or reflection moderate the relationship between moral distress and work engagement?
  - b) Does critical reflective practice or reflection have a direct relationship to moral distress?
  - c) Does critical reflective practice or reflection have a direct relationship to work engagement?

5. Do RNs identify themes in their work-related experiences: educational learning experiences, moral issue experiences, and reflective practice experiences?

## CHAPTER II – REVIEW OF THE LITERATURE

Educational level, moral distress, critical reflective practice and work engagement are the four key concepts within this dissertation. A critical review of the scientific literature for each of these concepts has been completed and findings are presented as follows: (1) Work Engagement – Emerging Literature, (2) Moral Distress and Work Engagement, (3) Educational Level and Work Engagement, Moral Distress, and Critical Reflective Practice, (4) Critical Reflective Practice and Work Engagement, and (5) Critical Reflective Practice and Moral Distress. While some areas have been heavily researched, such as moral distress, other areas have been less-researched, particularly reflective practice in relationship to educational level, work engagement and moral distress. Overall, studies have limited generalizability but they do provide some basis for exploring or proposing relationships among the variables. A synthesis of the research findings in reference to their relevance for the theorized relationships is presented at the end of this chapter.

### Work Engagement – Emerging Literature

Van den Broeck, Vansteenkiste, DeWitte, and Lens (2008) completed a quantitative study to examine whether basic job need satisfaction (i.e., autonomy, belongingness and competence), mediates the relationship between (1) job demands and employee burnout, (2) job resources and burnout, and (3) job resources and engagement. Subjects were recruited from 17 organizations in the Dutch-speaking part of Belgium - 20% blue-collar (n = 142), 44% white-collar (n = 323), 31% superiors (n = 225), and 6% were self-employed (n = 43). Fourteen percent (n = 105) worked in the health care sector. Data collection tools: (1) a developed job demand-resource characteristic tool with questions taken from a well-established Dutch questionnaires (demands = workload, emotional demands, physical demands, work home interference;

resources = task autonomy, supervisory support, skill utilization, and positive feedback); (2) Basic Need Satisfaction at Work Scale; (3) Maslach Burnout Inventory General Survey; and (4) Utrecht Work Engagement Scale. Data analysis: Structural Equation Modeling (SEM). Findings: (1) job demands related positively to exhaustion ( $\gamma = .59, P < .001$ ), (2) job resources related negatively to exhaustion ( $\gamma = -.33, p < .001$ ), and (3) satisfaction of basic psychological needs acted as a partial mediator in the relationship between job resources and engagement ( $z = .27, p < .01$ ). Conclusion: employees surrounded by resourceful job characteristics were more likely to experience a general feeling of freedom (e.g., autonomy), belongingness and effectiveness (e.g., competence), which in turn explained why they felt less exhausted and more vigorous in their jobs. Limitation: due to small sample size of health care workers, and inability to identify whether RNs were included in the sample, generalization of findings to the RN population is difficult.

Mauno, Kinnunen, and Ruokolainen (2006) completed a quantitative 2-year longitudinal study to provide knowledge on the prevalence and antecedents of work engagement. Participants included professional and non-professional public health care staff in Finland ( $n = 409$ ). Survey data was collected in 2003 and 2005. Data collection tools: (1) Utrecht Work Engagement Scale, (2) Job Insecurity Scale, (3) Quantitative Workload Inventory, (4) Work-to-Family Conflict SWING scale, (5) modified version of the Job Control Scale, (6) Organization-Based Self-Esteem Scale, and (7) Organizational Culture Inventory. Data analysis: MANCOVA with repeated measures and hierarchical regression analysis. Finding: there was a positive effect of job control on dedication after controlling for the baseline level of work engagement ( $\beta = .09, r^2 = .49, P < .001$ ). Conclusion: job control had the most consistent, positive association with the different dimensions of work engagement. Recommendation: to increase employee's work

engagement employers should provide a sufficient level of employee job control, (e.g., autonomy). Limitation: participants were not randomized, thereby limiting the ability to generalize findings.

Naudé and Rothmann (2006) completed cross-sectional survey research to examine the relationship between sense of coherence, occupational stress, burnout and work engagement. A convenience sample of 323 Gauteng, South Africa emergency workers participated. Data collection tools: (1) Orientation to Life Questionnaire, (2) Emergency Worker Stress Inventory, (3) Maslach Burnout Inventory, and (4) Utrecht Work Engagement Scale. Data analysis: product-moment correlation coefficients. Finding: personal accomplishment, (e.g., the feeling that one has accomplished many worthwhile things in the job), was significantly and positively related to work engagement ( $r = .61, p < .01$ ). Recommendation: organizations should encourage workers by stating to the workers that their efforts make a positive impact.

Schaufeli and Bakker (2004) implemented multi-site, cross-sectional, quantitative research to examine whether, (1) work engagement mediates the relationship between job resources and (low) turnover intention, and (2) burnout mediates the relationship between high job demands and experienced health problems. A sample of Dutch employees ( $n = 1698$ ) from four different organizations (insurance company, pension fund company, home-care institution, and occupational health and safety service) completed paper-and-pencil questionnaires. Data collection tools: (1) Maslach Burnout Inventory-General Survey, (2) Utrecht Work Engagement Scale, (3) Workload Scale, (4) Emotional Demands Scale, (5) Job Resources Instrument, (6) Social Support from Colleagues Scale, (7) Leader-Member Exchange Scale, (8) Health Problems Scale, and (8) Turnover Intention Scale. Data analysis: Structural Equation Modeling (SEM). Findings: (1) work engagement mediated the relationship between job resources and turnover

intention ( $z = -.17, p < .001$ ) and (2) burnout mediated the relationship between high job demands and experienced health problems ( $z = .66, p < .001$ ). Conclusion: the positive psychological state of engagement played a mediating role “in a motivational process that is driven by available resources and that might lead to organizational attachment” (Schaufeli & Bakker, 2004, p. 310). Recommendation: organizations should encourage implementation of job resources, (i.e., task level, performance feedback), interpersonal-level resources (support from colleagues), and organizational level resources (supervisory coaching).

Demerouti, Nachreiner, Bakker, and Schaufeli (2001) completed a series of LISREL analyses to test the Job Demand-Resource Model (JD-R Model). The JD-R model “assumes that burnout develops irrespective of the type of occupation when job demands are high and when job resources are limited because such negative working conditions lead to energy depletion and undermine employees’ motivation, respectively” (Demerouti et al., 2001, p. 499), (e.g., a consequence of limited job resources is withdrawal and disengagement from work). The sample included German employees ( $n = 374$ ) recruited from 21 different jobs in three different occupations (human services, industry, and transportation). Data collection methods: (1) observer ratings of working conditions, (2) Oldenburg Burnout Inventory and (3) a theoretically-derived working questionnaire of job demands and resources. Finding: a lack of job resources was related to work disengagement ( $\beta = -.72, p < .05$ ). Conclusion: when job resources were lacking, (i.e., job control and participation in decision making), it was appropriate to predict high levels of work disengagement. Recommendation: increase job resources in order to enhance employee engagement. Limitation: a cross-sectional design does not allow causal interpretation (Demerouti, et al., 2001, p. 510).

## Moral Distress and Work Engagement

### *Environmental Factors*

Eizenberg, Desivilya and Hirschfeld (2009) developed and tested the psychometric properties of a culture-sensitive moral distress questionnaire (MDQ) among Israeli nurses working in a variety of work settings. Data analysis: (1) Qualitative phase to probe in-depth the moral issues faced in everyday nursing practice; thematic, verbatim analysis of focus groups and individual interviews (n = 30), which led to the development of 15 items for a moral distress questionnaire and (2) Quantitative phase to examine the 15 items on the developed questionnaire; exploratory factor analysis (n = 179) and *t*-tests to determine whether a significant difference between hospital and community clinic nurses existed. Findings: (1) three sources of moral distress were prominent in the context of Israeli nursing practice; (a) time constraints, (b) shortage of resources, (2) conflicting perceptions between staff existed, (e.g., conflicting perceptions between staff nurses and “nurses in supervisory positions”) (Eizenberg, et al., 2009, p. 890), (3) hospital nurses reported higher stress due to time pressure and work relationships than did community nurses and (4) the tool factor analysis identified three factors representing moral distress: lack of resources, work relationships among staff, and time pressure. The internal consistency was above 0.79 for all three factors. Their recommendations were the following, (1) conduct further research to validate the MDQ, and (2) provide educational opportunities to nurses so they can learn constructive ways to deal with moral distress. A limitation in this study was that the instrument was utilized in one culture and may require culture-specific adaptations for use in cross-cultural research.

Hamric and Blackhall (2007) pilot tested a developed survey to examine RN and Medical Doctor (MD) perspectives on caring for dying patients in intensive care units (ICUs). Data

collection tools included: an adapted moral distress scale, ethical environment scale, end-of-life communication scale, satisfaction with quality of care scale, and a collaboration scale. A total of 196 RNs and 29 attending physicians from 14 ICUs in two Virginia institutions participated.

Findings: (1) the RNs experienced significantly more moral distress ( $p < .001$ ) and less collaboration ( $p < .001$ ) than physicians, (2) were significantly less satisfied than physicians with the care provided on their units ( $p = .005$ ) and (3) perceived a more negative ethical environment than MDs ( $p < .001$ ), (e.g., MDs did not see the following situation as morally distressing, and the RNs did: “Let medical students perform painful procedures on patients solely to increase their skill.”). The following MD and RN mean moral distress scores (0-6 frequency and intensity score) were demonstrated: M.D. = .98 and RN mean score = 5 (Hamric & Blackhall, 2007, p. 424).

At one site 17% (17/100) of the RNs had left a position due to moral distress, while 28% (28/100) considered leaving their position; in comparison, only 3% of the MDs (1/29) considered leaving a position due to moral distress, and none did. Conclusion: it was important to recognize that value differences between RNs and MDs existed and it was recognized that explicit discussions about moral issues may improve collaboration and mitigate RN moral distress perspectives. Limitation, generalizability: (1) at the second site only 13% of the MDs (4/30) participated, (e.g., they were dropped from data analysis due to the small sample size), and (2) there was inadequate explication of the constructs, related to multiple tool adaptations, which may “lead to incorrect inferences” (Shadish, Cook & Campbell, 2002, p. 73).

Zuzelo (2007) completed a quantitative, descriptive study to identify the frequency of morally distressing events in patient care situations and explore the resources utilized by RNs, both personal and institutional, when confronted with distressing ethical dilemmas. The three

study questions were, (1) what are the most distressing moral events encountered by RNs and how frequently are these events experienced? (2) what types of formal educational programs have RNs completed related to ethical practice? and (3) what resources do RNs utilize when confronted with morally distressing situations? A convenience sample of 100 RNs employed in a variety of care units at a large Northeastern USA urban medical center participated. Data collection tools were, (1) The moral distress scale (MDS), slightly modified for certain units, and (2) short-answer questions following the MDS. Findings: (1) “the most morally distressing event was identified as working with levels of nursing staff perceived as ‘unsafe’ ( $M = 4.14$ )” (Zuzelo, 2007, p. 351); (2) “70% had not completed any credit work in ethics” (p. 351), and (3) resources to confront moral distress included managers/supervisors (31/61, 51%), ethics committee consultations (16/61, 26%), chaplains (12/62, 20%) and nurse colleagues (8/61, 13%), while 13% (8/61) identified there were no resources available. Key suggested strategies to improve moral distress in clinical environments were offered ( $n = 46$ ): (a) broaden RN involvement in and access to ethics committees (i.e., ethics rounds, ethics hotline), and increased RN involvement on ethics committees. (b) provide debriefing/group discussion sessions to explore morally distressing events, and (c) change physician demeanor and behaviors. The results suggested that opportunities for reflection on practice were a way to decrease moral distress.

Corley, Minick, Elswick and Jacobs (2005) completed a descriptive-correlational study using two relatively new instruments, (1) 20-item, 5-point Likert, ethical environment questionnaire (EEQ), and (2) 32-item, 0-7 score, moral distress scale, to determine if ethical work environment was related to RN moral distress intensity and frequency. Sample included 106 RNs who worked on medical and surgical units in two large medical centers; over 25.5% had reported they left a position in the past due to moral distress (27/106). Findings: (1) the EEQ

significantly predicted moral distress intensity ( $F = 1.65$ ,  $p = 0.038$ ) and was negatively correlated with moral distress frequency ( $r = -0.42$ ,  $p = 0.01$ ) and (2) the lowest EEQ scores related to nurses' involvement in deliberations addressing ethical concerns. A recommendation was to improve organizational deliberations in order to mitigate the moral distress RNs experience, (e.g., broaden ethics committee availability).

Gutierrez (2005) implemented qualitative methodology (phenomenological inquiry, with constant comparison grounded theory analysis) to describe and analyze the nursing phenomenon of moral distress in critical care nurses. Participants included 12 surgical-ICU RNs working at a large teaching hospital in a Midwestern region of the U.S.; all maintained current RN licensure, had at least one year of critical care experience, were employed at least 50% in an ICU and self-identified with previous experience of moral distress. A researcher-developed, open-ended interview format, designed to address three moral concepts (moral conflict, moral judgment and moral action), elicited moral distress information. Findings for the three moral concepts, (1) (*moral conflict*) overly aggressive medical treatment was the greatest source of moral conflict, (2) (*moral judgment*) participants recognized that actions that should have been implemented were not, (e.g., do not resuscitate orders should have been written but were not), and (3) (*moral action*) participants identified various constraints which prevented moral action, (i.e., human, communication, emotional, and cultural barriers). Moral distress led to decreased interactions with patients/significant others. Recommendations were as follows: (1) provide a mechanism where moral concerns can be addressed in a respectful, non-intimidating manner and (2) continue research in order to assess the efficacy of recommended interventions to reduce or prevent moral distress. Limitations: (1) the researcher had a personal relationship with all of the participants, "the researcher may have influenced the content of the subjects' descriptions in such

a way that the descriptions do not truly reflect the subjects' actual experience" (Creswell, 1998, p. 208) and (2) devotion to one methodology was not evident, (i.e., phenomenological inquiry with grounded theory analysis), which may limit trustworthiness of findings, (e.g., pre-framing the research with theory).

Hart (2005) completed, in 2003 and 2004, a cross-sectional study of randomly selected, acute-care RNs in Missouri, USA. Data collection tool: self-administered questionnaire containing the (1) Hospital Ethical Climate Survey, (2) Anticipated Turnover Scale, and (3) Nursing Retention Index to assess RNs' perceptions of the hospital ethical climate and their intentions to leave the profession or exit their position. Data analysis: regression equation analysis. Findings: (1) hospital ethical climate explained 25.4% of the variance in positional turnover intentions ( $F = 141.030$ ,  $p < .001$ ) and (2) RNs who received employer ethics education demonstrated a greater intention to stay in their current position. Conclusion: ethical climate was "a significant factor in RNs decisions to leave their position or to leave the nursing profession" (Hart, 2005, p. 176); when RNs were able to maintain control over their nursing practice retention improved. A recommendation was that employers should consider the use of ethics education to enhance RN retention. Limitation: Participants represented only one USA state (e.g., regional).

Cronqvist, Theorell, Burns, and Lützén (2004) completed, from the perspective of relational ethics, a five level process, qualitative content analysis of the experiences of moral concern in intensive care nursing. Main study questions: (1) what situations are ICU RNs morally concerned about and (2) how do they reason about them? The sample included 36 ICU RNs from ten general, neonatal and thoracic ICUs in Sweden. Data collection: individual interviews where participants provided an example of an ethical situation. All interviews were

conducted and audio-taped in private. Findings: (1) no participant referred explicitly to traditional ethics principles or theories, (2) participants found it distressing not to find a moment to contemplate and obtain support, (3) physicians were not as available as RNs would wish, especially during times of heavy workloads and (4) physician orders, to withdraw or withhold treatment, were questioned and criticized, (e.g., “The physicians do have different opinions...about what matters”) (Cronqvist, et al., 2004, p. 71).

A discrepancy about caring about and caring for was identified: there was a disquiet about what the RN understood as good care (caring about) and about their responsibility to carry out orders as a working responsibility (caring for). Conclusion: (1) further study was needed to determine whether RNs actually have moral action knowledge, (e.g., the application of moral knowledge to practice), and (2) the lack of a shared value system was identified as concerning. Recommendation: conduct future study, perhaps on mentoring, to determine how caring about and caring for can be integrated into nursing interventions without leading to a strain between the two dimensions. Limitations: participants were recruited by their head nurses, this may have influenced the information provided during the interviews, (e.g., there was the potential the RNs withheld or embellished information), which potentially diminished the dependability of findings.

Kälvemark, Höglund, Hansson, Westerholm and Arnetz (2004) conducted focus group interviews to identify situations of ethical dilemma and moral distress among Swedish health care providers. Three clinical departments from an upper region of Stockholm participated: cardiology, hematology, and pharmacy. Each group consisted of five to seven multi-disciplinary members: nurses, physicians, auxiliary nurses, pharmacists, pharmacy assistants and medical secretaries. Findings: (1) all categories of staff experienced moral distress, and (2) hierarchical

structures and value conflicts within organizations contributed to moral distress. Conclusion: work organizations should provide better support resources and structures to decrease moral distress (i.e., more staff), less administrative work, more beds and an organized way to discuss ethical concerns. Limitation: because focus groups are difficult to manage, the communication and interaction within the group may have implied that everybody's personal view was "not expressed due to power imbalances and tensions within the group" (Kälvemark, et al., 2003, p. 1078). Non-responses are a potentially serious concern to generalizability.

Fry, Harvey, Hurley and Foley (2002) analyzed moral distress literature and obtained interview data from U.S. Army Nurse Corps officers (n = 13) to develop a model of moral distress in military nursing. The snowball method was utilized to recruit participants, all of whom had participated in a crisis military deployment. Stories of moral distress were elicited by using a semi-structured interview guide. Findings: military nurses' experienced moral distress in two domains: initial and reactive distress domains. *Initial* military nursing distress, usually begun by a conflict of values concerning the best interests of the patients and providing the best care, occurred when barriers to moral action were initially perceived, (i.e., wanting to help injured people lying on the ground but being prevented from doing so by regulations). *Reactive* military nursing moral distress, which had potentially long-term psychological consequences, occurred when barriers were not overcome, (e.g., RN wondered if she should have lied about her clinical assessment of a sick civilian in order to obtain treatment for him).

When initial barriers to a desired moral action were experienced RNs usually tried to consult a peer, bring the situation to the attention of a higher-ranking officer, or strongly advocate for the best care of the patient. In some cases these interventions were not effective and both short- and long- term consequences developed, (i.e., feeling numb, having difficulty putting

the uniform on, or being worried, frustrated and angry). Recommendation: utilize the study as a foundation from which to develop appropriate interventions to ameliorate the effects and consequences of moral distress by military nurses. Limitations: the non-specified date range and selection criteria for the literature review may have prevented a comprehensive presentation of moral distress findings relevant to this study.

Georges and Grypdonck (2002) completed a 1990-2000 literature review to, (1) explore how palliative care RNs are affected by ethical issues, and (2) describe the nature of moral problems they encounter. Much of the literature was in the form of case reports, more often theoretical than empirical. A total of 28 studies were included, primarily from the U.S., Canada and Australia. Findings: common moral problems included: (1) communicating honestly about patient situations and death (i.e., not wanting to destroy hope and wanting to share information but not being allowed to give the information), (2) managing pain symptoms, (e.g., fear of hastening death), and (3) having to collaborate in a medical treatment plan perceived as inappropriate, (e.g., disagreement about the use of advanced technologies).

A lack of decision-making contributed considerably to feelings of powerlessness in situations of moral difficulty and, in such cases, nurses tended to adopt a passive attitude and become less sensitive to moral problems. Additionally, due to their low position in the hierarchy, RNs felt unable to act as patient advocates, they distanced themselves from patients so that moral issues were no longer perceived as difficult. Conclusion: in order to address RN moral problems it was important to support reflection on incidents, such support was believed to enhance sensitivity to the consequences of nursing actions and alleviate negative feelings and professional disillusionment. Limitations: (1) due to the limited availability of empirical studies

generalization of findings was difficult, and (2) the study included settings other than palliative care, which diminished generalization to palliative care.

Storch, Rodney, Pauly, Brown, and Starzomski (2002) implemented a qualitative, descriptive design to explore the meaning of ethics for nurses providing direct patient care. Eighty-seven subjects involved in 19 focus groups participated: 12 represented RNs practicing in a hospital or community agency, four represented nurses in their third and fourth years of BSN nursing, three represented advance-practice nurses, and one represented a nurse manager. Findings: (1) nurses were concerned with the ethical climate of the organization in which they practice. “Nurses spoke about lack of time to listen to and support patients: they also spoke about lack of time for reflection on their practice with colleagues” (Storch, et al., 2002, p. 9), and (2) nurses were concerned with the hierarchical hospital climate, (e.g., a “lack of recourse to the physician’s order and inadequate policy implementation create considerable emotional and moral or ethical distress for nurses on the front lines of care”) (Storch, et al., 2002, p. 10).

In conclusion, a recommendation was that hospital and nurse leaders create infrastructure for nurses (i.e., environments where nurses can share clinical narratives and work collaboratively); “in almost all the focus group discussions there was reference made to the importance of nurses talking to each other and sharing clinical stories as a powerful strategy for reflecting on practice while engaging in practice” (Storch, et al., 2002, p. 12). These strategies would engage nurses (i.e., energize and empower nurses). Limitation: the responses of participants in the focus groups may potentially have been different than those who did not participate in the group, which generalization of findings difficult, (e.g., descriptive design).

Penticuff and Walden (2000) completed descriptive, correlational research to explore the relative contributions of practice environment characteristics and RN personal and professional

characteristics to perinatal RNs' willingness to be involved in activities to resolve clinical ethical dilemmas. A total of 127 RNs (63 = obstetric units and 64 = neonatal intensive care units) from five Texas hospitals participated in the study. Data Collection Instruments: (1) Nursing ethical Involvement Scale (NEIS), (2) Perinatal Values Questionnaire (PVQ), and (3) Demographic Data Sheet (DSS). Data analysis: descriptive and hierarchical regression.

Findings from this study included: (1) "three predictors – nursing influence, concern about ethics, and consequentialist values – account for 31% (24% adjusted) of the variance in nurses' activism scores" (Penticuff & Walden, 2000, p. 68); (2) RNs perceived themselves as limited in their ability to influence the care of patients, they did "not have a strong sense of being valued by their institutions...[and] their willingness to take actions to resolve ethical dilemmas [was] often limited" (Penticuff & Walden, 2000, p. 69), (i.e., 45% had little influence in their units, more than 70% were either uncertain or disagreed that hospital administrators were interested in their satisfaction or welfare, only 25% requested an ethics committee meeting and only 10% went outside their unit to talk with hospital administration); and (3) nursing educational level was not found to be a statistically significant influence to activism. Conclusion: ethical practice was influenced by the settings in which RNs practiced. Recommendations included, (1) include environmental and personal system variables in further research on nursing ethical practice, and (2) hospital administrators should support staff nurses' involvement in dilemma resolution actions. Limitation: the sample consisted of perinatal RNs in one region of the United States, e.g. not a random sample, which made it more difficult to generalize findings.

Redman and Fry (2000) present the results of a systematic analysis of five studies, published between 1994-1997, of nurses' ethical dilemmas, issues, concerns, problems and conflicts. The studies represented certified and practicing nurses in four specialties (diabetes

education, pediatric nurse practitioner, rehabilitation, and nephrology) who practiced in Maryland, Virginia, the District of Columbia, New York and Pennsylvania (N = 470). Data collection instruments: (1) Demographic Data Form (DDF) and (2) Moral Conflict Questionnaire (MCQ). Findings: RNs in specific roles described various ethical conflicts, (i.e., disagreement with quality of medical care [diabetes educators]; protection of child's rights [pediatric nurse practitioner]; over- and under- treatment [rehabilitation], initiation and discontinuation of dialysis [nephrology]).

Moral distress was experienced by 33% of the nurses in all five sites (155/470), and the practitioners perceived that institutional constraints made it nearly impossible to pursue a right course of action. Nurses perceived non-receptivity on the part of the workplaces to deal with the issues involved, a lack of access to ethics committees and an organizational disinclination to deal with physicians, which made these moral conflicts unresolvable in the nurses' minds.

Conclusion: differences in the philosophic orientations of the various health professions were evident, with "nurses believing they value[d] patient autonomy more highly than...physicians" (Redman & Fry, 2000, p. 365). This indicated there was still a need for evidence on the character and resolution of ethical conflicts. Limitation: data analyzed particularly from the East Coast, making it difficult to generalize findings to other states/countries.

Hefferman and Heilig (1999) completed approximately 100 informal surveys of neonatal intensive care unit (NICU) staff over a five month period at facilities throughout northern California. The respondents, who cared for extremely premature infants at 23-25 weeks gestation, were asked to list ethical concerns they faced and, if possible, describe, if any, the impact of the concern(s) on their care or sense of self as a healthcare provider. Findings: (1) a primary concern of all respondents, "with the exception of neonatologists, [was] the treatment

and resuscitation of 23-24 week infants” (Hefferman & Heilig, 1999, p. 174), (2) RNs agonized over the care provided, detached emotionally, and felt frustrated at the bedside, (3) physician and RN staff did not always heed each other’s input, and (4) there was a need for MDs and RNs to pro-actively resolve and discuss care decisions ahead of time, “not while patients need[ed] acute care” (Hefferman & Heilig, 1999, p. 177). Conclusion: there is an increased level of moral distress among direct care NICU providers. Recommendation: additional research was necessary to identify how to improve the decision-making process within the NICU environment.

Limitations: it was difficult to generalize findings from a descriptive research design.

Sundin-Huard and Fahy (1999) completed unstructured, in-depth interviews with a purposive sample of 10 critical care nurses from various critical care units in Queensland, Australia to begin to illuminate how moral distress was experienced by nurses and how moral distress was related to burnout. Findings: when RNs experienced moral distress they: (1) desired to take on the role of patient advocate and (2) implemented one of three possible action paths: (a) did nothing (e.g., feared retribution which may be caused by their actions), (b) utilized covert communication in an attempt to alleviate patient suffering, or (c) engaged in direct advocacy by confronting the medical doctor (many times unsuccessful in this endeavor, which increased frustration, anger and hurt). Conclusion: “advocacy [was] risky for the nurse” (Sundin-Huard & Fahy, 1999, p. 12). Being an advocate could mean being moved out of a preferred employment area, being scapegoated, or voluntarily leaving, sometimes “referred to as ‘burning out’” (Sundin-Huard, 1999, p. 12). Recommendation: it was important for respectful discussions, (e.g., “collegial discussions” [Sundin-Huard, 1999, p. 12], between RNs and MDs to occur, so that consensus in care decisions could be realized. Consensus in care could reduce moral distress and

burnout for RNs. Limitation: due to the descriptive nature of this study it was difficult to generalize findings.

Von Post (1998) implemented a hermeneutical approach and critical incident technique to gain better insight into peri-operative nurses' experiences in value conflicts that arose in the peri-operative caring environment. A total of 46 nurse-anesthetists and 54 operating-room (OR) nurses with 5-25 years of experience within the peri-operative area, from different hospitals in Sweden, described decisive situations from their clinical reality, (e.g., critical incidents). Data analysis: essence-method to summarize data categories (n = 127 incidents). Findings: (1) All nurses experienced two distinguishing qualities, (a) freedom of choice was eliminated, (e.g., nurses were prevented from giving good care and bad consciences develop), and (b) nurses acted as a patient's protector and (2) the "nurse and the physician [did] not always understand each other...[they] ha[d] different intentions in their care... The physicians [thought] about future patients when they practice[d] new techniques and the nurse focus[ed] on the patient who [was] being operated on here and now" (Von Post, 1998, p. 86). Conclusion: nurses' stories were important, they proved to be relevant instruments for understanding nursing care.

Recommendation was to encourage nurses' stories because they created an understanding of why nurses felt unhappy when getting into value conflict situations. Limitation: the varied work-experience levels amongst informants lent itself to difficulty in generalizing findings.

Millette (1994), to more clearly explicate the process by which RNs arrive at ethical choices, used Gilligan's Framework to examine RN stories of moral decision making. Semi-structured interviews were conducted, subjects were asked to describe a personally experienced event that involved a moral choice and clarify the factors considered during the event. A questionnaire about advocacy was sent to 500 randomly selected nurses from western

Massachusetts and 24 RNs responded. Findings: (1) a caring orientation was evident within a majority of stories, there was an emphasis placed upon the relational aspects of events (17/24, 71%), (2) the RNs perceived a lack of power to act on convictions (e.g., were unable to provide care they believed would benefit the patient), (3) distrust and a lack of confidence in supervisors was expressed, (i.e., betrayal and abandonment), and (4) 50% of RNs (12/24) considered leaving or changing a position, primarily because they could not provide the care they knew their patients required. Conclusion: nurses did not act autonomously and operated in unsupportive environments. The recommendation was that nurses should collaborate with each other, and other disciplines, in order to increase their power and enhance their capacity to influence their own practice. Limitation: generalizability (e.g., qualitative research design).

Erlen and Frost (1991) completed in-depth interviews to examine RNs' perceptions of their role in influencing the resolution of ethical decisions in nursing practice. Data collection tool: the Perceptions of Nursing Ethics Interview Schedule. Data were collected over a six-month period through in-depth interviews with a convenience sample of 25 RNs, employed either full- or part-time in a medical-surgical or critical care setting at the time of the incident that they chose to describe. Findings: (1) 84% of the RNs (21/25) described themselves as being powerless (e.g., they described the physician as being in total control): "I don't think they look upon us as patient caregivers as much as equipment managers" (Erlen & Frost, 1991, p. 401), (2) RNs described little communication between healthcare providers, (3) RNs described themselves as ineffective in influencing the outcome of ethical dilemmas and this ineffectiveness elicited feelings of anger, frustration and exhaustion. Conclusion: RNs felt powerless and did not always know how to resolve dilemmas, and their perceptions may have delimited how actively they would pursue alternative resolutions to ethical dilemmas. Limitation: it was possible that the RNs

who chose to participate wanted to ventilate their experiences for personal reasons, which makes generalization of findings more difficult.

Forchuk (1991) implemented a case summary, descriptive research design to describe the ethical conflicts reported by psychiatric-mental health nurses in both inpatient and community settings. Staff nurses were provided with a case summary form and were asked to describe an ethical problem they had encountered at work. Fifty-seven case situations (20 = psychiatric hospital, 18 = community mental health program, 19 = general public health program) were analyzed. Findings: (1) moral distress was evident in 5% (3/57) of the overall cases, and predominantly within the inpatient setting 3.5% (2/57), (2) doing good, or beneficence, was the most commonly used ethical principle across all settings, (e.g., balancing beneficence with client autonomy) (46%, 26/57), and (3) staff conflict, either inter-disciplinary or intra-disciplinary, was significantly increased in the inpatient versus community settings ( $p < .005$ ); 65% (13/20), (e.g., staff conflicts generally include consideration of who should make decisions). Recommendation: to address staff conflict issues organizations should provide educational in-services on how to work through ethical problems. Limitation: the descriptive nature limits generalization of findings.

Martin (1989) completed an exploratory investigation of the breadth and nature of RNs' reported participation in the resolution of treatment dilemmas for infants with severe congenital anomalies. Data collection: semi-structured interviews with an investigator designed case study instrument, (e.g., The Nursing Ethical Decision-Making Scale). Participants included 83 RNs from NICUs in five, large urban hospitals in the southwest U.S. Findings: a "majority (85%) of the nurses in the study [did] not participate in a substantial way in decisions to initiate or forego life-sustaining treatment for their infant patients, yet...[bore] the major responsibility for

implementing those decisions. The lack of participation in the decision-making process [was] cited by 70% of the nurses as being a major source of occupational stress and ethical anguish” (Martin, 1989, p. 463), (e.g., 18% indicated they disagree with the “overall aggressive treatment of infants”) (Martin, 1989, p. 469).

The RNs with graduate educational preparation or advanced clinical preparation were more inclined to take a more active role in decision-making, and if internal mechanisms for communication exist (e.g., infant care review committees), RN participation in decision-making was promoted. Conclusion: there was a lack of collaborative relationships between physicians and RNs, which resulted in RN anger and frustration. Recommendation: hospital administrators could play an important role in establishing an ethical climate which promoted collaborative decision-making among RNs and MDs. Limitation: the data-collection tool was investigator designed and there was no documented evidence that it was found to be a reliable and valid tool, thus investigator bias may have impacted findings.

Wilkinson (1987, 1988) used a combination of the constant comparative method, phenomenological inquiry, and qualitative analysis to generate conceptual categories and properties of the phenomenon of moral distress in nursing. Face-to-face, open-ended interviews with 26 randomly selected hospital staff RNs were completed; ICU nurses were highly represented (92%, 24/26). Findings: (1) moral distress had four dimensions: (a) situational (RN was aware of a moral issue in a patient-care situation), (b) cognitive (RN made a decision about what actions should be in the case), (c) action (RN was unable to implement the moral decision because of contextual constraints; frequent external constraints = physicians or hospital administration and policies; frequent internal constraints = RNs being socialized to follow orders, futility of past actions, fear of losing job, and self-doubt), and (d) feeling (painful feelings

and psychological disequilibrium are experienced by the RN) and (2) to cope with painful feelings RNs avoided patients and eventually changed jobs or left nursing altogether.

Recommendation: to retain nurses at the bedside, nursing administrators should give more support to nurses in moral situations. Limitation: qualitative research design.

#### *Clinical Care Factors*

Rice, Rady, Hamrick, Verheijde, and Pendergast (2008) completed a prospective cross-sectional survey to measure moral distress in surgical and medical nurses. A total of 260 RNs from a 200-bed, southwest U.S., adult tertiary care hospital participated. Findings: (1) moral distress was uniformly high, (2) three conditions increased moral distress: working with physicians deemed not as competent as the patient requires, unsafe staffing levels, and futile care. According to a multivariate regression analysis nursing experience > 6 years and oncology and transplant patient illness predicted moral distress frequency. Recommendation: strategies should be implemented to minimize the exposure of RNs to moral distress, (i.e., implement effective communication strategies surrounding end-of-life patient care, offer debriefing sessions with MDs, RNs, ethicists and clergy members, and offer interdisciplinary education to healthcare providers in order to improve collaboration). Limitation: the study was conducted at a single site with a specific patient and staff mix, thus making it difficult to generalize findings.

Mobley, Rady, Verheijde, Patel, and Larson, (2007) completed a cross-sectional survey, consisting of 38 clinical situations associated with six categories related to moral distress, (i.e., physician practice, nursing practice, institutional factors, futile care, deception and euthanasia), to study the relationship between moral distress and futile care in critical care units (CCUs). The intensity and frequency of moral distress was scored with a Likert scale: 0 (lowest) to 6 (highest). Forty-four CCU RNs participated. Findings: “the encounter frequency for...futile care

was the highest and was significantly related to age >33 years ( $p=0.03$ ), time in CCU > 4 years ( $p = 0.04$ ) and nursing practice > 7 years ( $p = 0.01$ )” (Mobley et al., 2007, p. 256).

Recommendation: future interventions, (i.e., educational programmes on nursing ethics, regular multidisciplinary practice meetings, and individual and group support), should be implemented to minimize futile care situations in the CCU. Limitation: non-random sample.

Liaschenko (1995) completed unstructured interviews to understand the lived ethical experiences of two groups of RNs. A total of 19 participants (10 home care, 9 psychiatry) were asked the following question: “Tell me a story from your practice that highlights some ethical concerns you have about your practice” (Liaschenko, 1995, p. 188). All participants were highly educated, 18 maintained a bachelor’s degree, six had a master’s degree, and one had completed a doctoral degree. Findings: RNs were harmed in two ways: (1) moral distress and (2) moral harm, (e.g., loss of integrity). RNs viewed the institutionalized response of medicine as a matter of deep ethical concern. Death, for the nurses, was not seen as an enemy to be fought. Rather, death was seen as a fact of human life. As one nurse put it, “It’s not the way I think life was meant to be. I think that life was meant to be lived and ended, and let’s let go.” (Liaschenko, 1995, p. 188). Harm, for the RNs, arose from carrying out procedures that contributed to suffering. Recommendations included: (1) allow RNs time to give testimony to one another and build community, and (2) to construct RN moral accountability, provide education on how scientific totalitarianism reduces RNs to “artificial persons” (Liaschenko, 1995, p. 194). Limitation: due to the exploratory nature of this study generalization of findings is difficult.

Holly (1993) completed a content analysis of 65 RN-written descriptions of personally encountered, work-related ethical situations. Critical care, burn, and post-anesthesia unit RNs, from both urban and suburban hospitals, participated. Findings: RNs experienced three recurrent

categories of ethical, work-related situations: (1) exploitation (e.g., treating the seriously ill in an inhumane manner), (2) exclusion (e.g., disregard for patient's choice), and (3) anguish (e.g., feeling powerless to practice or assist patients in a fully professional manner). The RNs were relegated to conventional roles when they attempted to become involved in ethical situations. A recommendation was to create open environments, (i.e., develop nursing ethics councils and open lines of communication so that individual RNs' perspectives can be included in decision making). Limitation: all participants volunteered to be in this study, generalization of findings was difficult.

#### Educational Level and Work Engagement, Moral Distress, and Critical Reflective Practice

##### *Educational Level and Work Engagement*

De Lange, DeWitte, and Notelaers (2008) completed a quantitative, two-wave (16-month lag) study to examine the relationship between job resources, work engagement and actual turnover across time. A total of 871 respondents from all sectors of the workforce were recruited by an advertisement placed on a 2003 Belgian Human Resource website. Highly educated workers, (e.g., university prepared), are overrepresented (e.g., 70.7%). Data collection tools: (1) job autonomy, (2) social support, (3) departmental resources, and (4) work engagement. The following covariates were controlled for: age, gender, work position, and years of experience. Data analysis: descriptive discriminant analysis. Findings: low departmental resources, job autonomy, and work engagement were particularly predictive of employees changing to another company or job ( $r^2 = .60$ ,  $p < .001$ ). Recommendation: employers, in order to retain and motivate personnel, should provide positive and resourceful work environments, especially in terms of job autonomy and departmental resources, (e.g., adequate staffing). Limitation: this was not a

random sample, nor was it specific to a RN population, which meant difficulty in generalizing findings to a RN population.

#### *Educational Level and Moral Distress*

Nathaniel (2006) utilized a grounded theory approach to further elucidate the experiences and consequences of professional RNs' moral distress. Unstructured interviews with 21 general staff RNs were completed. Findings: (1) 43% of the professional RNs (9/21) had left a previous position due to moral distress and (2) a new, three-stage theory, termed moral reckoning, was identified: Stage of Ease, Stage of Resolution, and Stage of Reflection. The stage of reflection occurred when RNs reckoned, (i.e., remembered and reflected upon their actions in response to a morally distressing situation). During the stage of reflection RNs questioned prior judgments, particular acts, and "the essential self" (Nathaniel, p. 432). It was suggested moral distress motivated RNs to come forward and tell their stories and this sharing provided support for self and other RNs. The conclusion was that sharing (e.g., storytelling), may be beneficial for all RNs; sharing may help RNs identify methods to move beyond moral distress and may contribute to retention of workforce RNs. Limitation: it was difficult to generalize findings: (1) participants were older and highly educated (76% with master's degree or higher) and (2) sample did not include nurses who experienced no distress.

Meltzer and Huckabay (2004) completed a descriptive survey design to determine the relationship between critical care RN perceptions of futile care and its effect on burnout. Two hospitals (350-470 bed) participated. A convenience sample of 60 critical care RNs, who worked full-time and had a minimum of one year of critical care experience, completed a (1) survey on demographics, (2) moral distress scale, and (3) Maslach burnout inventory. Data analysis: Pearson product moment correlation and analysis of variance with post hoc Scheffé tests.

Findings: (1) there was a significant positive correlation between moral distress situations involving futile care and emotional exhaustion ( $r = 0.317$ ,  $p = .05$ ), (2) RNs with a bachelor's degree in nursing or higher had "significantly higher scores ( $F = 4.27$ ,  $p = .009$ ) on the [moral distress scale] painful feelings subscale (mean = 154.19, SD = 30.10) than did nurses with an associate degree in nursing (mean = 126.58, SD = 34.87)" (Meltzer & Huckabay, 2004, p. 206).

Conclusion: (1) moral distress, associated with providing futile care, led to emotional exhaustion and (2) BSN or more highly educationally prepared RNs experienced more painful feelings when confronted with episodes of medical futility. To mitigate moral distress and emotional exhaustion, it was recommended that hospital administration implement availability of the following resources: accessibility to ethics committees, interdisciplinary group discussions, and development of organizational policies on futility and ethical decision making. Limitation: because this was a convenience sample, generalization of findings was difficult.

Corley, Elswick, Gorman and Clor, T. (2001) developed a 32-item, 0-7 scale tool to evaluate moral distress. A two-stage process was used to quantify content validity: (1) domain identification was achieved by reviewing research findings on moral problems in hospital settings and (2) content validity was confirmed by consulting two originators of the term moral distress and three doctorally prepared nurses with expertise in nurse ethics who assessed the tool and concurred all items were relevant. Test-retest reliability with a convenience sample of staff nurses ( $n = 35$ ) was obtained, 0.86 ( $p < 0.01$ ); identical forms were administered in person three weeks apart. The tool was then used to examine the effect of moral distress on previous decisions about resigning a nursing position. Of the 158 RNs who responded to the item about previous resignation, 15% (23/158) stated they had left a previous position because of moral distress. RN educational level did not predict moral distress levels.

A factor analysis identified three tool factors: (1) individual responsibility (20 items,  $m = 4.98$ ,  $SD = 1.53$ , Cronbach's  $\alpha = 0.97$ , all factor loadings  $>0.42$ ), (2) not in patient's best interest (7 items,  $m = 4.93$ ,  $SD = 1.12$ , Cronbach's  $\alpha = 0.82$ , all factor loadings  $>0.52$ ) and (3) deception (3 items,  $m = 4.34$ ,  $SD = 1.61$ , Cronbach's  $\alpha = 0.84$ , all factors loadings  $>0.66$ ). Low staffing was the item with the highest mean score for moral distress (5.47). A recommendation was to implement further study to evaluate the MDS as an appropriate measure of moral distress among nurses caring for adults in hospitals. Limitation: The Cronbach's  $\alpha$  for the deception factor (Factor 3) was 0.66, slightly lower than the recommended 0.70 for a new scale.

#### *Educational Level and Reflective Practice*

Duke and Appleton (2000) completed a quantitative research approach to assess whether: (1) some elements of the reflective process were harder to achieve than others and (2) reflective skills developed over time. Participants included undergraduate, post-registration RNs ( $N = 62$ ) who participated in palliative care modules during one academic year. Participants wrote a piece of reflection on a practice incident related to the module learning outcomes. Assignments were marked using a grid constructed from theoretical literature (total pieces of reflection = 160). Data analysis: chi-square and Wilcoxon paired signed rank testing. Findings: (1) there was a significant difference in students' abilities to achieve reflective skills (chi-square value = 239.81,  $df = 44$ ,  $p < 0.005$ ): students achieved higher grades for description of practice and lower grades for analysis of knowledge and contextual influences on care and action planning and (2) the students who took two modules in different terms during the same year demonstrated significant improvement in the following reflective skills over time: analysis of feelings ( $p < 0.01$ ), analysis of knowledge ( $p < 0.01$ ), and practice description ( $p < 0.01$ ). Conclusion: critical reflection was harder to achieve, yet reflective abilities developed over time and significant developments were

made between each term. A recommendation was to complete further research to determine how to develop critical reflection skills. Limitations: (1) the statistics in this study enabled formative ideas about reflection, yet the results were only starting points “to be developed by future research with larger numbers subjected to multivariate statistical analysis” (Duke & Appleton, 2000, p. 1566).

Mountford and Rogers (1996) completed exploratory research to examine assignment-reflection in a diploma degree nursing program. Two student cohorts participated (n = 20-25 per cohort); each cohort completed a 30-day course on care of the terminally ill and their family over a period of six months. The students completed two assignments: (1) individually written assessment during an assignment activity (reflection-in-practice) and immediately after an assignment assessment (reflection-on-practice) and (2) participation in reflective group discussion (e.g., students met at one time to discuss focused individual experiences). Findings: these reflection assignments influenced the following six factors: (1) academic self-concept, (2) task awareness, (3), views of knowledge, (4), the influence of knowledge on behavior, (5), writing as a learning activity, and (6) generation of knowledge by reflecting in and on assessment. Recommendation: allow students time to utilize reflective methods (i.e., written reflective assessment and reflective group discussion). Limitation: (1) the method of analysis was difficult to ascertain, and (2) due to the qualitative nature of this study it was difficult to generalize findings.

Lützén and Nordin (1995) completed an exploratory, pilot study to investigate demographic variables which might influence moral sensitivity in psychiatric nursing. A total of 79 RNs with more than one year’s employment in psychiatry completed the Moral Sensitivity Questionnaire. Data analysis: Parametric statistical analysis. Findings: post-basic psychiatric

nursing courses significantly increased nurses' reflection on values underpinning nursing actions ( $t$ -value = 2.71,  $p < 0.01$ ). Conclusion: education may influence moral sensitivity.

Recommendation: conduct further research to validate findings. Limitation: the grammar on the data collection tool was slightly modified, which made interpretation of findings more problematic.

Powell (1989) completed qualitative, open-ended inquiry to examine whether RNs studying for diploma degree reflect in action, to what extent and at what level, and whether the RNs based their care on nursing theory or theory from other disciplines. Mezirow's seven levels of reflectivity were utilized to analyze data. The researcher directly interviewed each volunteer RN participant ( $n = 8$ ) for 20-30 minutes and observed each participant for approximately two hours in RN-patient interactions. Findings: (1) reflection-in-action was present, (2) recognition of value judgments was utilized to a lesser extent than description of actions, and (3) diploma degree RNs relied upon existing nursing theory, did not develop theory or identify opportunities for learning and were less knowledgeable about the theory in other disciplines. Conclusion: (1) diploma study may not prepare RNs to develop new knowledge and (2) RNs should be able to use nursing knowledge and knowledge from other disciplines in practice, rather than separate knowledge from practice. Recommendation: Educators should closely monitor the application of knowledge to practice. Limitation: use of a small sample size limited identification of trends and generalization of findings.

### Reflective Practice and Work Engagement

Gustafsson, Asp, and Fagerberg (2007) completed a meta-study of an existing body of reflective practice (RP) in nursing care qualitative research. The aim of the study was to synthesize knowledge and understand registered nurses' RP. A total of 60 papers and one

doctoral dissertation published between January 1980 and June 2004 were analyzed. Findings: (1) “although the reports have empirical data, assumptions [were] mainly based on theory, which limit[ed] the empirical evidence” (Gustafsson, et al., 2007, p. 153), (2) reflection conceptualizations were ambiguous and there was a lack of evidence that RP improved outcomes, (3) the individual RN’s RP capability was essential to holistic care, (4) RP was an individual internal process with a point of departure to an outward process, (5) a dominance of RP publications were from the United Kingdom, (6) RP in nursing had primarily a constructivist epistemology and (7) RNs mainly reflected on deficiencies and incidents, which meant aspects of good nursing care may have passed by without reflection. Recommendations included: (1) clarify the conceptualization of RP, and (2) complete more empirical RP studies. Limitation: this qualitative study deepened understanding, yet its qualitative nature made it difficult to generalize findings.

Peden-McAlpine, Tomlinson, Forneris, Genck, and Meiers (2005) completed a phenomenological study to investigate the effectiveness of a reflection practice intervention (RPI) in increasing family sensitivity in the practice of pediatric critical care nurses. The RPI included three educational strategies: narrative, role modeling, and reflective practice (e.g., reflective discussion between novice nurses and clinical nurse specialists). Eight pediatric RNs from two Midwestern U.S. children’s hospitals participated. Findings: (1) pre-conceived ideas about family relationships were reframed, (2) new recognition of family relationships ensued as nurses attempted to connect with the whole family, and (3) nurses began to incorporate family into nursing care. Conclusion: a RPI created a more caring environment and offered a unique approach to nursing education/continuing education. Limitation: this was a qualitative, intensive examination in one environment and it was, therefore, difficult to generalize findings.

Murphy (2004) completed a methodological triangulation study to determine whether instruction in the use of focused reflection and articulation would enhance the development of clinical reasoning. The sample included four clinical cohorts of first-semester nursing students ( $n = 33$ ) and their four instructors in a community college program. Two cohorts and their instructors were trained in the use of articulation and focused reflection. Data collection included: (1) the Assessment and Analysis Instrument (AAI), which rates a student's written patient assessment and includes a clinical reasoning subscale, and (2) qualitative interviews. Findings: (1) per quantitative t-test analysis, those who received training demonstrated a higher level of clinical reasoning ( $d = 1.22$ ,  $t = 3.33$ ,  $p < .01$ ) and (2) per qualitative analysis, the higher clinical reasoners reported a higher frequency of reflection and were more enthusiastic and internally motivated. Conclusion: the use of reflection and articulation enhanced the practice dimension of clinical reasoning. Limitation: small sample size limited generalization of findings.

Ruth-Sahd (2003) completed a critical analysis of data-based reflective practice (RP) studies to identify the scope of nursing reflective practice and discuss implications for fostering reflection in the educational process. The studies selected for review included 20 articles, 12 dissertations, and six books with publication dates between 1992 and 2002. The following terms were searched: reflective practice, reflexivity, reflective learning, and reflection. Findings demonstrated that RP was: (1) defined largely from student's perspectives, (2) assessed primarily by qualitative methodology, (3) defined in a variety of ways, (4) associated with many positive outcomes (i.e., integration of theory to practice, increased learning from experience, enhanced self-esteem, acceptance of professional responsibility, enhanced critical thinking and judgment, empowerment of practitioners, increased social and political emancipation, and improvement in practice by promoting greater self-awareness), and (4) associated with both individual and

external characteristics (i.e., affective component to learning, flexibility, mindfulness, introspection, and safe learning environments that are open, honest and trusting). Conclusion: educators could facilitate RP by (1) focusing upon learner-centered education, (2) maintaining trusting environments, and (3) engaging learners both cognitively and affectively.

Recommendation: expand the RP knowledge base by use of quantitative approaches. Limitation: an abundance of qualitative research limited ability to generalize findings.

Paget (2001) completed a three-phase, multi-method study in a single nursing department to evaluate reflective practice (RP) in terms of clinical practice outcomes. The three main study phases included: (1) inductive process, collection of preliminary data via focus groups, (2) quantitative implementation of a constructed, piloted and analyzed postal questionnaire, and (3) qualitative brief telephone interview, (e.g., volunteer respondents from phase two). Stratified sampling from four nursing courses occurred: (1) pre-registration undergraduate course, (2) post-registration undergraduate course, (3) post-registration National Nursing Board diploma module, and (4) post-registration Master's in nursing course.

Findings per phase: (1) there was a positive attitude towards RP, although there was debate about the nature of RP, (2) a large majority of participants considered RP to be useful or very useful and favored the group approach (83%, 58/72) (e.g., they believed a significant, specific change had taken place in their practice due to RP - 78%, 56/72), and (3) participants (n = 38) described new changes in their practice, (i.e., 'looking at things afresh', 'having a different attitude' and 'I now see my patients differently'). There was no statistically significant association between level of study and perceived change to practice (p. 210). Conclusion: RP, especially in the group setting, changed nursing practice and the changes could be long-term in

nature. Limitation: (1) the RP course was not clearly defined and (2) the focused and small sample size limited generalization of findings.

Teekman (2000) completed sense-making, qualitative research to study reflective thinking in actual nursing practice. Ten participants recruited from a pool of RNs working full- or part-time in a variety of medical and surgical settings from three New Zealand hospitals were included in this study. Data collection occurred through 22 interviews in which the participants were asked to share one self-selected clinical situation which fell outside their usual range of experiences. Findings: there were three hierarchical levels of reflective thinking: (1) *thinking-for-action* (e.g., respondents realized they were facing a situation of perplexity and they needed to intervene in order to change the situation), (2) *thinking-for-evaluation* (e.g., respondents desired to analyze and clarify individual experiences, meanings and assumptions in order to evaluate both beliefs and actions), and (3) *thinking-for-critical inquiry* (e.g., respondents evaluated situations in totality or their role within it, such as power structures). Participants most often engaged in *thinking-for-action* which centers on the here and now, while *thinking-for-critical-inquiry* was not demonstrated. A recommendation was to encourage practitioners to apply the cognitive strategy of self-questioning, for this may lead nursing to shift attention from “problem solving to problem posing” (Teekman, 2000, p. 1133).

Durgahee (1998) completed a cooperative inquiry, illuminative approach to discover the educational concepts that could be used by nursing teachers in order to facilitate reflection. Data collection: (1) participant observation of 60 reflective diary meetings, and (2) group interviews with 110 RNs working in community, hospital and psychiatric settings, all of whom were undertaking a diploma level course in the care of the dying. Findings: (1) some students were unwilling to accept the self-directed nature of the reflective facilitation sessions (e.g., they were

more used to being taught by a teacher instead of learning from a group), (2) students felt encouraged when reflection was explained and demonstrated as a purposeful exercise with explicit direction, (3) students valued a balance between teacher confrontation and support (i.e., when teachers challenged students' underlying values and beliefs they also needed to empathize with student expressions), (4) students appreciated becoming active members of a group (i.e., they were able to "relax") (Durgahee, 1998, p. 162) and learn to work together, and (5) students valued placing clinical situations under a microscope in order to dissect the situations into various issues from which they could learn. Conclusion: teachers could use the following key concepts to facilitate student reflection: purposefulness, activity, collaboration, critical thinking, and confrontation and support (the mnemonic, 'PACTS').

Lowe and Kerr (1998) completed an experimental, group comparison study to see whether learning had been achieved in students who were exposed to reflecting learning strategies as compared to those who followed a conventional pathway. Two groups from a cohort of 46 nursing students were compared, a reflective group ( $n = 21$ ) and a control group ( $n = 25$ ). At the end of the second biological sciences module an 8 question test designed to assess knowledge of biological health science applied to clinical practice was undertaken by the students. A *t*-test comparison of mean percentage scores indicated no significant difference between the groups ( $df = 43$ ,  $t = 0.31$ ,  $p = 0.76$ ), reflective teaching methods were found to be as effective as conventional methods. Recommendation: complete further investigation to validate findings.

Durgahee (1996) completed a methodological triangulation research approach to portray how post-graduate nursing students perceive their development and practices after one year of reflective practice. Post-graduate nursing student cohorts ( $n = 110$ ) were asked to keep a personal

reflective diary throughout a palliative care course and every Friday for two hours, over a six week period, the diaries were discussed as a group, with facilitation by the instructor. Data collection: open-ended survey questions and semi-structured interviews. Findings: students believed reflective diaries helped them think about their practices and made them more alert to their approaches to patient's needs (e.g., the students learned to perceive their practices in a different way). The students moved from routines to curiosity, mental arousal and intellectual arousal. After one year's time the students indicated reflective thinking (e.g., the questioning of personal perspectives in nursing had become a dominant factor in their practice). Conclusion: the educational experience of reflective practice enhanced powers of nursing students' internal thinking processes, facilitated cognitive reasoning, and encouraged students to scrutinize nursing practice, (e.g. developed nursing theories). Limitation: the open-ended nature of both surveys and interviews limited generalization of findings.

Briggs (1995) completed a reflective, critical incident, case study analysis, from the perspective of a RN, to examine the sources of knowledge underpinning nursing practice. The critical incident involved a 54 year-old, critically ill woman who refused blood transfusion because she was a Jehovah's Witness. An MD, without prior consult with the RN, spoke with the patient's husband and attempted to have the husband over-ride the patient's choice to have no blood transfusion. Findings: RNs and MDs had differing perceptions of the patient, RNs usually decided care on the basis of autonomy and MDs operated from the belief that the absence of disease was the goal. Conclusion: the reflective process (e.g. critical incident analysis), enabled RNs (and multidisciplinary team members) to formulate coping strategies in future similar situations (e.g., discuss with medical staff, prior to patient and/or significant other discussion, the relevant issues that needed to be raised). Recommendation: multidisciplinary team members

should meet regularly to discuss all aspects of patient care. Limitation: findings from a case study cannot be applied universally.

Hogston (1995) completed a grounded theory study to examine the methods by which nurses evaluate quality care. An opportunistic sample of 18 volunteer RNs from a large hospital on southern England participated. Unstructured, open ended questions were asked (e.g., “Can you explain to me in your own words how you evaluate the quality of your nursing care?”) (Hogston, 1995, p. 164). Findings: RNs used three categories to evaluate quality of care (1) dialogue and sharing, which occurred on an ad hoc or formal basis, (i.e., peer review, managerial support, and knowledge sharing between students, peers, and multi-disciplinary team members), (2) reflective practice (an instinctual approach whereby care was analyzed through feelings, contemplation, and intuition), and (3) tools and frameworks (formal basis whereby care was analyzed by objective care plans and comparison to standards of care). Conclusion: RNs used both formal and informal methods to evaluate quality of care. Recommendation: RNs should “develop formalized peer support groups within an auditing programme which utilizes reflection as a foundation” (Hogston, 1995, p. 169). Limitation: due to qualitative nature of this study it was difficult to generalize findings.

Wong, Kember, Chung, and Yan (1995) completed qualitative content analysis of RNs reflective papers (n = 45), followed by in-depth interviews, to assess the level of reflection in written papers. Participants included RNs at the Hong Kong Polytechnic University taking a unit called ‘The Nurse as an Educator’. Based upon theoretical literature the RNs’ reflective papers were coded as follows: (1) non-reflector, (2) reflector, (3) critical reflector. Findings: (1) 13.3% (6/45) were non-reflectors (e.g., tended to report on happenings versus re-visiting an experience and analyzing it), (2) 75.6% (34/45) were reflectors (i.e., identified relationships between

knowledge and feelings, arrived at new insights and modified what was known to new situations, but could not validate assumptions nor demonstrate signs of making knowledge one's own), and (3) 11.1% (5/45) were critical reflectors (i.e., pursued alternative views, drew on a number of resources, tended to be courageous in trying out different methods, and did not take things for granted). It was also identified that years of working experience did not have an effect upon the level of students' reflectivity (e.g., experience did not necessarily imply learning) (Wong, et al., 1995, p. 55). Conclusion: writing reflective journals could help diagnose whether students were reflecting upon their practice. Recommendation: complete further research to examine teaching initiatives that promote reflection. Limitation: the coding reliability within was identified as being difficult, thereby making generalization of findings difficult.

Åström, Jansson, Norberg, and Hallberg (1993) implemented a phenomenological-hermeneutic study to uncover ethically difficult care situations for oncology staff nurses. Fourteen staff nurses and four ward sisters working with cancer patients at a medical, oncology and surgical clinic in Sweden participated in the study. Audio-taped interviews occurred, interviewees were asked to narrate a care situation in which they found it difficult to determine the right and good thing to do. Findings: two difficult ethical situational aspects existed: (1) nurses exhibited loneliness when rushing around (e.g., felt alienated from patients and believed it was impossible to meet patient demands), and (2) nurses experienced togetherness when they had time to be involved in inter-professional dialogue (e.g., perceived the patient as a unique and valuable person), which made it easier to provide ethically appropriate care for patients during difficult times. Conclusion: it was important to have group meetings where nurses could share thoughts and receive support, for without group support nurses had more difficulty acting in

accordance with their ethical values. Limitation: small sample size and qualitative methodology made it difficult to generalize findings.

Crandall and Getchell-Reiter (1993) completed two qualitative (study 1; study 2), research studies to develop a detailed description of the cognitive processes that surrounded the nursing assessment and care of critically ill infants. In the first study, the critical decision making (CDM) method, similar to the critical incident technique, was utilized; this is a method successful in eliciting intuitive knowledge. Participants included 17 female RNs working in the neonatal intensive care unit of a 772-bed, urban regional referral center. In the second study, the assessment indices identified in study 1, plus five more RN interviews, were completed. Findings: (1) (study 1) RNs were alert to early signs and symptoms of sepsis/advanced sepsis and almost half of the care indicators the RNs recognize were not mentioned in the medical literature, and (2) (study 2) based upon the CDM technique, RNs developed a useful guide for sepsis assessment in the neonatal intensive care unit. Conclusion: the CDM technique allowed RNs to describe aspects of their clinical judgment better than unstructured interviews. A study recommendation was to utilize the CDM technique to extract RN knowledge and provide higher standards of nursing care. Limitation: due to the qualitative nature of this study, and the limited sample size, it was difficult to generalize findings to other settings.

McCaugherty (1991) completed a qualitative, action research study to develop and evaluate a reflection, teaching model aimed to improve the integration of theory and practice for first-year nursing students. The major feature of the 'teaching model' was that students and teachers discussed, in a small group setting, the care provided to a patient whom the majority of students had nursed. There was a static group comparison and an experimental group; the experimental group received the teaching model 3 to 4 times per week, with a total of eight, 9-

week cycles over an 18-month period. To evaluate the teaching model spot checks occurred during the last three weeks of the 9-week cycle (e.g., students were asked, midway through a shift, to provide a verbal report on two patients they were nursing). Findings: twice as many students in the experimental group demonstrated the ability to provide rationale and depth of understanding in relation to the patient care provided (i.e., they could state why care was provided and were able to identify potential complications). A recommendation was that this teaching model be utilized to close the theory-practice gap in nursing. Limitation: there was a lack of randomization to static and experimental groups, which made generalization of findings difficult.

Boyd and Fales (1983) completed methodological triangulation research to describe the *process* of reflective learning. Four sets of data were analyzed: (1) open-ended, self-report responses to a five-item reflection questionnaire (sample = 12 clinically practicing counselors and 21 graduate students in adult education), (2) structured interviews (sample = 69 adult educators), (3) repeated, open-ended, nondirective interviews (sample = 9 clinically practicing counselors), and (4) the reflection and experience of the two authors. Findings; there was a generalized, six phase, non-linear process of reflective learning: (1) a sense of inner discomfort, (2) identification or clarification of the concern, (3) openness to new information from internal and external sources, (4) resolution, expressed as integration, acceptance of self-reality and creative synthesis, (5) establishing continuity with past, present and future, and (6) deciding whether to act on the outcome of the reflective process. Conclusion: the reflective learning process facilitated personal change and growth, learning, shifts in perspective and surges of energy. A recommendation was that further research be completed to more clearly understand/confirm the importance of reflective learning. Limitation: inherent qualitative nature

limits generalizability of findings and, as subjects were primarily counselors and adult educators, it was difficult to generalize findings to nursing.

### Reflective Practice and Moral Distress

Grady, Danis, Soeken, O'Donnell, Taylor, Farrar and Ulrich (2008) investigated "the relationship between ethics education and training, and the use and usefulness of ethics resources, confidence in decisions, and moral action/activism through a survey of practicing nurses and social workers from four United States (US) census regions" (Grady, et al., 2008, p. 4). A total of 1,215 nurses ( $n = 422$ ) and social workers ( $n = 793$ ) responded. Data analysis: multiple regression analysis. Findings: those with both professional ethics education and in-service or continuing education were more confident in their moral judgments ( $F = 9.84$ ,  $p < .001$ ), more likely to use ethics resources ( $F = 17.89$ ,  $p < .001$ ) and more likely to take moral action ( $F = 12.37$ ,  $p < .001$ ). Of the 422 nurse respondents, 22.7% (96) reported no ethics training at all. Conclusion: "education and training in ethics has a significant influence on the...confidence...and...moral action of [social workers] and nurses" (Grady, et al., 2008, p. 9). Recommendation: implement ethics training because not feeling qualified to respond to an ethical conflict may makes persons susceptible to moral distress. Limitation: self-reports versus actual behavior were surveyed, which limited the ability to infer findings beyond self-reported perceptions.

Verhaeghe, Vlerick, DeBacker, VanMaele, and Gemmel (2008) completed a cross-sectional, questionnaire survey of 1,094 RNs in 10 general hospitals in Belgium (416 = ICU, 678 = non-ICU/surgery-medical wards); the study was part of a larger cross-sectional survey of 7,863 employees, belonging to 10 general hospitals in Belgium. The purpose of the study was to examine the interaction between job demands/threats (i.e., changing colleagues, supervisors,

workplaces, working hours and tasks) and job resources (i.e., timing control, method control, and supervisory support) and its relation to distress among RNs. Timing control reflected the extent of RN control over the timing of work operations and method control reflected the extent to which RNs have discretion over how they carry out their tasks. Supervisor support was measured via adaptation of the Survey Perceived Organizational Support (SPOS) questionnaire. Findings: ICU RNs considered supervisory support a significant moderator in the positive relationship between threat and distress ( $p = 0.023$ ). Recommendation: in order to reduce or prevent RN distress nursing administrators should promote efforts to implement supervisory support. Limitation: the limited operationalization of job resources, along with the adaptation of the SPOS questionnaire, lent credibility to the notion that further research with other operationalization of these variables was necessary to validate findings.

Berggren and Severinsson (2000) completed 15 RN interviews in two medical wards (pulmonary and hematology/renal) in a district in southwest Sweden to investigate the influence of a group clinical supervision programme (five RNs per group, 1.5 hours once per week, 75 hours total) on nurses' moral decision making. Data analysis: hermeneutic transformative process. Findings: group clinical supervision led to increased: (1) self-assurance, (2) ability to support the patient, (3) ability to be in relationship with the patient, and (4) ability to take responsibility. Conclusion: clinical supervision promoted RN reflection (e.g., encouraged RNs to analyze their feelings); the analysis of feelings developed moral responsibility and motivated RNs to be more ethically "conscious in [the] decision-making process" (Berggren & Severinsson, 2000, p. 131). Limitation: qualitative design limited generalization of findings.

Raines (2000) completed a descriptive, correlational design, survey technique to describe the relation among moral reasoning, coping style, and the amount of stress experienced in RN

ethical decision-making. Participants included a nationwide sample of 229 oncology RNs. Data collection instruments: (1) Moral Reasoning Questionnaire, (2) Ways of Coping Inventory, and (3) Ethics Stress Scale. Findings: (1) per rank ordering of the 42 types of dilemmas on the Ethics Stress Scale, pain management ranked first and (2) RNs who were satisfied with support services (e.g., other staff, education programs, staff meetings, etc.) demonstrated more adaptive coping strategies ( $r = .266, p < .0001$ ); social support was one of the most often used coping strategies (i.e., ask a respected friend for advice, talk to someone to find out more about the situation, and talk to someone about feelings). Conclusion: RNs who experienced ethical issues received the most benefit when allowed time to talk with other staff, “particularly clinical nurse specialists” (Raines, 2000, p. 39). A recommendation was that RN to RN and RN to other practitioner discussions were to be promoted.

#### Literature Synthesis

A literature synthesis captures and summarizes the main themes identified in a research literature review (Creswell, 2003, p. 46). The following paragraphs synthesize the scientific findings presented above.

The emerging work engagement research highlights the value of resources in the work environment. For example, performance feedback on tasks, support from colleagues, supervisory coaching, sharing of feelings and personal autonomy can motivate staff to stay within a position (Demerouti, Nachreiner, Bakker & Schaufeli, 2001; Schaufeli & Bakker, 2004). As such, especially during this time of nursing shortages, it seems relevant to examine nursing factors related to work engagement (i.e., educational level, moral distress and critical reflective practice). For such findings, currently not in existence, may do well in identifying means to increase nursing work engagement.

It was postulated that increased educational level would relate positively to work engagement. Currently, no published research directly examines how RNs' educational preparation relates to work engagement. However, a Belgian, all-sector, workforce work engagement study identified that a more highly educated workforce (e.g., workers prepared at the university level), with adequate staffing and autonomy, were likely to stay in a position (De Lange, et al., 2008).

According to current scientific literature, the relationship between increased educational preparation and moral distress is inconclusive (Corley et al., 2001; Metzler & Huckabay, 2004; Nathaniel, 2006). Corley et al. (2001) concluded level of education did not predict level of moral distress. However, Nathaniel (2006) completed a qualitative study with RNs who had experienced moral distress and 76% (16/21) of these RNs were educationally prepared at the Master's level. Thus, more research is needed, such as this study, in which educational level and moral distress, together, are examined for their relationship to work engagement.

Moral distress is a significant, psychologically painful issue for RNs practicing within current work environments. Primary factors which contribute to this moral distress include: decreased collaboration and support in regards to health care decision-making, personal delivery of futile care measures, and an apparent discrepancy in how registered nurses and medical doctors conceptualize care (Crongqvist, et al., 2004). For example, physicians are perceived to: (a) view death "as an enemy to be fought" (Liaschenko, 1995, p. 188), (b) desire "the ongoing transmission of medical knowledge amongst physicians" (Liaschenko, 1995, p. 188), (c) value "scientific totalitarianism" (Liaschenko, 1995, p. 186), (d) respect the presumed superiority of "objective...medical knowledge" (Liaschenko, 1995, p. 189), and (e) demonstrate a relentless drive to try more interventions and technology when treating patients.

Nurses, in their moral distress, report patients are often used “for the teaching of medical students despite the knowledge that the treatment administered would not be effective” (Holly, 1993, p. 112). In the exemplary words of one nurse: “The month of July is the worst, I try to take as much vacation then as possible. I just can’t stand by and watch while new interns practice on dead and dying bodies” (Holly, 1993, p. 112). These findings support the postulated negative relationship between moral distress and work engagement in this study, although there is a need for further study.

Although little research has been done on reflective practice and work engagement, variables related to reflective practice have been found to be associated with positive work-related outcomes, (i.e., acceptance of professional responsibility, empowerment, increased social and political emancipation, and improvement in practice by promoting greater self-awareness), (Ruth-Sahd, 2003). However, the research to date has not explored reflective practice as conceptualized in this study, as critical reflective practice.

Finally, the literature review supports the proposed negative relationship between critical reflective practice and moral distress. Qualitative research, primarily completed with nursing students, has identified that both internal and external resources, resources representative of critical reflective practice (Gustafsson, et al., 2007; Ruth-Sahd, 2003), can be implemented within learning and work environments to reduce moral distress, which may also enhance work engagement.

For example: storytelling (Nathaniel, 2006), RNs gathering together to share and talk about ethical clinical care happenings (Storch, Rodney, Pauly, Brown & Starzomski, 2002), one-and-a-half hours of clinical supervision per week (Berggreen & Severinsson (2000), availability of support services so that RNS can talk about feelings (i.e. educational programs, staff meetings,

availability of other staff) (Åström, Jansson, Norberg, & Hallberg, 1993; Raines, 2000; Verhaeghe, Vlerick, De Backer, Van Maele, & Gemmel, 2008), and continuing, in-house ethics education (Grady, Danis, Soeken, O'Donnell, Taylor, Farrar, & Ulrich, 2008) may contribute to RN coping in ethical situations (Raines, 2000), motivate RNs (Murphy, 2004), and develop RN moral responsibility within the work environment (Berggren & Severinsson, 2000). Although these findings are promising, there currently is no research which directly examines critical reflective practice in relation to moral distress, and work engagement.

The results of the literature review, along with the ambiguous conceptualization of 'reflective practice', suggests a need for additional research which focuses upon critical reflective practice in relation to moral distress and work engagement, amongst the other study variables is relevant. It is to this end that the current research was designed.

### CHAPTER III – METHODOLOGY

This chapter describes the proposed research design, sample and setting, data instruments, data collection and analysis procedures used to address the research questions as outlined below. The purpose of this study was to examine how nurses' educational level, moral distress, and critical reflective practice relate to their work engagement. The following research questions were proposed in this study:

1. What are the levels of each variable (work engagement, moral distress, education, reflection and critical reflective practice) among RN's working in a southwest magnet-designated hospital?
2. What are the bivariate correlations among all of the variables?
  - a) What are the relationships among moral distress, educational level, reflection, critical reflective practice, and work engagement?
  - b) How does RN educational level relate to moral distress, reflection, critical reflective practice and work engagement?
  - c) How does moral distress relate to reflection, critical reflective practice and work engagement?
3. What variables taken together (educational level, moral distress, reflection and critical reflective practice) best explain the variance in work engagement?
4. What role does critical reflective practice or reflection play in the relationship between moral distress and work engagement?
  - a) Does critical reflective practice or reflection moderate the relationship between moral distress and work engagement?

- b) Does critical reflective practice or reflection have a direct relationship to moral distress?
  - c) Does critical reflective practice or reflection have a direct relationship to work engagement?
5. Do RNs identify themes in their work-related experiences: educational learning experiences, moral issue experiences, and reflective practice experiences?

### Research Design

A research design, the glue that clasps a research project together, shows how the major parts of a research project work together to address the central questions of a study (Trochim, 2006). According to Creswell and Plano-Clark (2007), a “research *design* refers to the plan of action that links the (study’s) philosophical assumptions to specific methods” (p. 4). In this study, a non-experimental, descriptive, correlational design was used.

The proposed study was: (a) *non-experimental*, an intervention was not deliberately being introduced to observe its effects (Shadish, Cook, & Campbell, 2002), (b) *descriptive*, the research data described characteristics about the population being studied, yet did not describe a *causal relationship* between the variables within the study and (c) *correlational*, it “simply [observed] the size and direction of a relationship among variables” (Shadish, et al., 2002, p. 12). The use of questionnaires was proposed to elicit participants’ perspectives, with open-ended questions provided at the end of each instrument to allow the “language and words of participants” (Creswell, 2003, p. 186) to be included in the findings.

### Sample and Setting

A purposive sample of 198 registered nurses (46 = medical intensive care unit [MICU], 62 = pediatric ICU [PICU], and 90 = neonatal ICU [NICU]) from a 355-bed, southwest magnet-

designated hospital was identified for recruitment for study participation. The inclusion criteria for study participation were: (1) registered nurse (RN) status, (2) greater than or equal to 50% of on-duty work time spent in the provision of direct nursing care to patients in an ICU setting, (3) greater than or equal to 20 hours work time per week, and (4) computer literacy.

In regards to an appropriate sample size for this study, Knapp and Brown (1995) recommend at least ten participants per variable in a research design, or that the number of participants “should exceed the number of variables by at least 50” (p. 466). This study included four variables: educational level, moral distress, critical reflective practice, and work engagement. Therefore, an appropriate sample size for this proposed study was 40 to 54 participants, (i.e., ten participants x four variables = 40 participants, or four variables + at least 50 participants = 54 participants). To help plan for this study, however, and “maximize the potential for significant results by having a sufficiently large sample size” (Polit, 1996, p. 230), a power analysis was performed. The power analysis revealed an appropriate sample size for this study would be 33 participants to attain a large effect size of .80, with an alpha level of .05 and a beta of .20.

Alpha and beta significance levels are often set at .05 and .20, respectively (Polit, 1996, p. 108). The alpha level corresponds to the probability of committing a Type I error, which is to reject a null hypothesis when it is true. The beta level corresponds to the probability of committing a Type II error, which is the acceptance of a null hypothesis when it is in fact false (Munro, 2005, p. 88). An effect size measures the strength of a relationship between two variables in a population, it is “the magnitude of the effect of an independent variable on the dependent variable” (Munro, 2005, p. 100). A .80 effect size is considered large (Polit, 1996, p. 141).

An online survey format, (e.g., Survey Monkey), was used to collect the data. According to Online Surveys by Zoomerang, for online surveys, in which there is no prior relationship with recipients, a response rate of 30% can occur (Online Surveys by Zoomerang, retrieved February 15, 2009). Therefore, within this study it was reasonable to anticipate that at least 59 participants would participate (198 recruited RNs x 30% response rate = 59 participants) and this number of 59 participants exceeded the upper recommended requirements for data analysis as outlined by the power analysis results stated above.

Several strategies were used to encourage study participation as recommended by Shadish, Cook, and Campbell (2002). These included the following: (1) nurse managers, who were familiar to the respondents, sent the recruitment messages; (2) participants were invited to enter a raffle for a random drawing for three \$50.00 gift certificates to a Target store; and (3) a two week e-mail reminder, post study initiation, was forwarded to prospective participants by the respective nurse managers.

### Data Instruments

Five data collection instruments were used in this study: (1) Demographic Data Collection Tool, (2) Utrecht Work Engagement Scale (UWES), (3) Moral Distress Scale (MDS), in part, (4) Critical Reflective Practice Questionnaire (CRPQ), and (5) Reflection-Rumination Questionnaire (RRQ), in part. Additionally, in order to capture qualitative data, one open-ended question was included at the end of each of the five data collection instruments. The following paragraphs describe each data collection instrument.

#### *Demographic Data Collection Tool*

A Demographic Data Collection Tool was constructed by the investigator of this study (see Appendix A). Investigators often choose to collect demographic data so as to follow-up this

data in relation to other study variables (Creswell & Plano-Clark, 2007, p. 146). In this study, because nurses' educational level in relation to other study variables was of primary interest (i.e., relation to moral distress, critical reflective practice, and work engagement), the Demographic Data Collection Tool included, amongst other information, educational-level type questions.

#### *Utrecht Work Engagement Scale (UWES)*

Developed in 1999, the Utrecht Work Engagement Scale (UWES) consists of 17 items in a 7-point Likert format (see Appendix B). The UWES consists of three factors: *vigor* (6 items), *dedication* (5 items), and *absorption* (6 items). For all factors the Cronbach's  $\alpha$  was equal to or greater than ".70" (Schaufeli & Baker, 2003, p. 7). Higher scores reflect higher levels of work engagement (0 to 6 Likert). No study solely examined U.S. RN work engagement scores. For all-sector Finnish healthcare providers, however, which included RNs, work engagement scores ranged from 4.20 to 4.36 (Mauno, et al., 2007, p. 157).

*Vigor* refers to "high levels of energy and resilience, the willingness to invest effort, not being easily fatigued, and persistence in the face of difficulties" (Schaufeli & Bakker, 2003, pp. 5-6). A mean *vigor* score for Finnish nurses is 4.54,  $n = 261$  (Mauno, et al., 2007, p. 161).

*Dedication* refers to "deriving a sense of significance from one's work, feeling enthusiastic and proud about one's job, and feeling inspired and challenged by it" (Schaufeli & Bakker, 2003, pp. 5-6). A mean *dedication* score for Finnish nurses is 4.97,  $n = 261$  (Mauno, et al., 2007, p. 161).

*Absorption* refers to "being totally and happily immersed in one's work and having difficulties detaching oneself from it so that time passes quickly and one forgets everything else that is around" (Schaufeli & Bakker, 2003, pp. 5-6). A mean *absorption* score for Finnish nurses is 3.85,  $n = 261$  (Mauno, et al., 2007, p. 161).

According to Schaufeli and Bakker (2004), work engagement is distinct from workaholism and is negatively associated with burnout. Job resources act as motivators to cause work engagement (0.51) and engaged employees exhibit positive job attitudes and appear to perform better than those who were less engaged (Schaufeli & Bakker, 2004, p. 307).

“Engagement is not restricted to the individual; it may crossover to others, thus leading to what has been labeled collective engagement” (Schaufeli & Baker, 2003, p. 11).

#### *Moral Distress Scale (MDS)*

Developed in 2001, the MDS consists of 38 items in a 7-point Likert format (0 to 6), with higher scores reflecting higher levels of moral distress (Corley, 2002; Corley, 2005; Corley, Elswick, Gorman, & Clor, 2001). The MDS tool demonstrates good reliability, Cronbach’s  $\alpha = 0.98$  (Corley, 2005, p. 385), and consists of both intensity and frequency Likert scores for four factors: *individual responsibility* (20 items), *not in the patient’s best interest* (7 items), *deception* (3 items), and *ethical concerns* (8 items).

For purposes of this study and to reduce the overall volume of study questions, only one subscale, the ‘*not in the patient’s best interest*’ factor (7 items), was used. If data collection tools consist of too many items there is the risk that participants will experience a “fatigue effect” (Huck, 2004, p. 365), they will become bored with the questions and perform less well in responding. In recognition of the fact that five separate tools will be utilized in this study, in an effort to reduce a potential fatigue effect, and due to the fact that the largest volume of previous research in regards to this study’s variables has been completed on moral distress, it was deemed appropriate that only the frequency score for the ‘*not in the patient’s best interest*’ factor (7 items, Cronbach’s  $\alpha = 0.82$ ) (Corley, 2005, p. 385) be included in the study (see Appendix

C). The items on this particular subscale also were most relevant to an important ethical value within the nursing profession, truth-telling.

The seven items comprising the '*not in the patient's best interest*' factor "involve acting in ways that the nurses believe do not benefit the patient" (Corley, et al., 2001, pp. 254-255). Stated otherwise, this factor's items represent the nurses' inability to act on their own values of truth telling. As well, this dimension of moral distress scale has been found to be one of the most significant dimensions in nurses' work experiences (Georges & Grypdonck, 2002). The U.S. nurses' mean moral distress frequency scores for this subscale range from 0.08 to 3.05, with a mean score of 1.45 (Corley, et al., 2005, p. 386).

#### *Critical Reflective Practice Questionnaire (CRPQ)*

The Critical Reflective Practice Questionnaire (CRPQ) was constructed by the investigator of this study, in collaboration with a Faculty Advisor (see Appendix D). The CRPQ is being pilot tested in this research project. Reflective practice literature, including *critical* reflective practice literature, was reviewed and synthesized, a pool of instrument items were generated, and this pool was reviewed and refined in collaboration with an expert nursing faculty professor. The CRPQ consists of 22 items in a 7-point Likert format (1 to 7), with higher scores reflecting higher levels of critical reflective practice.

It is noted that the best data collection tools are rigorously developed by using good procedures of scale development: (a) ground in theory, (b) develop an item pool, (c) expertly review the item pool, (d) consider inclusion of validated items from other scales or instruments, (e) administer the instrument to a sample for validation, (f) evaluate the items (i.e. item-scale correlations, reliability, item variance), and (g) optimize the length of the scale based upon the item performance and reliability checks (Creswell & Plano-Clark, 2007, p. 124). Procedures (a)

thru (d) were completed. A limitation of this study is that aspects (e) thru (g) have not been completed, although length of the instrument (item g) was taken into consideration in designing the instrument's items. To address these limitations in part, a standardized *reflection* measurement tool, (e.g., the *reflection* subscale of the reflection-rumination questionnaire [RRQ]) (see Appendix E), was included in the study. For further information on the RRQ, refer to the following section titled '*Rumination-Reflection Questionnaire (RRQ)*'. It was thought that if the CRPQ was found to be inadequate, the study questions could be addressed using the RRQ. In addition, inclusion of the RRQ *reflection* subscale may allow for analysis of construct validity by examining correlations between the RRQ and CRPQ.

Additional means for testing construct validity is to examine the correlation between the CRPQ and other study variables to determine if the resulting correlations are as theorized. Construct validity "involves evidence that an instrument is really measuring the underlying construct of interest" (Polit, 1996, p. 250), in this case, reflection. One approach to establishing construct validity is to "rely on the calculations of correlations coefficients" (Polit, 1996, p. 250). Significant correlations between the two reflection instruments, and between the CRPQ and other variables, as theorized, are two approaches that were used to estimate construct validity of the CRPQ.

#### *Rumination-Reflection Questionnaire (RRQ)*

The *reflection* subscale from the Rumination-Reflection Questionnaire (RRQ) (Trapnell & Campbell, 1999), which measures reflection as a personal characteristic (Cronbach's  $\alpha = .91$ ), will also be distributed to study participants (see Appendix E). Utilization of this subscale will address the identified study limitation, which is that the CRPQ is being pilot tested in this research study. The RRQ *reflection* subscale consists of 12-items in a 5-point Likert format (1 to

5), with higher scores reflecting higher levels of reflective disposition (Rumination-Reflection Questionnaire, 1999). No identified study solely examines U.S. RN's RRQ, *reflection* subscale scores. British Columbia university undergraduates, in an introductory psychology class, however, demonstrate a mean reflection score of 3.14 (Trapnell & Campbell, 1999, p. 294).

#### Data Collection Procedures

Institutional Review Board (IRB) permissions are required for all research data collection projects (Creswell & Plano-Clark, 2007, p. 117). An IRB committee exists to protect participants against human rights violations and assesses the research plan for potential risk (i.e., “physical, psychological, social, economic or legal harm to the participants in a study”) (Creswell, 2003, p. 64). Prior to implementation of this study's research, IRB permission was obtained from the University of Arizona Social Science Human Subjects Committee (see Appendix F). No inherent participant risks were identified in this research plan. Additionally, after IRB approval was obtained and prior to data collection, site approval from the magnet designated hospital from where data was collected was obtained (see Appendix G).

A waiver of documentation of informed consent was obtained from the IRB Committee. A signed informed consent document was deemed inappropriate for this project because the data collection questionnaire existed in an on-line format, the research presented no more than minimal risk of harm to subjects, and the research involved no procedures for which written consent is normally required (i.e., live interviewing, audio taping, etc.). To obtain participant's informed consent an electronic disclosure form/recruitment script (see Appendix H) was utilized (this was the second page of the online questionnaire). The use of the electronic disclosure form acknowledged participant's rights, (i.e., before the participant's engaged in the research they were informed data would be maintained in a confidential manner, there were no inherent risks

associated with study participation, they could choose not to participate and/or withdraw study participation at any time without recourse to their employment status, etc.) (Creswell, 2003, p. 64).

According to Pedroni and Pimple (2001), the “voluntary consent of the human subject is absolutely essential” (Pedroni & Pimple, 2001, p. 2) in research projects. Voluntary consent recognizes the fact that each person has an inherent capacity for self-determination. Ethically, in this research study, no undue coercion or manipulation occurred; each participant’s autonomy in decision-making was respected.

After IRB authorization and hospital site approval were obtained the researcher contacted the three, respective ICU Nurse Managers to request their assistance in recruiting potential ICU-RN participants. The respective Nurse Managers implemented the following recruitment protocol: (a) sent two group, e-mail, recruitment script messages (see Appendix I) to potential participants, one e-mail at initiation of the study and the second e-mail two week’s post initiation of the study and (b) placed, for a time period of three weeks, a copy of the recruitment script (see Appendix I) in a strategic location within the respective ICU, (e.g., in the staff lounge). Incidentally, the recruitment script (see Appendix I) was also the first page of the electronic SurveyMonkey questionnaire.

All data were collected via an electronic, password protected questionnaire format (e.g., SurveyMonkey format) (*SurveyMonkey.com*, retrieved February 19, 2009).

SurveyMonkey allows researchers to creatively design their own professional surveys (i.e., multiple choice questions, rating scales, drop down menus, etc.).

The appendices A-E, along with the recruitment script (see Appendix I) and

disclosure form explanation (see Appendix H), were placed creatively into the SurveyMonkey format.

Data security was maintained. SurveyMonkey employs multiple layers of protection to ensure that accounts and data remain private (i.e., a third-party firm conducts daily audits of security and the data resides behind the latest in firewall and intrusion prevention technology). All data was de-identified by SurveyMonkey before being sent to the researcher. Additionally, the researcher maintained all de-identified data in a locked, secured cabinet.

The only link to personal data occurred in those cases where an ICU-RN participant voluntarily chose to electronically enter his or her name and e-mail address into the random \$50.00 gift certificate raffle drawing. In these cases, when the de-identified data was received from SurveyMonkey, there was no way for the researcher to associate the voluntarily provided names and e-mail addresses to the survey question answers, for the answers, including names and emails, were provided to the researcher in an aggregated format. The researcher maintained aggregated personal name and e-mail data in a separate locked cabinet, and shredded and discarded this personal identification information in a confidential waste bin immediately after the raffle drawing. Neither the hospital leadership nor nurse managers had access to the personal identification of participants and participant names did not appear on any reports which resulted from this study. These measures were undertaken to ensure participant confidentiality.

## Data Analysis

### *Quantitative and Qualitative Analysis*

The five research questions are presented below. After each question the proposed data analysis method is presented.

1. What are the levels of each variable (work engagement, moral distress, education, reflection and critical reflective practice) among RN's working in a southwest magnet-designated hospital? Data analysis: Descriptive analysis (i.e., frequency counts, means, ranges and standard deviations).
2. What are the bivariate correlations among all of the variables?
  - a) What are the relationships among moral distress, educational level, reflection, critical reflective practice, and work engagement?
  - b) How does RN educational level relate to moral distress, reflection, critical reflective practice and work engagement?
  - c) How does moral distress relate to critical reflective practice, reflection, and work engagement?

Data analysis: correlational coefficient (e.g., Pearson product-moment correlation).

“Correlation simply expresses the strength and direction of the relationship between two variables” (Glaser, 2005, p. 49).

3. What variables taken together (educational level, moral distress, reflection and critical reflective practice) best explain the variance in work engagement? Data analysis: Multiple regression analysis, Stepwise regression. In multiple regression analysis “more than one variable is used to predict the expected value of Y” (Glaser, 2005, p. 82).
4. What role does critical reflective practice or reflection play in the relationship between moral distress and work engagement?
  - a) Does critical reflective practice or reflection moderate the relationship between moral distress and work engagement?

- b) Does critical reflective practice or reflection have a direct relationship to moral distress?
- c) Does critical reflective practice or reflection have a direct relationship to work engagement?

Data analysis: Hierarchical multiple regression. For item (a), to identify a moderator relationship, first “the independent variables (including the moderator) are entered...as predictors of the outcome variable. The independent variables do not have to be significant predictors of the outcome variable in order to test for an interaction...In a separate test an interaction term (the product of two independent variables, which represents the moderator effect) is entered. If the interaction term explains a statistically significant amount of variance in the dependent variable a moderator effect is present” (Bennett, 2000, p. 417). For item (b) and (c), multiple regression will allow analysis of direct relationships between CRP and moral distress, as well as the direct relationship between CRP and work engagement.

5. Do RNs identify themes in their work-related experiences: educational learning experiences, moral issue experiences, and critical reflective practice experiences? Data analysis: Content analysis. “Content analysis is a research tool used to determine the presence of certain words or concepts within texts or sets of texts. Researchers quantify and analyze the presence of meanings and relationships of such words and concepts, then make inferences about the messages within the texts” (An Introduction to Content Analysis, retrieved February 19, 2009 from <http://writing.colostate.edu/guides/research/content/pop21.cfm>). The responses to the open-ended survey questions will be analyzed, i.e. counting of themes and their meanings will be presented at the end of this study (Creswell & Plano-Clark, 2007, p. 12).

## CHAPTER IV – RESULTS

This chapter presents the results of the study in reference to the five research questions. The sample characteristics are presented using descriptive statistics. An assessment of the psychometric properties of the Critical Reflective Practice Questionnaire (CRPQ) is presented in addition to an estimate of the reliability of all other study instruments. Finally, to answer the research questions, study variables and their proposed relationships are analyzed using various and appropriate statistical procedures (i.e., correlations, multiple regression, and content analysis). The following abbreviations for the variables are used throughout the chapter:

### Characteristics of the Sample

The sample for this study, intensive care unit registered nurses (ICU-RNs), were recruited from three separate ICUs in one 355-bed, southwest magnet designated hospital. A total of 198 RNs from three separate ICUs (46 = medical intensive care unit [MICU], 90 = neonatal intensive care unit [NICU], and 62 = pediatric intensive care unit [PICU]) were recruited. Thirty-two RN-participants initially responded to the on-line study questionnaire, with 28 meeting criteria (N = 28) for data analysis. Four participants (13%, 4/32) were excluded from the data analysis for two reasons: (1) two participants did not meet inclusion criteria, (e.g., spent < 50% of their work time in direct patient care), and (2) two participants did not complete two entire data collection instruments, (i.e., one participant did not complete the CRPQ and the reflection subscale of the Rumination-Reflection Questionnaire (RRQ), the second participant did not complete the ‘not in the patient’s best interest’ subscale of the Moral Distress Scale (MDS) and RRQ). The overall study response rate was 14% (28/198). Respective ICU response rates were MICU 22% (10/46), PICU 11% (10/90), and NICU 9% (8/90).

Participants, in addition to being asked to respond to 15 demographic questions, of which a descriptive analysis will be presented in the following paragraphs, were asked to respond to four separate Likert-item study instruments: (1) Critical Reflective Practice Questionnaire (CRPQ, 22 items), (2) Utrecht Work Engagement Scale (UWES, 17 items), (3) reflection subscale of the Rumination-Reflection Questionnaire (RRQ, 12 items), and (4) 'Not in the patient's best interest' subscale of the Moral Distress Scale (MDS, 7 items). Simultaneously, at the end of each of the four study instruments and demographic questionnaire, one open-ended question was included for participants' response. In sum, each participant was asked to answer 15 demographic, five open-ended, and 58 Likert-item study questions.

In exclusion of the demographic and open-ended questions, five of the eligible 28 participants (18 %) demonstrated missing data in their question responses, (i.e., five participants did not answer one or two questions from the four Likert-item study instruments). There was no consistent pattern in the missing data. Respectively, a summary of the missing data follows: (1) one answer on the CRPQ missing (*Question 16*), (2) one answer on the CRPQ missing (*Question 19*), (3) one answer on the UWES missing (*Question 3*), (4) one answer on the UWES missing (*Question 15*), and (5) two answers on the CRPQ missing (*Question 14* and *Question 15*), two answers on the UWES missing (*Question 14* and *Question 15*), one answer on the MDS missing (*Question 5*), and one answer on the RRQ missing (*Question 3*).

As this summary demonstrates, in each of the five missing data cases the extent of the problem was not large, (e.g., in four of the five cases only one answer out of 58 total was missing), and the missing values appeared reasonably random, (e.g., four CRPQ questions were randomly unanswered, *Questions 14, 15, 16, and 19*). Polit (1996) indicates "when a researcher encounters missing data in a data set, a decision must be made regarding how to handle this

problem. One approach is to drop the case and another is to drop the variable. These are extreme solutions that researchers usually prefer to avoid. When missing values are reasonably random and when the extent of the problem is not large, researchers [may] perform a *mean* substitution. That is, they calculate a mean based on the cases that are not missing, and then replace the missing values with the value of the mean” (Polit, 1996, pp. 61-62).

Consistent with Polit (1996), to address the missing data in this research study a participant-mean substitution occurred. For each unanswered question a respective participant mean substitution was calculated and the missing data was replaced with the value of the overall participant’s mean for that respective scale. This process, in addition to being an appropriate strategy, allowed the sample size to remain as large as feasible. “The larger the sample, the more powerful the statistical tests will be” (Polit, 1996, p. 108).

The participants, all of whom either worked full-time (86%, 24/28) or > 20 hours per week (14%, 4/28) within a 355-bed southwest magnet-designated hospital, consisted of 26 females (92%, 26/28), one male (4%, 1/28), and one participant gender unreported (4%, 1/28). Their mean reported age was 39.3 years (range 22 to 62,  $SD = 12.4$ ), three participants (11%, 3/28) did not specify an age. The primary work role identified by participants was staff nurse (89%, 25/28). Seventeen participants (61%, 17/28) had previously taken a leave from their work, (e.g., an extended period of time away from the work environment).

The participants worked a mean number of 8.6 years in an ICU setting (range 1 to 29,  $SD = 7.8$ ) and their mean number of years since first becoming a RN was 11.4 (range 1 to 42,  $SD = 11.4$ ). Primary race/ethnicity of participants included Caucasian/White, 82% (23/28), Hispanic/Latino 7% (2/28), Native American Indian 0% (0/28), African American 0% (0/28), Asian/Pacific Islander 4% (1/28), Other 4% (1/28), and Not Specified 4% (1/28).

The highest educational degrees earned by participants included diploma 7% (2/28), associate 36% (10/28), bachelor's 57% (16/28), master's 0% (0/28), and post-master's 0% (0/28). A total of six participants (21%, 6/28) were currently working towards a higher educational degree in nursing, with the following degrees being pursued: bachelor's of science in nursing (BSN) (50%, 3/6) and Master's degree (50%, 3/6).

The majority of participants were Caucasian/White (85%, 23/27), females (96%, 26/27), who worked full-time (86%, 24/28) and were educated at the baccalaureate level (57%, 16/28). The MICU demonstrated a higher proportion of baccalaureate prepared RNs (80%, 8/10), compared to PICU (55%, 6/11) and NICU (29%, 2/7), and a lesser proportion of ICU work years (5, SD 3.8), compared to NICU (12.2, SD 12.4) and PICU (9.7, SD 6.6). The NICU RNs demonstrated a higher mean age (52, SD 14.9), compared to MICU (36.4 mean age, SD 10.2) and PICU (37.1, SD 11.6), and a higher mean number of years since first becoming a RN (17.6, SD 16.3), compared to MICU (6.6, SD 8) and PICU (12.1, SD 10). The largest proportion of extended work leave was demonstrated by PICU (45%, 5/11) and NICU (43%, 3/7), compared to MICU (1%, 1/10).

Table 1 presents a summary of reported demographic characteristics (e.g., work status, gender, race/ethnicity, extended work leave, age and RN years), by intensive care unit. Table 2 presents a summary of reported demographic characteristics (e.g., highest degree earned and seeking a higher degree), by intensive care unit.

TABLE 1. *Reported Demographic Characteristics (Work Status, Gender, Race/Ethnicity, Extended Work Leave, Age, and RN Years), by Intensive Care Unit (MICU = 10; NICU = 7; PICU = 11; Total N = 28)*

	MICU			NICU			PICU		
	Range	Mean (SD)	n (%)	Range	Mean (SD)	n (%)	Range	Mean (SD)	n (%)
Work Status									
Full-time			10 (100)			5 (71)			9 (82)
> 20 Hours per week			0 (0)			2 (29)			2 (18)
Gender									
Female			9 (90)			7 (100)			10 (91)
Male			0 (0)			0 (0)			1 (9)
Race/Ethnicity									
Caucasian/White			7 (70)			7 (100)			9 (82)
Hispanic/Latino			0 (0)			0 (0)			2 (18)
Asian/Pacific Islander			1 (10)			0 (0)			0 (0)
Other			1 (10)			0 (0)			0 (0)
Extended Work Leave			1 (10)			3 (43)			5 (45)
Age (in years)	22-53	36.4 (10.2)	8 (80)	25-62	52 (14.9)	7 (100)	23-60	37.1 (11.6)	10 (91)
RN Years									
Worked in ICU	1-13	5 (3.8)	9 (90)	2.5-29	12.2 (12.4)	6 (86)	1-20	9.7 (6.6)	11 (100)
Since First Became RN	1-27	6.6 (8.0)	9 (90)	2.8-42	17.6 (16.3)	6 (86)	1-35	12.1 (10)	11 (100)

TABLE 2. *Reported Educational Demographic Characteristics (Highest Degree Earned and Seeking Higher Degree), by Intensive Care Unit (MICU = 10; NICU = 7; PICU = 11; Total N = 28)*

	MICU			NICU			PICU		
	Range	Mean (SD)	<i>n</i> (%)	Range	Mean (SD)	<i>n</i> (%)	Range	Mean (SD)	<i>n</i> (%)
<b>Highest Degree Earned</b>									
Diploma			1 (10)			1 (14)			0 (0)
Associate			1 (10)			4 (57)			5 (45)
Bachelor's			8 (80)			2 (29)			6 (55)
<b>Seeking Higher Degree</b>									
Bachelor's of Science			0 (0)			1 (14)			2 (18)
Master's of Science			2 (20)			0 (0)			1 (9)

### Assessment of the Reliability of the Study Instruments

The Cronbach's coefficient alpha was used to measure the reliability of the four Likert-item study instruments. Cronbach's alpha is an estimate of internal consistency, or "how much the items on a scale are measuring the same underlying dimension" (Polit, 1996, p. 447). The term reliability means *consistency* (Shadish, et al., 2002, p. 511), or "the degree of dependability...with which [the] instrument measures the attribute it is designed to measure" (Polit, 1996, p. 249). This index summarizes the correlations between all items in a scale and the scale total, "considered simultaneously" (Polit, 1996, p. 249).

An acceptable coefficient for an established instrument is .80, and for a new instrument, .70. Table 3 presents the Cronbach's alpha for each of the four Likert-item study instruments. All study instruments, including the newly developed CRPQ, demonstrated adequate reliability with the Cronbach's alpha 0.83 and greater.

The construct validity of the CRPQ was examined in reference to its correlation with the RRQ reflection subscale ( $r = .16, p = \text{NS}, N = 28$ ) along with its performance in reference to theorized relationships. The CRPQ correlated with the RRQ at a non-significant coefficient of .16. However, the RRQ may not be as congruent with the CRPQ, as anticipated. According to Brown and Ryan (2003), the RRQ reflection subscale measures a cognitive aspect, the "cognitive operations on aspects of the self through self-examination" (Brown & Ryan, 2003, p. 823). In contrast, there was a strong correlation of the CRPQ with work engagement ( $r = .56, p = .01, N = 28$ ), lending some support to its validity. Also, all correlations between the CRP and other variables were in the expected direction, though the correlations did not attain significance. The small sample size limited power to attain significance. Overall, the very adequate reliability coefficient of .83, the strong relationship with work engagement, and the direction of the

correlations as theorized lent some support, overall, to the validity of the CRPQ. Further psychometric testing is needed.

TABLE 3. *Cronbach's alpha for Likert-item Study Instruments (N = 28)*

Study Instruments (Likert-item)	Cronbach's alpha	N of Items
CRPQ	.83	22
UWES	.92	17
RRQ ('Reflection' Factor)	.95	12
MDs ('Not in Patient's Best Interest' Factor)	.85	7

#### Characteristics of Study Variables

Prior to performing the statistical analysis necessary to answer quantitative research questions, (i.e., Pearson's  $r$  Correlation and Multiple Regression), characteristics of study variables were examined to determine that they met required statistical assumptions. This is an important step so as to avoid violating statistical assumptions, which can render results invalid or misleading (Polit, 1996, p. 36).

Pearson's  $r$  Correlation, consistent with simple linear regression, requires three statistical test assumptions (Polit, 1996, p. 227) (1) variables are to be measured on approximately interval or ratio levels, (2) variable scores are to be "normally distributed", and (3) variable scores are to be "homoscedastic – that is, for each value of X, the variability of the Y score must be about the same, and vice versa" (Polit, 1996, p. 227); stated otherwise, according to the homoscedasticity assumption requirement "the variability in scores for one variable is approximately the same at all values of another variable" (Polit, 1996, p. 282).

An examination of study variables confirmed most requirements for Pearson's  $r$  Correlation statistical assumptions were met. First, the measures of psychosocial attributes, (i.e., CRPQ, UWES, RRQ, and MDS), were treated as interval measures, there were equal distances between the values on the measurement scales, but the zero points were arbitrary (Norman & Streiner, 1994, p. 4). The 'highest degree earned' variable, however, was an ordinal measure; numbers were used to designate the ordering of this attribute. A determination was made to leave the highest degree earned variable within the study because "parametric tests (e.g., those which assume that variables are normally distributed in the population) are robust to the violations of the assumptions underlying them" (Polit, 1996, p. 115). Second, z-score values for  $S$  (skewness) and  $K$  (kurtosis) were all below 1.96, with the exception of skewness for 'highest degree earned' (2.06). In a normal distribution  $S$  and  $K$  values should be zero; values above 1.96 are generally considered to be problematic. When a study sample is small, however, as in this study,  $S$  and  $K$  criterion can and should be "increased to 2.5 (2.58 to be exact)" (Field, 2003, pp. 41-42). Finally, the Durbin-Watson value was 2.124. According to Field (2003), homoscedasticity is almost certainly met when the Durbin-Watson value is closer to 2, values less than 1 or greater than 3 "should definitely raise alarm bells" (Field, 2003, p. 146).

In regards to multiple regression, characteristics of the study variables were further examined to determine whether they met the additional, required statistical assumptions of: (1) collinearity, which assumes there "is a straight line relationship between all pairs of variables;" (2) multivariate normality, which assumes each variable and "all linear combinations of the variables" are normally distributed; and (3) absence of extreme multivariate outliers (Polit, 1996, p. 282). All three multiple regression assumptions were met in this study.

First, the variance inflation factor (VIF) was  $> 1.0$  for all variables, a VIF below 0.1 “indicates a serious problem” (Field, 2003, p. 153) (e.g., multi-collinearity). Second, the residual scatterplot demonstrated multivariate normality, a rectangular form with residuals trailing off on either side of a straight line in the center (Polit, 1996, p. 283). Finally, standard residual values ranged from -1.605 to 1.608, indicative of no extreme multivariate outliers. “Standardized residual values that are greater than 3 or less than -3” (Polit, 1996, p. 284) are indicative of multivariate outliers.

## Research Questions

### *Research Question One*

The research question, “What are the levels of each variable (i.e., work engagement, moral distress, education, reflection and critical reflective practice) among RN’s working in a southwest magnet-designated hospital?” was answered using descriptive statistics. Table 4 presents the levels of work engagement, moral distress, reflection and critical reflective practice. Table 2, cited earlier, presents education levels.

The MICU demonstrated a higher MDS mean score (4.5, SD 0.63), compared to NICU (2.3, SD 1.14) and PICU (2.5, SD 0.81). An analysis of variance (ANOVA) confirmed MICU’s MDS mean score was significantly higher than NICU and PICU ( $F = 19.29 [2, 25], p = .000$ ) Additional analysis was conducted to examine whether this significant between-group mean difference was due to MDS Question #6, which asked participants how frequently the following moral situation occurred in practice: “Prepare an elderly man for surgery to have a gastrostomy tube put in, who is severely demented and a ‘No Code’”. Because the MDS question #6 is relevant to an adult population, a population served by MICU, but not PICU or NICU, it was

possible that the inclusion of this particular question in the MDS instrument contributed to the significantly higher MDS MICU mean scores.

To examine this, the MDS Question #6 was removed and a repeat ANOVA was completed. This second ANOVA demonstrated consistent findings, whereby the MICU mean MDS score remained significantly higher (4.37, SD .71,  $F = 12.61 [2, 25], p = .000$ ), when compared to NICU (2.72, SD 1.34) and PICU (2.92, SD .90). The decision was made to keep and report data analysis findings with Question #6 in the equation. An ANOVA with all other variables revealed no statistically significant mean score differences.

TABLE 4. *Levels of Work Engagement, Moral Distress, Reflection, and Critical Reflective Practice for each Subgroup (MICU = 10; NICU = 7, PICU = 11; Total N = 28)*

	Possible Range	Actual Range	Mean (SD)
Work Engagement	0-6	2.1-5.7	4.0 (0.88)
<i>Vigor</i>	0-6	1.5-6.0	3.9 (0.98)
<i>Dedication</i>	0-6	2.6-6.0	4.4 (0.96)
<i>Absorption</i>	0-6	1.3-5.3	3.7 (0.94)
MICU	0-6	2.1-5.2	3.6 (1.01)
NICU	0-6	2.4-5.6	3.9 (1.06)
PICU	0-6	3.6-5.3	4.4 (0.44)
Moral Distress	0-6	0.57-5.7	3.2 (1.3)
MICU	0-6	3.7-5.7	4.5 (0.63)
NICU	0-6	0.57-4.2	2.3 (1.14)
PICU	0-6	1.4-3.4	2.5 (0.81)
Reflection	1-5	1.8-4.9	3.4 (1.31)
MICU	1-5	2.9-4.8	3.7 (0.63)
NICU	1-5	1.8-4.3	3.4 (1.14)
PICU	1-5	2.4-4.9	3.2 (0.81)
Critical Reflective Practice	1-7	3.6-6.1	4.5 (0.61)
MICU	1-7	3.7-6.1	4.6 (0.78)
NICU	1-7	3.6-5.2	4.4 (0.90)
PICU	1-7	4.0-5.5	4.5 (0.51)

*Note:* The MICU, NICU, and PICU Education levels are found in Table 2.

### *Research Question Two*

Research question two was answered using Pearson's  $r$  Correlation: What are the bivariate correlations among all of the variables?

- a) What are the relationships among moral distress, educational level, reflection, critical reflective practice, and work engagement?
- b) How does RN educational level relate to moral distress, reflection, critical reflective practice and work engagement?
- c) How does moral distress related to reflection, critical reflective practice and work engagement?

The Pearson's  $r$  Correlation, or Pearson product-moment correlation coefficient, is "a statistic that is appropriate when two variables are measured on an interval or ratio scale, or on a level that approximates interval characteristics" (Polit, 1996, p. 77). It indicates both the *magnitude* and *direction* of a linear relationship between two variables. Table 5 presents the intercorrelations between moral distress, educational level, reflection, critical reflective practice, and work engagement.

In this study, two significant correlations were demonstrated in the total sample: (1) critical reflective practice and work engagement were significantly and positively related ( $r = .56, p = .01, r^2 = .31$ ) and (2) moral distress and work engagement were significantly and negatively related ( $r = -.48, p = .05, r^2 = .23$ ). No other significant correlations were found.

TABLE 5. *Intercorrelations Between Moral Distress, Educational Level, Reflection, Critical Reflective Practice, and Work Engagement (N = 28)*

Subscale	1	2	3	4	5
1. Moral Distress	--	-.03	.21	-.16	-.48*
2. Educational Level		--	-.11	.13	-.03
3. Reflection			--	.16	-.10
4. Critical Reflective Practice				--	.56**
5. Work Engagement					--

\*\* .  $p = 0.01$ . \* .  $p = 0.05$ .

Table 6 presents unit-specific (i.e., MICU, NICU, and PICU), intercorrelations between moral distress, educational level, reflection, critical reflective practice, and work engagement. Consistent with the total-group analysis, critical reflective practice and work engagement were significantly and positively related on two ICU's: (1) MICU ( $r = .80, p = .01, r^2 = .64$ ) and (2) NICU ( $r = .78, p = .05, r^2 = .61$ ), but not on the PICU ( $r = -.11, NS$ ). Inconsistent with the total-group analysis, educational level and critical reflective practice were significantly and positively related ( $r = .78, p = .05$ ) on the NICU only. No other significant relationships were found on the individual units.

TABLE 6. *Unit-specific Intercorrelations Between Moral Distress, Educational Level, Reflection, Critical Reflective Practice, and Work Engagement (MICU = 10; NICU = 7; PICU = 11; Total N = 28)*

Subscale	1	2	3	4	5
MICU					
1. Moral Distress	--	-.02	.16	-.58	-.20
2. Educational Level		--	-.08	-.05	-.24
3. Reflection			--	-.17	-.34
4. Critical Reflective Practice				--	.80**
5. Work Engagement					--
NICU					
1. Moral Distress	--	-.61	-.01	-.49	-.71
2. Educational Level		--	.21	.78*	.59
3. Reflection			--	.54	.31
4. Critical Reflective Practice				--	.78*
5. Work Engagement					--
PICU					
1. Moral Distress	--	.17	.01	-.01	-.03
2. Educational Level		--	-.58	-.22	-.53
3. Reflection			--	.20	.07
4. Critical Reflective Practice				--	-.11
5. Work Engagement					--

\*\* .  $p = 0.01$ . \* .  $p = 0.05$ .

*Research Question Three*

Research Question Three, What variables taken together (educational level, moral distress, reflection, and critical reflective practice) best explain the variance in work engagement? was answered by using stepwise multiple regression, a technique used for one of two reasons: (1) explanation or (2) prediction. *Explanation*, used in this study, focuses upon the independent variables, (i.e., how much variance in work engagement can be explained by critical reflective practice, moral distress, etc.), *prediction* focuses upon the dependent variable, (e.g., does critical reflective practice, moral distress, etc. predict occurrence of the event of work engagement) (Huck, 2004, p. 429). Table 7 presents the summary of stepwise regression analysis for study variables explaining work engagement.

TABLE 7. *Summary of Stepwise Regression Analysis for Variables Explaining Work Engagement (N = 28)*

Variable	R	R <sup>2</sup>	Adj. R <sup>2</sup>	R <sup>2</sup> Δ	β	F (df.)
Step 1						
Critical Reflective Practice	.56	.32	.29	.32	.56 **	11.97 (1, 26) **
Step 2						
Critical Reflective Practice					.50 **	
Moral Distress	.69	.47	.43	.16	-.40 *	11.08 (1,25) **

*Note:* \*  $p \leq .01$ , \*\*  $p \leq .001$ .

In stepwise regression analysis the computer, (e.g., SPSS version 16), enters the study's independent variables one at a time, with the order based solely on the *size* of the bivariate correlation between the given independent variables and the dependent variable. The first independent variable entered "is the variable that has the highest bivariate correlation with the

dependent variable” (Huck, 2004, p. 433). The second independent variable selected, however, is not necessarily the one with the second highest correlation to the dependent variable. Rather, it is the variable that accounts for the largest portion of what *remains* of the dependent variable’s variability “after the first variable entered has been taking into account” (Polit, 1996, p. 272). Typically, the analysis proceeds as long as there are predictors that can contribute significantly to R; when there are no more independent variables that can yield a significant increment to R, the analysis stops” (Polit, 1996, p. 272).

In this study, the variables critical reflective practice and moral distress, taken together, explained the most variance in work engagement ( $R^2 = .47, p = .00$ ).

#### *Research Question Four*

Research question four was answered by using stepwise hierarchical multiple regression and stepwise simple linear regression. What role does critical reflective practice play in the relationship between moral distress and work engagement?

- a) Does critical reflective practice (or reflection) moderate the relationship between moral distress and work engagement?
- b) Does critical reflective practice (or reflection) have a direct relationship to moral distress?
- c) Does critical reflective practice (or reflection) have a direct relationship to work engagement?

In stepwise hierarchical multiple regression the independent variables are entered into the analysis in stages, depending on what variables the researcher wants to control. Each time a variable was entered the computer removed the least useful “predictor” (Field, 2000, p. 120). In this study, the following entry format was used: moral distress and critical reflective practice (or

reflection) (Step 1) and the interaction term, (i.e., product of moral distress and critical reflective practice [or reflection]) (Step 2).

Figure 2 presents the model used to test whether critical reflective practice (or reflection) moderated the relationship between moral distress and work engagement. According to Bennett (2000), “if the interaction term explains a statistically significant amount of variance in the dependent variable, a moderator effect is present” (Bennett, 2000, p. 417).

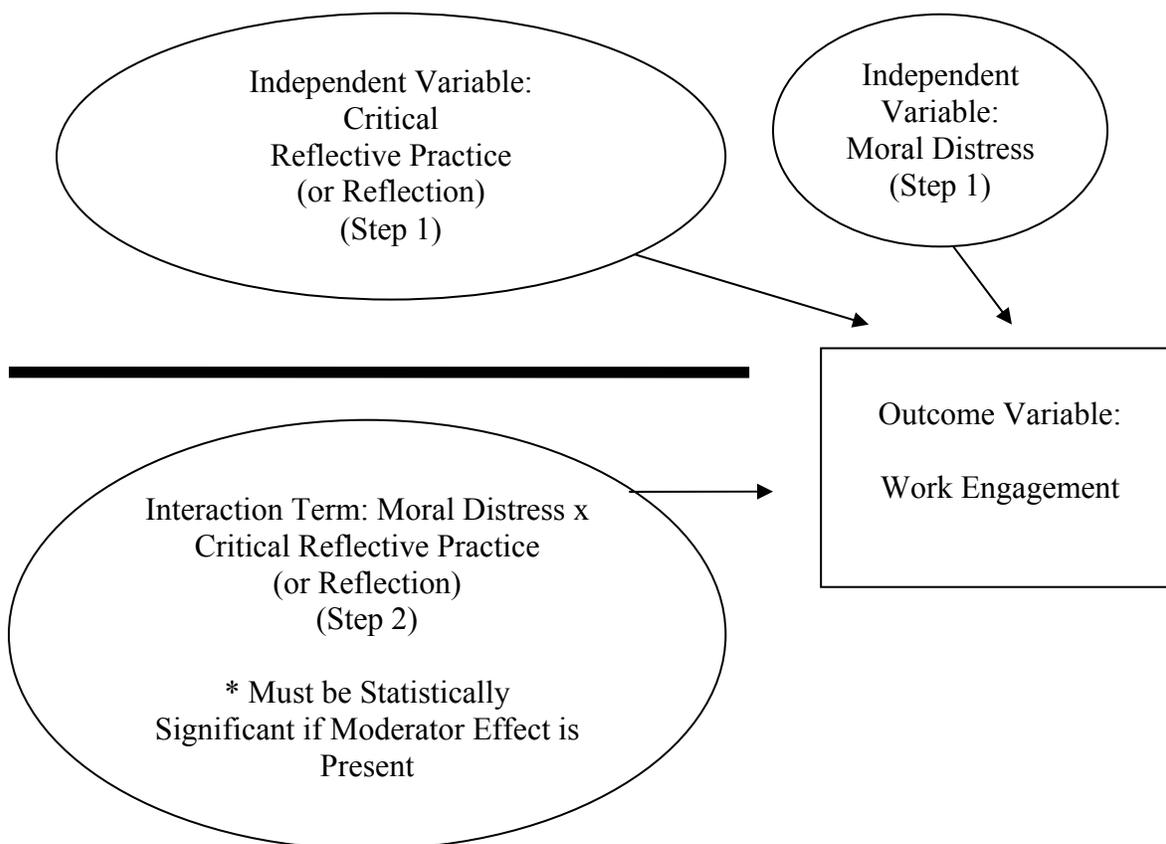


FIGURE 2. Model Used to Test Whether Critical Reflective Practice (or Reflection) Moderates the Relationship Between Moral Distress and Work Engagement.

Table 8 presents a summary of the stepwise hierarchical regression analysis for the critical reflective practice moderator effect on the relationship between moral distress and work engagement. Table 9 presents a summary of the stepwise hierarchical regression analysis for the reflection moderator effect on the relationship between moral distress and work engagement. The findings demonstrated no moderator effect exists, neither the critical reflective practice interaction nor the reflection interaction terms entered into the regression model.

TABLE 8. *Summary of Stepwise Hierarchical Regression Analysis for the Critical Reflective Practice Moderator Effect on the Relationship between Moral Distress and Work Engagement (N = 28)*

Variable	<i>B</i>	<i>SE B</i>	$\beta$
Step 1			
Critical Reflective Practice	.72	.21	.50*
Moral Distress	-.27	.10	-.40*
Step 2			
Critical Reflective Practice Interaction Term	Variable did not enter.		

*Note:* Critical Reflective Practice ( $R^2 = .32, p = .002$ ); Moral Distress ( $R^2 = .47, p = .012$ ) for Step 1.

\*  $p < .05$

TABLE 9. *Summary of Stepwise Hierarchical Regression Analysis for the Reflection Moderator Effect on the Relationship Between Moral Distress and Work Engagement (N = 28)*

Variable	<i>B</i>	<i>SE B</i>	$\beta$
Step 1			
Moral Distress	-.32	.12	-0.48*
Reflection	Variable did not enter.		
Step 2			
Reflection Interaction Term	Variable did not enter.		

*Note:* Moral Distress ( $R^2 = .23, p = .01$ ) for Step 1.

\*  $p < .05$

Stepwise hierarchical simple linear regression was used to answer question 4b: Does critical reflective practice (or reflection) have a direct relationship with moral distress?. In this study, the following entry format was used: the independent variables, (i.e., critical reflective practice and reflection), were entered one at a time, in separate columns. No combination of, (e.g., multiple), variables were entered together. “Simple regression seeks to predict an outcome from a single predictor, whereas multiple regression seeks to predict an outcome from several predictors” (Field, 2003, p. 104). In the stepwise method, “each time a predictor is added to the equation, a removal test is made of the least useful predictor. As such the regression equation is constantly being reassessed to see whether any redundant predictors can be removed” (Field, 2003, p. 120). The findings demonstrated that neither critical reflective practice nor reflection entered into the model (i.e., neither critical reflective practice nor reflection demonstrated a direct relationship with moral distress).

Stepwise hierarchical simple linear regression was also used to answer Question 4c: Does critical reflective practice (or reflection) have a direct relationship to work engagement? The finding demonstrated the independent variable critical reflective practice has a direct relationship with work engagement ( $R^2 = .315$ ,  $p = .002$ ,  $\beta = .561$ ).

#### *Research Question Five*

Content analysis was used to answer question 5: Do RNs identify themes in their work-related experiences; educational learning experiences, moral issue experiences, and critical reflective practice experiences? Content analysis determines the presence of certain themes within communicative language, it quantifies the presence of words or themes (Content Analysis, retrieved July 14, 2009 from <http://www.gslis.utexas.edu/~palmquis/courses/content.html>).

“Researchers quantify and analyze the presence of meanings and relationships of... words and

concepts, then make inferences about the messages within the texts” (An Introduction to Content Analysis, retrieved February 19, 2009 from

<http://writing.colostate.edu/guides/research/content/pop21.cfm>).

Five open-ended questions were included in this study, (i.e., one open-ended question located at the end of the demographic questionnaire and one open-ended question located at the end of each data collection instrument, [i.e., UWES, RRQ, MDS, and CRPQ]). The five open-ended questions in this study included:

- (1) (*work-related experiences question, 68% response rate, 19/28, located at end of UWES*), What factors in our work setting, if any, may be worthwhile to examine?,
- (2) (*miscellaneous question, 11% response rate, 3/28, located at end of RRQ*), Is there anything else that you would like to add after responding to all of these questions?,
- (3) (*educational learning experiences question, 100% response rate, 28/28, located at end of demographic questionnaire*), What learning experience, in your most recently completed nursing educational program, has best prepared you for nursing practice?,
- (4) (*moral issue experiences question, 71% response rate, 20/28, located at end of MDS*), Please add any comments you may have about your experiences with moral issues in your practice., and
- (5) (*critical reflective practice question, 50% response rate, 14/28, located at end of CRPQ* ), How do you reflect upon your practice experiences?

Findings demonstrated the following three experiences had high response rates: (1) ‘*educational learning*’ (100%, 28/28), (2) ‘*moral issue*’ (71%, 20/28) and (3) ‘*work-related*’ (68%, 19/28).

This indicated participants were engaged with these experiences and desired to provide

information that could be used to advance nursing knowledge. In the order that the questions appeared on the survey questionnaire, a summary of open-ended question findings follows.

*Open-Ended Question # 1:*

What learning experience, in your most recently completed nursing educational program, has best prepared you for nursing practice?

Findings demonstrated there are three primary paths to learning: (1) practice-based (50%, 14/28), (2) relationship-based (25%, 7/28), and academic-based (25%, 7/28). Table 10 summarizes findings for what learning experiences best prepared participants for practice.

TABLE 10. *Summary of Content Analysis: What Learning Experience Best Prepared Participants for Practice? (N = 28)*

Theme	% (n)	Exemplars
Practice-Based Learning	50 (14/28)	Clinical time; time spent w/ pt's  Hands on  on the job training
Relationship-Based Learning	25 (7/28)	preceptorship  The preceptorship completed during the last semester of nursing school  Wow, I didn't really feel prepared by school at all once I'd started on the floor. My preceptorship through the hospital was helpful.
Academic-Based Learning	25 (7/28)	Review of pathophysiology  review classes yearly  Trauma Care, ACLS, PALS, BCLS, CPN...all prepare me to give the best possible care and challenges me

*Open Ended Question # 2:*

What factors in your work setting, if any, may be worthwhile to examine?

Findings demonstrate four primary work-related factors to examine: (1) role conflict in terms of management style or rules (37%, 7/19), (2) moral distress (26%, 5/), (3) physical distress (21%, 4/19), and (4) relationships (16%, 3/19). To this question, one participant responded that “Space is limited”. This one response could not be identified as a theme. Table 11 summarizes findings for the four primary work-related factors to examine. Participants demonstrated that an examination of management style or rules would be the most worthwhile (37%, 7/19). The RN participants also reported exhaustion, stress, and a conflict in personal values, (e.g., moral distress), within the work setting.

TABLE 11. *Summary of Content Analysis: What Factors in Your Work Setting May be Worthwhile to Examine? (N = 19)*

Theme	% (n)	Exemplars
Role Conflict with Management/Rules	37 (7/19)	management  way assignments are made, number of patients in assignment, acuity of pts and not just the number of pts assigned
Moral Distress	26 (5/19)	The high level of stress in the ICU is exhausting and demoralizing. Most people outside the ICU do not understand the constant stress, lack of thanks, and physical exhaustion that comes with this job. Thus, something to assist nurses with a way to release stress, heal, and learn from the work about them would be excellent.
Physical Distress	16 (3/19)	The workload can be incredible and overwhelming many times. You feel like you have been beaten up by the time you leave. It is exhausting and I sometimes I feel burnt out. And I've only been an RN for 2.5 years!
Relationships	16 (3/19)	Close friendship bonds due to being together in life/death situations.

*Note:* One participant response could not be categorized into a theme, the response was "Space is limited".

*Open Ended Question #3:*

Please add any comments you may have about your experiences with moral issues in your practice.

The analysis of ‘moral distress experiences’ affirmed the validity of the MDS questionnaire, moral distress is clinically significant. Four major ‘moral distress experiences’ themes were identified: (1) death and suffering (35%, 7/20), (2) dealing with family (30%, 6/20), (3) medical versus nursing values (20%, 4/20), and (4) self-identification with items on the MDS (15%, 3/20). Table 12 summarizes findings for these four ‘moral distress experiences’ themes.

TABLE 12. *Summary of Content Analysis: What Moral Issues are Experienced in the Work Setting? (N = 20)*

Theme	% (n)	Exemplars
Death and Suffering	35 (7/20)	<p>I frequently see situations where a patient's life is being prolonged when morally and ethically it should not.</p> <p>I feel like sometimes what we put these children through is so much worse than death, and I hate to see their suffering when the final outcome will be the same.</p>
Dealing with Family	30 (6/20)	<p>It is hard in the NICU setting to deal with parents clinging to hope when there is none.</p> <p>At times with family centered pt. care, the tail can wag the dog. Families may have "some knowledge" of what is going on from the net and family members, yet they may "guide" the care in a direction that the team did not need to go.</p>
Medical vs. Nursing Values	20 (4/20)	<p>I feel the nurses are prepared more for a patient's death. I sometimes feel that patient's lives are prolonged because the MDs see death as defeat and not a natural part of the human process. I feel that specialty doctors (renal, cancer, transplant, etc.) often fail to see the patients as a whole system, they are more concerned with certain numbers and labs and not others.</p>
Identification with MDS	15 (3/20)	<p>They are common and stressful on staff</p> <p>All of the above are VERY common experiences in the ICU</p>

*Open Ended Question #4:*

How do you reflect upon your practice experiences?

Two primary 'critical reflective practice' experiences were demonstrated, reflection as: (1) self-thought (57%, 8/14) and (2) varied discussion (29%, 4/14). Although a theme was not specified, two participants (14%) reported they reflect upon practice experiences "almost daily" or "daily". Table 13 summarizes findings for the 'critical reflective practice' themes, (i.e., self-thought and varied discussion, respectively). The findings demonstrated a majority of reflection is done by self. Although there is no systematic approach to reflection, a discussion-approach to reflection is widely accepted. Some participants were found to agonize when thinking about work.

TABLE 13. *Summary of Content Analysis: How Does Reflection Upon Practice Occur?*  
(*N* = 14)

Theme	% (n)	Exemplars
Self-thought	57 (8/14)	<p>A lot while I'm lying in bed.</p> <p>I review the shift in my mind to see if I could have done something different – good or not</p> <p>mostly in my head; I tend to agonize over situations that I could have done better in.</p>
Varied Discussion	29 (4/14)	<p>I write about them or discuss (carefully) with friends and family.</p> <p>I sometimes feel that MD's are not concerned or cannot be bothered to listen to the nursing staff. Some disciplines are better than others. I am a BSN prepared nurse and know about complex systems, sometimes more than a first or second year resident, however, many of my suggestions on patient care are dismissed.</p> <p>Being a nurse, I spend time speaking to the more "senior" nurses regarding my practice experiences.</p>

*Note:* Two participants noted they reflect "almost daily" or "daily".

*Open Ended Question # 5:*

Is there anything else that you would like to add after responding to all of these questions?

The overall response rate for this question was 11% (3/28), no identified themes in response were identified. The three respondents submitted the following responses:

- (1) "Of course I love the contemplative life. I thought/hoped nursing would be a contemplative practice, but it isn't."

(2) “My job is very important to me; being a mom and a nurse defines who I am. I have tons of hobbies, but I need the anchor of going to work at a job that makes a difference in someone’s life to give it all meaning: I really don’t ever want to retire.”, and

(3) “I have a long commute to and from work. I use this time to prepare my mind for work and to change gears for home. I also get up early to allow myself time to read my Bible and pray before I go to work”.

There are significant contrasts in how participants responded to this question.

#### Revised Theoretical Model

Based upon a review of study findings, the theoretical model has been revised. Figure 3 depicts the revised theoretical model for this summary. This revised model suggests there is:

- (1) a negative direct relationship between moral distress and work engagement,
- (2) a positive direct relationship between critical reflective practice and work engagement,
- (3) moral distress and critical reflective practice together explain a significant 47% of the variance in work engagement,
- (4) a positive direct relationship between increased educational level and critical reflective practice in one unit only, (i.e. NICU); and,
- (5) a suggested inverse relationship between educational level and moral distress in one unit only, (i.e. MICU), which warrants further study.

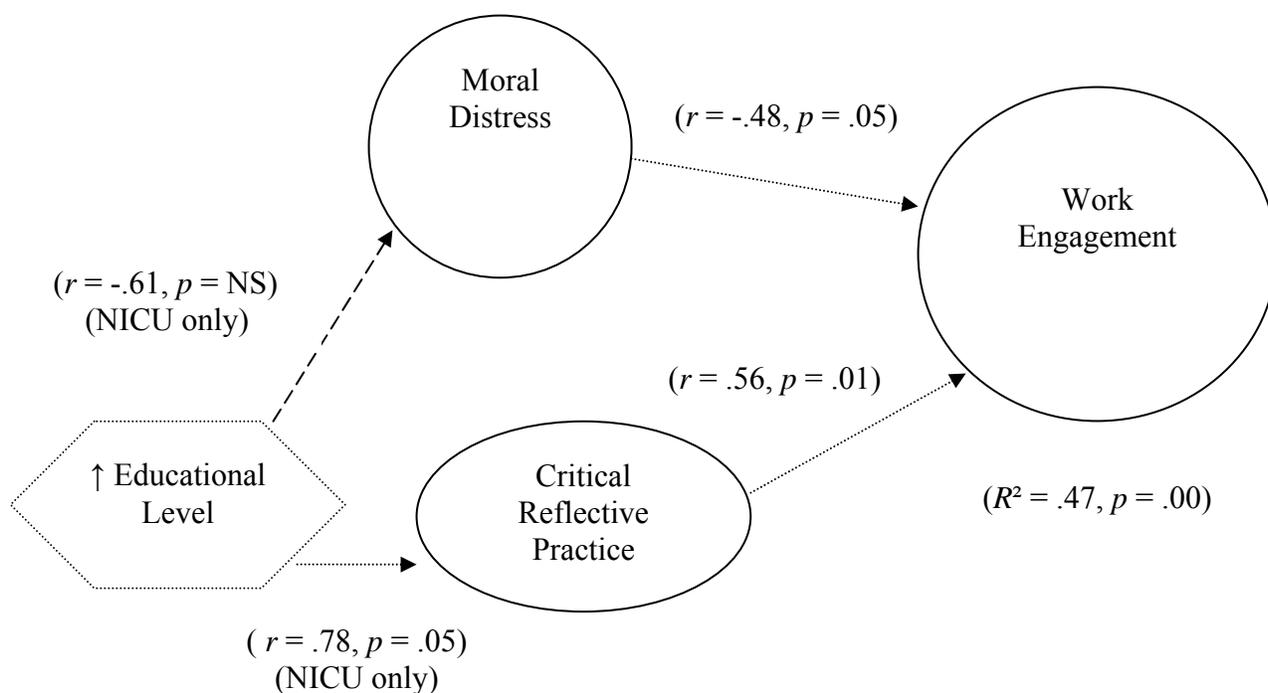


FIGURE 3. Theoretical Model: Demonstrated Relationships Among Registered Nurses Educational Level, Moral Distress, Critical Reflective Practice, and Work Engagement.

### Summary

In response to this study's research questions, this chapter presented quantitative and content analysis findings from a purposive sample of 28 RNs practicing 20 hours or greater in a southwest magnet-designated hospital. Both statistically and clinically significant findings were demonstrated. The theoretical model was revised accordingly.

## CHAPTER V – DISCUSSION

This chapter focuses on study findings and their potential implications for future research and practice. A critical discussion of four areas is presented: (1) sample characteristics, (2) research findings for each question, (3) study limitations and (4) implications for future research and practice.

### Sample Characteristics

The 28 study participants represented a purposive sample: (1) RN status, (2) greater than (>) 50% of on-duty work time spent in the provision of direct nursing care to patients in an ICU setting, (3) computer literacy, and (4) greater than or equal to 20 hours work time per week. They all shared the common experience of working within a magnet-designated hospital. Due to the specification of eligibility criteria any generalizations, (e.g., inferences), from this study should be made only to like populations. According to Polit (1996), using a purposive sample helps readers avoid the mistake of generalizing study findings to other populations (Polit, 1996, p. 110). Furthermore, because study participants were predominantly female (92%, 26/28), Caucasian/white (82%, 23/28), full-time employees (85%, 23/27) and prepared at the Baccalaureate level (57%, 16/28), study inferences to a like sub-populations within the study's overall population may be appropriate.

In regards to educational level and years of ICU-RN work experience, the medical intensive care unit (MICU) RNs demonstrated: (1) a higher proportion of baccalaureate educational preparation (80%, 8/10), compared to PICU (55%, 6/11) and NICU (29%, 2/7), and (2) the lowest number ICU-RN work experience, in years, (5, SD 3.8), compared to PICU (9.7, SD 6.6) and NICU (12.2, SD 12.4). Additionally, the MICU-RN group was much more likely to be seeking a higher educational degree, 20% (2/10), compared to PICU (1%, 1/9) and NICU

(0%, 0/7). However, the MICU results were similar to the PICU and NICU in terms of the lack of significant correlations between the education level and other variables. It is likely that the lack of variability in education level contributed to the lack of significant relationships proposed between education and moral distress, work engagement, and CRP.

The mean age of study participants, in years, was 39.3 (SD 12.4). The NICU RN-group demonstrated the highest age, in years, (52, SD 14.9), compared to PICU (37.1, SD 11.6) and MICU (36.4, SD 10.2). According to the United States (U.S.) Department of Health and Human Resources 2004 National Sample Survey of Registered Nurses, the average age of a U.S. RN is 46.8 years. Therefore, the mean NICU RN age in years, in addition to being higher than PICU and MICU, was above the U.S. national average.

#### Critical Discussion of Research Findings, Per Research Question

##### *Research Question # 1*

Research Question #1 was: “What are the levels of each variable (work engagement, moral distress, education, reflection and critical reflective practice) among RNs working in a southwest magnet-designated hospital?” A summary of study findings follows.

When compared to findings from previous research, the mean work engagement (4.0, SD = 0.88) level within this study was decreased and the mean moral distress (3.2, SD = 1.3) level was elevated. Both of these variables were measured by using 0 to 6 Likert-item instruments, the Utrecht Work Engagement Scale (UWES) and the Moral Distress Scale (MDS), respectively. In both of these study instruments higher scores demonstrated higher variable levels.

There is limited nursing work engagement literature available (Palmer, 2008; Simpson, 2009). However, one Finnish, two-year longitudinal, all-sector healthcare provider study, which included 261 nurses, demonstrated mean nurse work engagement levels of 4.45 (SD = 1.13,

Time 1) and 4.31 (SD = 1.21, Time 2) (Mauno, et al., 2007). The magnet-hospital RNs in this study, when compared with their Finnish counterparts, demonstrated slightly lower mean work engagement scores (4.0, SD = 0.88). However, future nursing work engagement research, to confirm variations in RN work engagement levels, is necessary.

This study's mean moral distress score (3.2, SD = 1.3) was based upon the MDS' *frequency* level of the 'not in the patient's best interest' subscale. In reference to this subscale, there was one known previously published research finding. According to Corley, et al. (2005), for 106 medical-surgical RNS, the mean *frequency* moral distress score for 'not in the patient's best interest' subscale was 1.45 (SD 0.67). The dearth of published *frequency* subscale literature was related to the fact that, as noted in Chapter III, a majority of mean moral distress scores were reported in the mean *intensity* divided by the mean *frequency* format. Only the *frequency* subscale score was used in this study, to reduce the potential for a participant 'fatigue effect.'

In this study, the elevated mean moral distress level (3.2, SD = 1.3) was anticipated because, according to moral distress literature, the ICU environment is particularly susceptible to moral distress. Greater than 50% of ICU RNs were reported to experience moral distress (Mobley, et al., 2007), compared to 33% of RNs in less acute practice areas (i.e., rehabilitation, diabetes education, nephrology, etc.) (Redman & Fry, 2000). Stated otherwise, because the Corley, et al. (2005) study involved medical surgical RNs rather than those from the ICU, it was understandable that their mean *frequency* moral distress score (1.45, SD = 0.67) was less than that found in this study of ICU-RN's.

In this study, an ANOVA analysis was done to compare means across the three units. Interestingly, at the unit-specific level, only one statistically significant finding was demonstrated, and this finding was related to mean moral distress level. The mean MICU moral

distress level (4.5, SD = .063) was statistically higher ( $F = 19.29 [2, 25], p = .000$ ) than both the PICU (2.5, SD = 0.81) and NICU (2.3, SD = 1.14) levels. This finding was examined in relation to unit-specific sample characteristics, where it was identified that the MICU RNs demonstrated higher proportional levels of educational preparation: MICU 80% baccalaureate prepared (8/10), NICU 29% baccalaureate prepared (2/7), and PICU 55% baccalaureate prepared (6/11).

According to some moral distress literature, nurses with advanced RN educational preparation, (i.e., BSN or higher), demonstrated increased moral distress levels (Meltzer & Huckabay, 2004; Nathaniel, 2006). While this study did not show a significant relationship between educational level and moral distress, the higher level of education in the MICU group suggested that the higher educational levels among these nurses may be related to the higher moral distress levels in this group.

It is possible that with advanced education participants experience greater exposure to ethics education and thereby develop sensitivity to ethical and moral issues. Lützén and Nordin (1995) demonstrated that increased educational level was related to moral sensitivity, (i.e., increased focusing upon patient's feelings, reflection upon values underpinning practice, etc.). It is the morally sensitive nurses, then, who may be more likely to act as patient advocates and speak for changes in common practices. This, in turn, may have an influence such that these RNs experience moral distress, (i.e., speaking up about patient care issues, including low staffing, can lead organizations to implement covert communication to the RN advocates, or to scapegoat the RN advocates, which contributes the feelings of moral distress which RN advocates experience) (Sundin-Huard, 1999). Knowing more rather than knowing less may contribute to the potential to experience moral distress.

In this study, the reflection variable was measured by using the reflection subscale of the Rumination-Reflection Questionnaire (RRQ). The RRQ is a 1 to 5 Likert-item instrument, higher scores represent higher levels of reflection. There currently was no published literature specifying RN reflection levels. It was noted, however, that participants in this study demonstrated a mean reflection score of 3.4 (SD = 1.31), a score slightly higher than that demonstrated by British Columbia undergraduates in an introductory psychology class (3.14, SD = 1.06) (Trapnell & Campbell, 1999).

Specific to critical reflective practice (CRP), which was measured by the newly developed Critical Reflective Practice Questionnaire (CRPQ), a 1 to 7 Likert-item instrument where higher scores represent higher level of the variable, there was no previously published research in which to compare this study's means. In this study, the overall CRPQ mean was 4.5 (SD = 0.61). All three unit-specific mean scores were comparable to the overall CRPQ mean: MICU (4.6, SD = 0.78), NICU (4.4, SD = 0.90), and PICU (4.5, SD = 0.51). The consistency in CRP scores across ICU's lends some support to its reliability. Further psychometric testing is warranted, particularly since this variable shows promise in research on work-related issues among nurses.

### *Research Question #2*

In this study, two significant bivariate intercorrelations were demonstrated (1) CRP and work engagement were positively related, and (2) moral distress and work engagement were negatively related. Both of these findings were consistent with the proposed theoretical model and previous literature. This was the first study that demonstrated a positive relationship between CRP and work engagement. Obviously, further research will be necessary to confirm this study's finding. However, it was a positive finding and it suggested that, as theoretically proposed, the

cognitive, affective and behavioral aspects associated with critical reflective practice were important to RN's work engagement. Specifically, this finding suggested that the CRP process contributes to the "optimal functioning and happiness of [nurses]" (de Lange, et al., 2008, p. 201).

The identified negative bivariate correlation between moral distress and work engagement was also consistent with the proposed theoretical model and previous literature. According to previous studies, RNs who experienced moral distress were more likely to leave a *position* (Corley, et al., 2001, 2005; Wilkinson, 1987, 1988), leave (or consider to leave) the *profession* (Hamric & Blackhall, 2007; Millette, 1994), or implement the unsuccessful coping behavior of avoiding patients (Georges & Grypdonck, 2002; Gutierrez, 2005; Wilkinson, 1987, 1988); all of which were demonstrative of decreased work engagement.

The RRQ and the CRPQ findings did not demonstrate consistent findings. Although there was a significant positive correlation between CRP and work engagement, no significant correlation between reflection and work engagement was demonstrated. This suggested the CRPQ and RRQ were measuring different aspects of the reflection construct. Indeed, a subsequent literature review demonstrated the RRQ reflection subscale primarily measured a cognitive process (Brown & Ryan, 2005). And, in contrast, the CRPQ was designed to measure a cognitive, affective, and behavioral process. Therefore, in regard to this study's further research questions, it was determined that the remainder of RRQ and CRPQ findings would not be consistent.

Theoretically, positive bivariate relationships between educational level and moral distress, reflection, CRP and/or work engagement were anticipated. In this study, however, no significant 'educational level' correlations were identified in the total sample (N = 28). It was

possible that due to the study's small sample size, (i.e., perhaps due to decreased amount of variability in study variables), a significant correlation was not found.

However, a bivariate correlation analysis at the unit-specific level demonstrated one 'educational level' significant positive correlation: within the NICU ( $n = 7$ ) a statistically significant strong correlation between educational level and CRP was demonstrated. This finding, although not significant in the total sample, was consistent with the proposed theoretical model and previous literature, which suggested that an increased educational level enhanced reflection (Duke & Appleton, 2000; Mountford & Rogers, 1996; Powell, 1989). Although a causal link between educational level and CRP cannot be established with correlation data, the relationship between educational level and CRP warrants further study.

Finally, within the NICU, a non-significant but moderately large inverse relationship between increased education level and moral distress was identified, suggesting that increased education was associated with decreased moral distress, as theorized. Although this finding was not significant it indicated further study to examine the relationship between increased education level and moral distress is warranted. Current literature addressing this relationship was inconclusive (Corley et al., 2001; Nathaniel, 2006).

### *Research Question #3*

Research Question #3 was: "What variables taken together (educational level, moral distress, reflection and critical reflective practice) best explain the variance in work engagement?" This study's stepwise regression analysis demonstrated that CRP and moral distress taken together, best explained the variance in work engagement. As addressed above, these findings were consistent with the theoretical model and previous literature, which proposed that both moral distress and critical reflective practice were related to work engagement. It was

noteworthy that critical reflective practice was the more significant variable in this relationship, attesting to its potential in future research to develop theory about how to promote positive work experiences among nurses. Educational level did not turn out to be a significant variable in the model. This may have been due to the lack of variability in the variable, in relation to the study's small sample size.

Again, however, promising findings in respect to education level and the theoretical model were demonstrated at the unit level of analysis. The NICU demonstrated a statistically significant and strong correlation between education level and CRP. Although no causal link between education level and CRP was demonstrated, education level strongly correlated with CRP and, at the group level, CRP explained variance in work engagement. These findings, taken together, were encouraging and they indicated further study on whether educational level and CRP explain variance in work engagement is warranted. A review of literature demonstrated that reflective abilities (i.e., analysis of knowledge, practice descriptions, and analysis of feelings), developed significantly across academic terms (Duke & Appleton, 2000). While within practice, those who demonstrated reflection were more enthusiastic and internally motivated (Murphy, 2004), they demonstrated characteristics consistent with work engagement.

#### *Research Question # 4*

Research Question #4 was: "What role does critical reflective practice (CRP) play in the relationship between moral distress and work engagement?" In this study, a hierarchical stepwise regression analysis demonstrated no moderator effect (i.e., neither CRP nor reflection moderated the relationship between moral distress and work engagement). There was little support for this relationship, and it was proposed only as an exploratory step in gaining better understanding of how variables may relate to work engagement.

Critical reflective practice did, however, relate directly and positively to work engagement. This relationship was inferred from related reflection research findings. A review of the literature, which was primarily qualitative, demonstrated that reflection contributed to activities generally associated with optimal functioning at work. According to Peden-McAlpine et al. (2005), for example, reflection contributed to RNs developing creative strategies which were implemented in order to create more caring work environments. Similarly, according to work engagement literature, engaged employees create job and personal resources (Bakker, et al., 2008, p. 193). These studies did not employ the concept of CRP as conceptualized in this study. However, the findings from previous research and the current study are promising in terms of the potential significance of CRP in nurses' work experiences. Future research that specifically employs the CRP measure is warranted. In addition, in recognition of the fact that quantitative analysis of CRP is in the development stage, further study with an increased sample size is needed.

#### *Research Question #5*

Research Question #5 was: Do RNs identify themes related to the study variables in their work related experiences? A content analysis of participant responses to open-ended questions revealed some important themes.

The working ICU-RNs in this study demonstrated the following three primary paths to learning: practice-based, relationship-based, and academic-based. These themes were consistent with the philosophical stance of pragmatism that underlies this research study. The ICU-RNs, as expected, appreciated academic-based theories, but were also supportive of creating practice-based and relationship-based knowledge.

In relation to moral issues, study participants strongly identified with the MDS, they reported experiencing many of the moral issues as outlined in the literature, (i.e., the moral difficulty of prolonging suffering in dying patients, the identification that medical doctors are more reluctant than nurses to accept death, and the lack of communication deemed necessary for patient-care decision making). Most basically, these findings confirmed how statistically significant the problem of moral distress is for ICU-RNs.

The ICU-RNs in this study reflected primarily in one of two ways, either through self-thought or via discussion with various others, (i.e., colleagues, friends or family members). The fact that a majority of reflection was completed by ‘self’ provided some evidence that critical reflective practice in the truest sense (e.g., as a community-sharing process), may not yet be fully realized within the nursing profession.

In sum, an examination of study findings led to the development of a revised theoretical model. Figure 4 presents the revised theoretical model. It was identified that further study to examine the relationships in this model was warranted to explore the study variables along with other potential explanatory factors, (e.g., age and years of experience), in the proposed relationships. Further study will be useful in refining the critical reflective practice model.

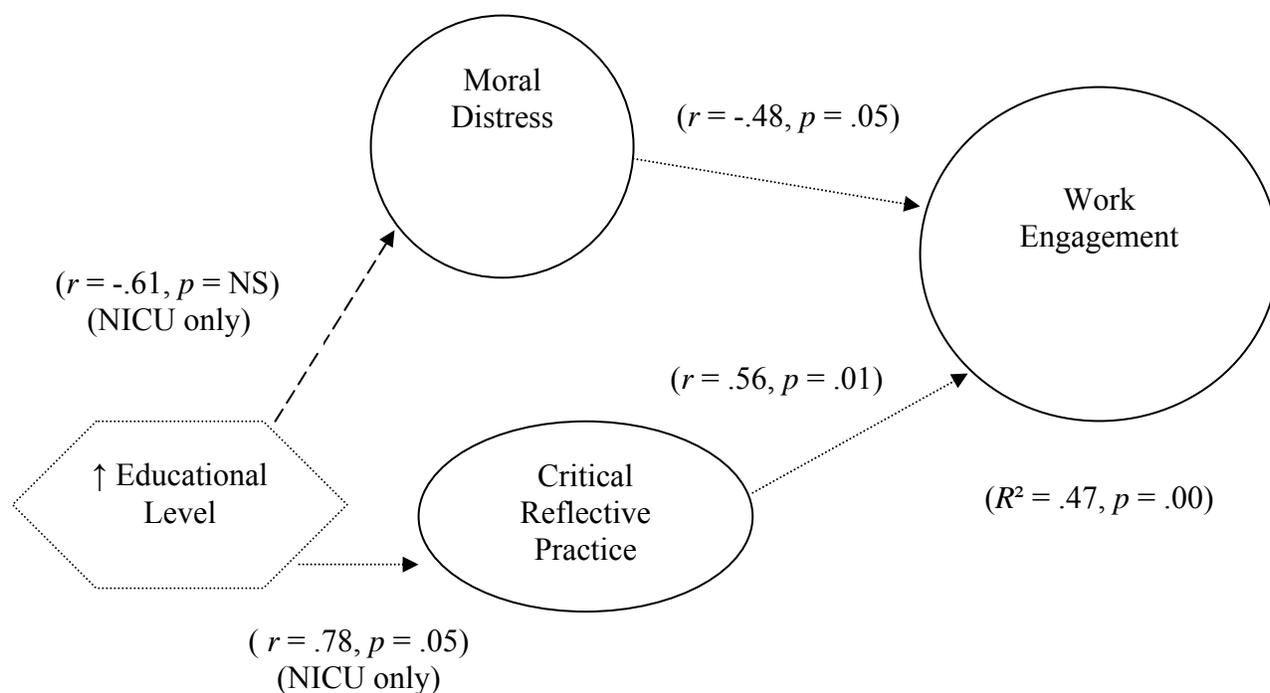


FIGURE 4. Theoretical Model: Demonstrated Relationships Among Registered Nurses Educational Level, Moral Distress, Critical Reflective Practice, and Work Engagement.

### Study Limitations

#### *Sampling*

Two identified sampling limitations within this study were identified. First, the sample was purposive and non-randomized, which made generalization of findings more difficult. According to Shadish, et al. (2002), purposive samples are not “backed by a statistical logic that justifies formal generalizations” (Shadish, et al., 2002, p. 24). Second, because the study’s sample size was small, there was an increased potential *not* to achieve significance in the

correlations. Again, this limited any generalization of findings that potentially could have resulted from this study.

### *Instrumentation*

Another limitation was the use of an unstandardized instrument, the CRP. However, the instrument demonstrated more than adequate reliability for a new instrument (above .80), and content validity was acceptable. In addition, the instrument correlated with all study variables as expected theoretically. As presented in Chapter 4, there was some preliminary support for construct validity. Therefore, while continued testing is warranted, it was acceptable for use in this initial study.

### Implications for Future Research and Practice

Future research will focus on further psychometric testing of the CRPQ. For example, the “sophisticated statistical technique called factor analysis” (Huck, 2004, p. 94) will be implemented. Additionally, in an effort to establish CRPQ construct validity, it is suggested that it may be appropriate to replicate this study, but use the Mindful Attention Awareness Scale (MAAS) (Brown & Ryan, 2004, p. 245) versus the RRQ. Mindfulness is operationalized as a cognitive, emotional, and perceptual construct and it may be better able to correlate with the CRP construct, which is designed to represent a cognitive, affective, and behavioral construct.

Additionally, as cited above, future research will include testing and refinement of the theoretical framework. The proposed relationships between current and additional study variables will be examined. According to Palmer (2008), for example, Self-Transcendence demonstrated a significant positive relationship with work engagement. This variable, in addition to nurses’ age and years of experience, may be examined to refine the theoretical model

presented in this dissertation. Refinement of the theoretical model will add to nursing knowledge about factors that relate to and influence nurses' work engagement.

In regards to clinical practice, this study supported the importance of increased educational level and critical reflective practice to work engagement. It is, therefore, recommended that practicing nurses, along with nursing and hospital leadership, promote advanced nursing education and the following critical reflective practice activities:

1. promote reflective discussions between nurses and clinical nurse specialists (Peden-McAlpine, et al., 2005),
2. provide a space where RNs can meet to discuss clinical encounters (Wong, et al., 1995),
3. promote group activities in trusting environments (i.e., provide safe environments where RNs, as a group, can discuss both the cognitive *and* affective components of their practice) (Paget, 2001; Ruth-Sahd, 2003),
4. provide adequate time for RNs to place clinical situations under a microscope (i.e., allow RNs to dissect clinical situations into various issues) (Durgahee, 1998),
5. explain and demonstrate the purpose of reflection (e.g., use the mnemonic PACTS when explaining a CRP activity: purposefulness, activity, collaboration, critical thinking, and confrontation and support) (Durgahee, 1998),
6. encourage RNs to maintain a personal reflective diary and meet regularly (i.e., weekly or bi-monthly) to discuss, as a group, the diary contents (Durgahee, 1996),
7. encourage regular multidisciplinary team-member meetings where all aspects of patient care are discussed (Åström, et al., 1993; Briggs, 1995), and

8. encourage managers and/or supervisors to regularly meet (e.g., weekly), with RNs on the unit to discuss care provision (McCaugherty, 1995).

These CRP activities have been demonstrated to promote RN engagement in work-related activities: incorporation of patient's family into nursing care, acceptance of professional responsibility, enhanced critical thinking and judgment, empowerment, increased social and political emancipation, improvement in practice by the promotion of greater self-awareness, development of new attitudes, and increased alertness in regards to approaches to patient's needs).

Finally, results of this study also supported the theoretical idea that moral distress is a clinically significant issue for ICU-RNs. To reduce the negative outcomes of moral distress, including decreased work engagement as identified in this study, it is recommended that nurses in clinical practice implement proven strategies to reduce moral distress: RN storytelling (Nathaniel, 2006), group gatherings to share and discuss ethical clinical happenings (Storch, et al, 2002), provision of support services so that RNs can talk about feelings (Aström, et al, 1993; Raines, 2000; Verhaeghe, et al., 2008), and provision of continuing, in-house ethics education (Grady, et al., 2008).

Furthermore, due to the non-significant but moderately large inverse relationship between increased education level and moral distress in the NICU it is suggested that nurses and nurse leaders advocate for advanced nursing education. However, further study to examine the relationship between education level and moral distress is warranted.

APPENDIX A  
DEMOGRAPHIC DATA COLLECTION TOOL

**Directions:** I request that you answer some demographic questions about yourself. This information will assist me to describe the characteristics of nurses who participate in this study. Please answer every question.

1. Gender:  Female  Male
2. Age (years): \_\_\_\_\_ (When 'fill-in' the blanks exist, the Participant will input actual data)
3. Race/Ethnicity:  Caucasian/White  African American  
 Hispanic/Latino  Asian/Pacific Islander  Native American Indian  Other
4. Number of years since I first became a nurse: \_\_\_\_\_
5. Years worked in ICU: \_\_\_\_\_
6. Highest nursing degree earned:  Diploma  Associate  Bachelors  
 Masters  Post-Masters
7. Currently working towards higher nursing degree:  Yes  No
8. If currently working towards higher nursing degree, what year started: \_\_\_\_\_ N/A
9. If currently working towards higher nursing degree, what year is graduation anticipated:  
\_\_\_\_\_ N/A
10. If currently working towards higher nursing degree, what is the title of the degree you are working towards: \_\_\_\_\_ N/A
11. Percent of work time spent in direct patient care: \_\_\_\_\_
12. Work Status:  Full Time  Part Time (> 20 Hours/week)  Part Time (< 20 Hours/week)
13. What is your primary role at work:  Staff Nurse/Direct Patient Care  
 Clinical Nurse Specialist  Nurse Practitioner  Other: \_\_\_\_\_

(Continued Next Page)

14. Have you undertaken breaks in your work (extended periods of time away from the work environment):  Yes  No  N/A

15. What learning experience, in your most recently completed nursing educational program, has best prepared you for nursing practice?

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APPENDIX B

THE UTRECHT WORK ENGAGEMENT SCALE (UWES)

(DEVELOPED AT UTRECHT UNIVERSITY – THE NETHERLANDS)

**Directions:** The following statements are about how you feel at work. Please read each statement carefully and decide how frequently you feel this way about your job. If you have never had this feeling, please indicate 0.

	Never	Almost Never	Rarely	Some- times	Often	Very Often	Always
		(A few times a year or less)	(Once a month or less)	(A few times a month)	(Once a week)	(A few times a week)	(Every day)
1. At my work, I feel bursting with energy.	0	1	2	3	4	5	6
2. I find the work that I do full of meaning and purpose.	0	1	2	3	4	5	6
3. Time flies when I'm at work.	0	1	2	3	4	5	6
4. At my job, I feel strong and vigorous.	0	1	2	3	4	5	6
5. I am enthusiastic about my job.	0	1	2	3	4	5	6
6. When I am working, I forget about everything else around me.	0	1	2	3	4	5	6
7. My job inspires me.	0	1	2	3	4	5	6
8. When I get up in the morning, I forget everything else around me.	0	1	2	3	4	5	6
9. I feel happy when I am working intensely.	0	1	2	3	4	5	6
10. I am proud of the work that do.	0	1	2	3	4	5	6
11. I am immersed in my work.	0	1	2	3	4	5	6

(Continued Next Page)

	Never	Almost Never  (A few times a year or less)	Rarely  (Once a month or less)	Some- times  (A few times a month)	Often  (Once a week)	Very Often  (A few times a week)	Always  (Every day)
12. I can continue working for very long periods at a time.	0	1	2	3	4	5	6
13. To me, my job is challenging:	0	1	2	3	4	5	6
14. I get carried away when I'm working.	0	1	2	3	4	5	6
15. At my job, I am very resilient, mentally.	0	1	2	3	4	5	6
16. It is difficult to detach myself from my job.	0	1	2	3	4	5	6
17. At my work I always persevere, even when things do not go well.	0	1	2	3	4	5	6
18. What factors in your work setting, if any, may be worthwhile to examine?							

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APPENDIX C

MORAL DISTRESS SCALE (MDS)

(‘NOT IN THE PATIENT’S BEST INTEREST’ SUBSCALE)

**Directions:** The following statements are about moral situations in the hospital environment. For your current position, please indicate for each of the following situations, the frequency with which you experience the situation. If you do not have experience with the situation, please indicate 0.

	Never						Very Frequently	
	0	1	2	3	4	5	6	
1. Carry out the physician's orders for unnecessary tests and treatments for terminally ill patients.	0	1	2	3	4	5	6	
2. Follow the family's wishes to continue life support even though it is not in the best interest of the patient.	0	1	2	3	4	5	6	
3. Carry out a physician's order for unnecessary tests and treatment.	0	1	2	3	4	5	6	
4. Initiate extensive life-saving actions when I think it only prolongs death.	0	1	2	3	4	5	6	
5. Follow the family's wishes for the patient's care when I do not agree with them but do so because hospital administration fears a lawsuit.	0	1	2	3	4	5	6	
6. Prepare an elderly man for surgery to have a gastrostomy tube put in, who is severely demented and a "No Code".	0	1	2	3	4	5	6	
7. Continue to participate in care for a hopelessly injured person who is being sustained on a ventilator, when no one will make a decision to "pull the plug".	0	1	2	3	4	5	6	
8. Please add any comments you may have about your experiences with moral issues in your practice:								

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APPENDIX D

CRITICAL REFLECTIVE PRACTICE QUESTIONNAIRE (CRPQ)

**Directions:** This scale measures your perceptions of how often you engage in certain activities in the course of your nursing practice. The following statements are about being mindful of oneself in one's practice experiences and interactions, including personal values and beliefs and opportunities for growth. Please read each statement carefully and decide how often you experience the activity in your current nursing position. If you have never had experience with the statement, please indicate 0.

	Never Never	Almost	Rarely	Some- times	Often	Very Often	Always
1. My conversations with patients and families give me new insights regarding how I might conduct my nursing practice.	1	2	3	4	5	6	7
2. I discuss practice experiences that perplex me.	1	2	3	4	5	6	7
3. I try to learn from the challenges I face at work.	1	2	3	4	5	6	7
4. I am able to delay my nursing actions, so I can think about what to do before I act.	1	2	3	4	5	6	7
5. I critique my personal views in order to make sense of troubling experiences in practice.	1	2	3	4	5	6	7
6. I think about how to improve my nursing care.	1	2	3	4	5	6	7
7. I write about my work-related experiences in a diary or journal.	1	2	3	4	5	6	7
8. I meet with colleagues to debrief about patient cases.	1	2	3	4	5	6	7
9. In relation to my work I share my suffering and my happiness with colleagues.	1	2	3	4	5	6	7

(Continued Next Page)

	Never	Almost Never	Rarely	Some- times	Often	Very Often	Always
10. In my work I experience a tension between my practice ideals and the actions I'm able to do.	1	2	3	4	5	6	7
11. I share my feelings, good or bad, about my practice with my colleagues and/or supervisor.	1	2	3	4	5	6	7
12. When I practice I am conscious of my own values, beliefs, and assumptions.	1	2	3	4	5	6	7
13. I hypothesize about how to change my practice with creative solutions.	1	2	3	4	5	6	7
14. I try out the ideas that I generate in practice, in order to see if my hypotheses work.	1	2	3	4	5	6	7
15. I try to find meaning in difficult practice situations.	1	2	3	4	5	6	7
16. I am familiar with and implement active listening in my practice.	1	2	3	4	5	6	7
17. When I listen to patients I am conscious of the fact that I suspend my own prejudices and assumptions.	1	2	3	4	5	6	7
18. I meet with other nurses, away from the patient care setting, to discuss thoughts and feelings about patient cases and nursing issues that perplex me.	1	2	3	4	5	6	7

(Continued Next Page)

	Never	Almost Never	Rarely	Some- times	Often	Very Often	Always
19. I have a personal vision of my nursing practice and I can verbalize this vision with others.	0	1	2	3	4	5	6
20. I share my nursing beliefs in formal environments, i.e. a journal club, an ethics committee, in educational forums, etc.	0	1	2	3	4	5	6
21. From an ethical standpoint, I examine the appropriateness of my nursing actions.	0	1	2	3	4	5	6
22. I participate in political activities relevant to nursing practice.	0	1	2	3	4	5	6
23. How do you reflect upon your practice experiences?							

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APPENDIX E  
RUMINATION-REFLECTION QUESTIONNAIRE (RRQ)  
(REFLECTION SUBSCALE)

**Directions:** This scale measures your perception of your self-characteristic qualities, there are no right or wrong answers. For each of the following statements, please indicate your level of agreement or disagreement by circling one of the scale categories to the right of each statement.

	1 Strongly Disagree	2 Disagree	3 Neutral	4 Agree	5 Strongly Agree
1. Philosophical or abstract thinking doesn't appeal to me that much.	1	2	3	4	5
2. I'm not really a meditative type of person.	1	2	3	4	5
3. I love exploring my "inner" self.	1	2	3	4	5
4. My attitudes and feelings about things fascinate me	1	2	3	4	5
5. I don't really care for introspective or self-reflective thinking.	1	2	3	4	5
6. I love analyzing why I do things.	1	2	3	4	5
7. People often say I'm a "deep," introspective type of person.	1	2	3	4	5
8. I don't care much for self-analysis.	1	2	3	4	5
9. I'm very self-inquisitive by nature.	1	2	3	4	5

(Continued Next Page)

	1 Strongly Disagree	2 Disagree	3 Neutral	4 Agree	5 Strongly Agree
10. I love to meditate on the nature and meaning of things.	1	2	3	4	5
11. I often love to look at my life in philosophical ways.	1	2	3	4	5
12. Contemplating myself isn't my idea of fun.	1	2	3	4	5
13. Is there anything else that you would like to add after responding to all of these questions?					

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APPENDIX F  
INSTITUTIONAL REVIEW BOARD APPROVAL FORM



Human Subjects  
Protection Program

1618 E. Helen St.  
P.O. Box 245137  
Tucson, AZ 85724-5137  
Tel: (520) 626-6721  
<http://www.irb.arizona.edu>

### HSPP Correspondence Form

**Date:** 06/11/09

**Investigator:** Lisa Lawrence, PhD Candidate, MS, BSN

**Advisor:** Pamela Reed, PhD

**Project No./Title:** 09-0458-02 An Examination of Nursing Work Engagement, Moral Distress, Educational Level, and Critical Reflective Practice

**Current Period of Approval:** 06/11/09-06/10/10

IRB Committee Information	
<input type="checkbox"/> IRB1 – IRB00000291	<input type="checkbox"/> Full Committee Review
X IRB2 – IRB00001751	1 <sup>st</sup> review –
<input type="checkbox"/> IRB3 – IRB00003012	Conditions met –
<input type="checkbox"/> IRB4 – IRB00005448	X Expedited Review – 06/11/09
<input type="checkbox"/> Administrative Action	<input type="checkbox"/> Facilitated Review –
FWA Number: FWA00004218	<input type="checkbox"/> Administrative/Exempt Review
Nature of Submission	
X New Project	<input type="checkbox"/> Continuing Review
<input type="checkbox"/> Amendment	<input type="checkbox"/> Protocol Deviation/Violation/Waiver
Documents Reviewed Concurrently	
X Project Review Form (dated 06/11/09)	Appr: Approved Act: Acknowledged Rev: Reviewed Appr
X Consenting Instruments: Disclosure Form (version 06/07/09) Re-consent: <input type="checkbox"/> All <input type="checkbox"/> Current Only <input type="checkbox"/> Not Required	Appr
X VOTF (dated 05/12/09)	Appr
X Recruitment Materials: Recruitment Script for flyers, emails & verbal presentations	Appr
X Surveys/Questionnaires: Demographic, Work Engagement, Work Related Exp, Reflective Practice, Reflection-Rumination,	Appr
Committee/Chair Determination	
X Approved as submitted	
Additional Determination(s)	
Expedite Approval (45 CFR 46.110 Category 7): Research on individual or group characteristics or behavior (including, but not limited to, research on perception, cognition, motivation, identity, language, communication, cultural beliefs or practices, and social behavior) or research employing survey, interview, oral history, focus group, program evaluation, human factors evaluation, or quality assurance methodologies	



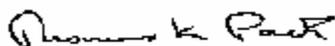
Lisa Lawrence

09-0458-02

Page 2

6/11/09

- **UMC Approval Requirement:** Prior to initiation of research at University Medical Center, approval from the UMC Scientific Authority must be obtained. Please contact Anita Crockett, RN, PhD or Valerie Evans for submission information ([acrockett@umcaz.edu](mailto:acrockett@umcaz.edu); 694-6427 or [vevans@umcaz.edu](mailto:vevans@umcaz.edu); 694-5049). A copy of the approval letter must be forwarded to the UA HSPP office for file completion.



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Thomas K. Park  
Co-Chair, IRB 2 Committee  
UA Institutional Review Board

TKP:les  
cc: Departmental/College Review Committee

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**Reminders:** Continuing Review materials should be submitted 30–45 days prior to the expiration date to obtain project re-approval

- Projects may be concluded or withdrawn at any time using the forms available at [www.irb.arizona.edu](http://www.irb.arizona.edu).
- No changes to a project may be made prior to IRB approval except to eliminate apparent immediate hazard to subjects.
- Original signed consent forms must be stored in the designated departmental location determined by the Department Head.

APPENDIX G  
SITE APPROVAL LETTER



1501 North Campbell Avenue  
Tucson, Arizona 85724



June 12, 2009

Lisa Lawrence, MS, BSN, PhD Candidate  
College of Nursing  
The University of Arizona  
100 Box 210203  
Tucson, Arizona 85721-0203

**RE: 09-0458-02 An Examination of Nursing Work Engagement, Moral Distress, Educational Level, and Critical Reflective Practice**

Dear Lisa:

Your request for access to Patient Care Services of the University Medical Center has been granted by the UMC Scientific Review Authority for the above titled project. The Nursing Research and EBP Committee reviewed your study and determined it to be feasible for implementation, causing no undue burden to nursing and bringing focus to an area that nurses deal with on a daily basis.

It will be important to inform the directors and managers so that they will know of your purpose and I will assist you in making those contacts. You have already provided us with your IRB approval and, as per HIPAA regulations, you will need to maintain confidentiality while in our environment as described in your previously signed UMC agreement. We are glad to be able to assist you in your research endeavors and you can contact me at (520) 594-6427 or e-mail me at [acrockett@u.arizona.edu](mailto:acrockett@u.arizona.edu).

**Period of Approval: 06/11/09 – 06/10/10**

Regards,

*Artha B. Crockett*

Artha B. Crockett, PhD, RN  
Director, Nursing Research  
Co-Chair, UMC Scientific Review Authority  
Chair, Nursing Research and EBP Committee



APPENDIX H

ELECTRONIC DISCLOSURE FORM/RECRUITMENT SCRIPT

(PAGE TWO OF THE SURVEY MONKEY QUESTIONNAIRE)

**Title of Project: ICU-RN Work-Related Experiences and Work Engagement**

- By selecting the below 'accept' button I confirm:
  - a.) I have read the first page of this survey questionnaire, titled 'ICU-RN Work-Related Experiences and Work Engagement,
  - b.) I have read the proposed study elements as outlined below, and
  - c.) I agree to participate in this study, I give my permission to allow the Investigator to use my information for research purposes.

- I understand because I am an ICU RN I am eligible for participation in this research study. There are approximately 200 RNs recruited for study participation.

- The purpose of this study, which is to examine ICU RN Work-Related Experiences and Work Engagement, has been disclosed and I understand there are no inherent risks involved by my participation in the study. While the study may provide generalizable for working nurses, it won't directly benefit me. However, I may enjoy the opportunity to reflect and comment on my work experiences in participating in this research.

- My voluntary participation in this study includes completion of an on-line questionnaire (e.g., a SurveyMonkey questionnaire). It will take approximately 20 minutes to complete the questionnaire. I will be asked to respond to multiple choice questions and provide written responses to some study questions (see following examples):

(a) Multiple Choice Question: I am enthusiastic about my job.

- Never
- Almost Never (A few times a year or less)
- Rarely (Once a month or less)
- Sometimes (A few times a month)
- Often (Once a week)
- Very Often (A few times a week)
- Always (Every day)

(b) Written Response Question: How do you reflect upon your practice experiences?

- I understand my voluntary study participation, refusal for participation, or decision to discontinue study participation at any time will have no effect on my employment status. All of the information that I voluntarily provide will remain anonymous and confidential.

- I understand SurveyMonkey employs multiple layers of computer protection and will de-identify my study responses prior to the responses being sent to the Principal Investigator (PI), Lisa A. Lawrence, Doctoral Candidate, College of Nursing. The PI will have access to the de-identified data, she will maintain this data in a locked cabinet in a secure location. Neither the researcher nor the hospital will know whether I personally participated in this study. My name will not be revealed in any reports that result from this research study.

(Continued Next Page)

- The de-identified data will be maintained indefinitely for potential further research purposes conducted by this researcher only.
- If I choose to voluntarily participate in the random raffle drawing, to potentially receive one of three \$50.00 gift certificates to a Target store, I will enter my name and email address at the end of the completed on-line questionnaire. This information will remain confidential. It will be used solely for the raffle drawing and will be known solely by the PI, who will maintain it in a separate, locked cabinet in a secure location. Raffle winners will be drawn at the completion of collecting questionnaire responses and all voluntarily provided names and emails will be confidentially discarded immediately after the raffle drawing. Winners will be notified by e-mail immediately after the raffle drawing and participant names and e-mail addresses will not be revealed in any reports that result from this research project.
- Any questions I have can be answered by the Principal Investigator, Lisa A. Lawrence, Doctoral Candidate, College of Nursing, University of Arizona. This researcher can be reached at (email) [llawrence@nursing.arizona.edu](mailto:llawrence@nursing.arizona.edu) or (phone) 520-398-5436. I can also access other resources to have my questions answered. I can call the University of Arizona Human Subjects Protection Program office at 520-626-6721 or visit the Human Subjects Protection Program via the web, <http://www.irb.Arizona.edu/contact/> (this can be anonymous).

**Accept**

APPENDIX I  
RECRUITMENT SCRIPT  
(E-MAIL, FIRST PAGE OF SURVEY MONKEY QUESTIONNAIRE,  
AND FLYER)

## RECRUITMENT SCRIPT

The following recruitment script (see next page) was presented in the following ways: (1) flyer placement on each of the three intensive care units (ICUs), (2) e-mail advertisements (at start and two-week's post the data collection process), and (3) PI verbalization to respective RN Unit Managers, who supported (versus encouraged) study participation. Additionally, this script was presented as the first page of the on-line SurveyMonkey questionnaire. A 'continue' option was provided on the first page of the electronic questionnaire screen, for those participants who chose to participate.

(Continued Next Page)

## RECRUITMENT SCRIPT

Title of Project: ICU-RN Work-Related Experiences and Work Engagement

As an ICU RN you are invited to voluntarily participate in the above-stated research study that is being conducted by Lisa A. Lawrence, a Doctoral Candidate at the University of Arizona, College of Nursing. The purpose of this study is to examine ICU RN Work-Related Experiences and Work Engagement.

If you agree to participate, your participation will involve answering on-line questions about work-related experiences and work engagement, e.g. you will access an on-line 'SurveyMonkey' questionnaire. It will take approximately 20 minutes to answer the on-line questions. You may choose to answer some or all of the questions. It is up to you whether you wish to participate in the study and you have the right to refuse participation at any time. Your participation, refusal for participation, or decision to discontinue participation at any time will have no effect on your employment status.

To access the electronic questionnaire you will need to enter from a computer, at a time convenient for you, the following weblink address: **(the PI will enter the weblink address here, once it is created)**. After you have entered the weblink you will be required to enter the following password, in order to access and answer the study's questions: **(the PI will enter the weblink password here, once it is identified)**.

SurveyMonkey employs multiple layers of protection to ensure that accounts remain private. Neither the researcher nor the hospital will know whether you personally participated. You can be assured that your participation will be anonymous and confidential. All provided information, de-identified by SurveyMonkey, will be maintained in a locked cabinet in the researcher's office. Your name will not appear on any reports that result from this project.

There are no known risks from your participation in this study. If you choose to participate in the study, to thank you for your time, you will become eligible to receive one of three confidential, randomly drawn \$50.00 gift certificates to a Target store. To become eligible for this random drawing you may choose to enter your name and email address at the end of the completed questionnaire. This personal information, should you choose to provide it, will be used solely for the purpose of the raffle and will be known solely by the Principal Investigator (PI). The PI will maintain all voluntarily submitted contact information in a locked cabinet in a secure place and this information will be confidentially discarded immediately after the raffle drawing. Raffle winners will be drawn at the completion of collecting questionnaire responses and winners will be notified by e-mail. Participant names will not be revealed in any reports that result from this research project.

At the conclusion of the study, after the data are analyzed, the Investigator will personally provide a report of findings to your unit.

(Continued Next Page)

Any questions you have will be answered, feel free to contact the Principal Investigator (PI) to tell her about questions, concerns or complaints about this research study. The PI, Lisa A. Lawrence, Doctoral Candidate, College of Nursing, University of Arizona, can be reached at (e-mail) [llawrence@nursing.arizona.edu](mailto:llawrence@nursing.arizona.edu) or (phone) 520-398-5436. If you want to talk with someone other than the Investigator or have questions about your rights as a research subject you may call the University of Arizona Human Subjects Protection Program office at 520-626-6721 or visit the Human Subjects Protection Program via the web (this can be anonymous), please visit <http://www.irb/Arizona.edu/contact/>

By completing the on-line questionnaire, you are giving your permission for the investigator to use your information for research purposes.

Thank you for your consideration of participation in this study.  
Lisa A. Lawrence, Doctoral Candidate, College of Nursing

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