The relationship among registered nurse's years of experience, credentials, work location, completed non-required continuing education hours, moral development and conceptual level

Agatha Custodio Dado Parks
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THE RELATIONSHIP AMONG REGISTERED NURSE’S YEARS OF EXPERIENCE, CREDENTIALS, WORK LOCATION, COMPLETED NON-REQUIRED CONTINUING EDUCATION HOURS, MORAL DEVELOPMENT AND CONCEPTUAL LEVEL

A Dissertation

Presented to

The Faculty of the School of Education

The College of William and Mary in Virginia

In Partial Fulfillment

Of the Requirements for the Degree

Doctor of Education

by

Agatha Custodio Dado-Parks

August 1999
THE RELATIONSHIP AMONG REGISTERED NURSE'S YEARS OF EXPERIENCE, CREDENTIALS, WORK LOCATION, COMPLETED NON-REQUIRED CONTINUING EDUCATION HOURS, MORAL DEVELOPMENT, AND CONCEPTUAL LEVEL

By

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Dedication

This is dedicated to my parents, Gumersindo Arceno Dado, U.S. navy, retired, and Edith Zapanta Custodio Dado, registered nurse. While in the Philippines, my father enlisted in the United States Navy, May, 1959. My mother attended the School of Nursing at the University of the Philippines and received her diploma in 1960. They were married in 1962 and moved to the United States (Hawaii) in 1967.

When they moved to the United States, they knew that they had the opportunity to ensure that their children would become college-educated people. I am grateful for the personal sacrifices they endured. They did a great job in teaching me how to be a strong, intellectual, and self-sufficient woman. My son, Ryan, couldn't ask for more loving grandparents. I know they are proud to see how well their four children have “turned-out”, but the recognition and praise is deserved by them.

I would also like to dedicate this to four very special people in my life. My son, Ryan, for teaching me how to play and for being very patient with my schedule. My best friend and fiancée, Paul Savage, Jr., who has lovingly stuck by my side (thank you). Matthew and Alyson Savage, my soon-to-be stepchildren, who have been a wonderful addition to my family. I thank you all for enriching my life and allowing me to complete a dream I have had since I was a child. Each one of you made this work worth the hardship. In return, I plan to give each one of you my support, mentorship and unconditional love in all your life endeavors. Thank you for being my family.
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ABSTRACT

Limited research has been done regarding the relationship among registered nurses years of experience, credentials, work location, completed non-required continuing education hours, moral development, and conceptual level. This study's theoretical framework is based on the cognitive-developmental theory domains of moral and conceptual development. A descriptive and correlational research design was used to discover the relationship between variables. One hundred registered nurses were selected from a hospital in southeastern Virginia. Participants completed a general questionnaire, Defining Issues Test-2 and the Paragraph Completion Method. Findings resulted in failing to reject the null hypotheses. There was no statistically significant correlation among the variables. The findings may be related to low sampling, unclear understanding of terms and/or participant's demographic profile being more similar than different.

Agatha Custodio Dado-Parks
The College of William and Mary
The Relationship Among Registered Nurse's Years of Experience, Credentials, Work Place, Completed Non-Required Continuing Education Hours, Moral Development, and Conceptual Level
CHAPTER 1
INTRODUCTION

Statement of the Problem

This study will investigate the relationship among years of experience, credentials, work location, completed non-required continuing education hours, moral development, and conceptual level of registered nurses. The relationship between a nurse and client should be one of trust and caring. Ideally, the client will believe the nurse can be trusted and competent in the skills needed to care for patients. Nurses are to convey a sense of caring and empathy in the work they perform for a client. Nurses are confronted with several problem-solving and moral dilemmas. The range of potential issues can be varied and complex. The complexity of issues require critical thinking. This course of action depends on assessing a number of alternatives for the probability of the consequences desired, then the skill needed for identification and decision requires a high order of perceptual and cognitive ability and knowledge (Johnson, 1966).

The type and amount of education to prepare for professional nursing practice continues to be a major policy issue (Johnson, 1988). At the present time, there exist three educational programs that prepare nurses for the professional practice: the diploma program, the associate degree program, and the baccalaureate program. Proponents believe that a more technical and complex health care system requiring nurses to practice in a variety of settings and assume diverse roles calls for the baccalaureate degree as the minimal preparation for
professional practice (Johnson, 1988). Opponents believe that no evidence exists to support the claim that graduates from the three types of programs practice differently, and, therefore, no distinction should be made between them (Johnson, 1988).

Within the last ten years researchers began to study the relationship between nursing moral reasoning and educational preparation (Ketefian, 1981; Murphy, 1976) but these studies were limited to baccalaureate nursing students in the northeast (Munhall, 1979). Munhall (1979) believes that the level of nursing education will impact and influence moral decision making abilities.

Developmental differences related to conceptual level have also been investigated. In a study by Khalili and Hood (1983), it was noted that individuals with more education function at higher levels of conceptual thought. The focus of this study is to gain information about the relationship among nurses’ years of experience, credentials, work location, completed continuing education hours, moral development and conceptual level. The findings will provide recommendations for the training and supervision of nurses.

Justification for the Study

Three concerns will be discussed that justify the need for exploring factors related to the cognitive development of registered nurses: the need to enhance client care, developmental benefits for nurses, and nursing program development.

Enhance Client Care

In today’s modern technology, there is a growing complexity within the delivery of the health-care system that requires nurses to challenge their own ethical problem solving abilities (Duckett & Ryden, 1994). Breakthroughs such as organ transplantation occurred in medical treatment; epidemics such as AIDS and teenage pregnancy continue; exposure to clients who lack access to health; and the
pressures for cost containment require difficult decisions regarding the allocation of resources (Duckett & Ryden, 1994). All these factors challenge the cognitive capacity of nurses to make ethical and medical choices in order to critically establish the next order of care for a patient.

The distinction between professional and technical skills derives primarily from the nurses' knowledge and ability to problem solve nursing situations (Johnson, 1966). Johnson (1968) differentiated between technical and professional nurses. The technical nurse was described as having a storage of knowledge in the form of descriptive empirical generalizations, which enables the practitioner to understand typical and concrete problems. The professional nurse was described as having a level of knowledge which goes beyond empirical generalizations to theoretical constructs and themes (Johnson, 1968). This type of nurse is described as intellectually skillful. The most important tools and skills used are perceptual acuity and conceptual ability.

It has been noted that the custodial nursing care needs delivered by the nurse to the client are similar between the technically and professionally trained. However, the professionally trained nurses have been described as providing more on-the-spot teaching to clients, group teaching, anticipating long-term discharge planning needs, participation in team conferences, discussion in areas of concern, initiation of a plan that promotes health maintenance, addressing prevention of health problems, servings as a patient advocate, and works with the staff to enhance the client care.

Developmental Benefits

The construct of conceptual level describes the normal development of an individual interacting with the environment (Khalili & Hood, 1983). This interaction is based on the person's level of cognitive complexity and interpersonal style. A person with a low conceptual level is described as needing high structure and absolute rules (Khalili & Hood, 1983). In contrast, individuals with higher
conceptual levels are capable of attending to a larger variety of stimuli and adapt to their environments to suit their needs.

Nurse educators have a continued obligation to facilitate student growth toward principled level of ethical/moral reasoning. It has been found that nurse educators have experienced a strong sense of responsibility to ensure the adequacy of moral reasoning and a sound base of ethical principles from which nursing graduates can work (Feather, 1985). Yet it has been reported that little control has been placed to integrate moral development teaching into nursing curricula. Feather (1985) believes that educators find it easier to abstractly discuss complex moral issues in the classroom in hypothetical situations. What Feather (1985) has noted are students become frustrated because the nursing program has not provided the actual methods used to resolve moral dilemmas. Nursing faculty should teach moral development and identify its linkage with other variables as a means of raising the level of moral development in nursing students (Felton & Parsons, 1987).

Higher levels of moral decision making require critical thinking. Felton and Parsons (1987) noted that not only does principled decision making require a higher level of moral reasoning it also requires risk-taking. Nursing educators are responsible for preparing practitioners for many dilemmas, varied viewpoints, and conflicts encountered in nursing practice (Felton & Parsons, 1987). For example, nurses are faced with multiple dilemmas that may challenge their belief system, such as caring for a drunk driver that has caused an accident that involved a child; a pregnant teenager; a drug-addicted patient; or a homosexual patient diagnosed with AIDS. Individuals operating on a higher or more abstract conceptual level are capable of attending to a larger variety of stimuli and can organize their actions in a more varied manner (Khalili & Hood, 1983).
Nursing Program Development

Johnson (1988) has indicated that one of the major public policy issues confronting nursing concerns the educational preparation of nurses for entry into professional practice. Johnson's (1988) study suggests that performance differences exist between baccalaureate, associate degree and diploma nurses. The findings of this study indicated that nurse educators at the baccalaureate level need to examine their curriculums and learning experiences related to leadership. Johnson (1988) also mentioned that consideration needs to be given to the readiness of young, inexperienced nurses. Recommendations include planned orientations and attention to transition into professional nursing roles that are matched with the nurse's academic preparation.

Theoretical Rationale

The cognitive paradigm advances from defining development as the acquisition of responses to a definition that includes changes in the structuring of thoughts and behavior (Achenbach, 1986). Blocher (1980) maintained that one of the most significant contributions of developmental theory is its emphasis on maintaining the essential integrity of the human experience. Psychological changes that are viewed as developmental are also described as transitional, persistent, and complex.

There appears to be some assumptions of the cognitive-behavioral theories. One of the assumption of this model is that behavior, both problem and adaptive, is learned. Cormier & Cormier (1991) noted that behavior is assumed to be developed and maintained by external events or cues, external reinforces, or internal processes such as cognition. It had been noted that this assumption expresses the influence of the early behaviorists and the recognition of the importance of cognition in the process of development as well as acknowledging that development is based on each individual's different learning history, the unique experiences provided by the environment, and the individual's cognitive understanding of the world.
Cognitive developmental theories share several assumptions:

1) Human motivation towards mastery and competence is intrinsic.

2) Cognitive development occurs in stages or structures, and each stage or structure represents the individual's current style of making meaning of experiences.

3) Movement from one stage to another represents qualitative changes in the individual's meaning-making system rather than quantitative changes.

4) Movement from one stage to another occurs in a hierarchical fashion.

5) Movement from one stage to another occurs from the least complex to the most complex stages, and movement is irreversible.

6) Growth is dependent upon the interaction between the person and the environment.

7) Human behavior is a function of experience and level of cognitive complexity.

8) Cognitive development includes both physiological and psychological transformation.

9) Development occurs along specific domains (e.g., moral, emotional, intelligence) rather than across the entire realm of domains.

10) People operate in the stage they most frequently use, however, no one person is completely in one stage at any particular time.

11) Cognitive development is culturally universal (McAdams, 1988).

Moral Developmental Theory

Kohlberg believed that it is the individual who determines what is right and what is wrong (Rest, 1994). Rest (1994) maintained that the individual interprets situations, derives psychological and moral meaning from social events, and makes moral judgments. Moral development argues that individuals
must pass through increasingly differentiated stages of moral development in a sequential manner. Kohlberg (1981) believed that moral values are acquired through learning, as the ability to think and reason become evident.

Like other stage theorists, Kohlberg claimed that moral development was sequential and dependent on the individual’s level of cognitive development (Nokes, 1989). According to Kohlberg’s theory of moral development, there are six stages. Principled moral development is the highest level to attain. Kohlberg found that people pass through each stage at different rates; research suggests that many people fail to reach the higher levels called the “principled” or post-conventional (Coon, 1992). People functioning at the principled level or moral reasoning articulate moral principles that include respect for the dignity, values, and rights of others (Felton & Parsons, 1987). Nokes (1989) noted that age and educational preparation were thought to facilitate moral development; individuals with more formal educational preparation often function at higher levels of moral reasoning.

Research has indicated that education is the strongest correlate of advanced levels of moral reasoning. It is apparent that moral reasoning judgment increases significantly when the individual is in school (Felton & Parsons, 1987).

**Conceptual Developmental Theory**

Hunt (1975) maintained that people at higher levels of conceptual complexity have a greater capacity for acting responsibly and adapting to a changing environment. Conceptual level is recognized as a cognitive domain which is related to critical thinking and the concepts a person uses to understand and make meaning of experience and interpersonal relationships. Hunt originally applied Conceptual Systems Theory to the study of the school environment. There are three conceptual levels that range on a continuum from concrete (low conceptual level) to abstract (high conceptual level).
According to Harvey, Hunt & Schroder (1961), the conceptual systems approach view personality development as an interactive function of the person's stage of personality development and the environmental conditions the individual encounters. The ideal level of development was assumed to occur when the environmental conditions facilitated the "conceptual work" necessary for the person's conceptual growth (Hunt, 1970). Hunt also noted that when the environment was not conducive to personal growth, then some form of developmental delay might occur.

It is believed that individuals at lower conceptual levels are seen as requiring an environment that is highly structured and that provides absolute rules (Khalili & Hood, 1983). The individual with a higher conceptual level is able to address a larger variety of stimuli and can organize their environment to suite their requirements.

**Definition of Terms**

**Registered Nurse (RN):** Individual who has been licensed by the State Board of Nursing to practice as a registered nurse.

**Conceptual Systems Theory (CST):** A conceptual system is a schema that provides the foundation by which a person relates to the environmental events s/he experiences (Harvey, Hunt, and Schroder, 1961).

**Conceptual Level (CL):** "A personal characteristic, indexing both cognitive complexity (differentiation, discrimination, and integration) as well as interpersonal maturity (increasing self-responsibility). A person at a higher Conceptual Level is more structurally complex, more capable of responsible actions, and, most important, more capable of adapting to a changing environment than a person at a lower Conceptual Level" (Hunt, 1975, p. 218).

**Moral Development:** A six stage developmental sequence that interprets how an individual determines what is right and what is wrong (Rest, 1994). Rest (1994) maintains that simple stages precede complex ones in a logical sequence.
Research Hypotheses

This study will correlate the scores nurses receive on the DIT, PCM and information obtained from the demographic profile. Nurses with more years of experience, more formal education and more completed continuing education hours are predicted to function at higher moral and conceptual levels.

Population and Sample

The population used for this study will consist of 100 randomly selected registered nurses from a hospital located in Southeastern Virginia. These nurses will complete three measures, the DIT, the PCM and the demographic profile, which will include personal, work and educational information.

Data Gathering Procedures

A survey format will be used for data collection. The three instruments will be hand delivered to the 100 registered nurses. Each subject will receive the following: a letter that explained the nature of the study; a letter asking for participation; a written consent form, and; a returned signed consent form indicating the subject’s consent. The instruments used to gather data will be a General Questionnaire, Paragraph Completion Method (PCM), and the Defining Issues Test (DIT).

Limitations of the Study

There are several limitations that exist for this study. First, in this correlational research design, correlations obtained cannot establish cause-and-effect relationships between the variables that are correlated (Gall, Borg & Gall, 1996). When a correlation is found to occur between two variables other factors may affect the results, such as artifacts which occasionally cause the relationship rather than the independent variable(s) (Gall, Borg & Gall, 1996). Second, “many researchers have criticized relationships studies because they break down complex abilities and behavior patterns into simpler components”. This oversimplification is inherent in correlational design studies (Gall, Borg & Gall,
Third, when using correlational statistics to identify variables related to complex behavior patterns or abilities, it is the success in many of the complex activities that interest us (Gall, Borg & Gall, 1996). For example, a study that attempts to find variables that correlate with the moral development of registered nurses might fail because of the lack set characteristics of all registered nurses' moral development.

Ethical Considerations

All participants in this study will be adults who are professionals working in the healthcare field. A consent form will be enclosed in all the packets; along with a return consent form acknowledging their voluntary participation.

All subjects will be informed of the privacy and confidentiality of their responses. Codes will be assigned to each individual to enhance confidentiality. All personal data that makes reference to the participant will be destroyed. Also, all participants will be given an option to receive a summary of the research findings along with the option of meeting with the researcher individually, if requested.

If the participants experience any adverse experiences as a result of participating in this study, a referral to individual counseling will be made for the participant. Participants will be informed of this option in writing.

Summary

In this chapter, the problem was described and identified, justification was provided to conduct the study, the theoretical basis for the study was discussed, definitions of the terms were provided, research questions were proposed, the description of the sample was identified, data gathering steps were illustrated, limitations to the study were identified, and the ethical concerns were addressed.
CHAPTER 2
REVIEW OF THE LITERATURE

Introduction

In the preceding chapter, developmental theory was suggested as a framework for describing characteristics of nurses. A discussion was presented regarding nurses’ academic preparation and years of work experience and the relevance of exploring these variables in relation to moral and conceptual development. This chapter introduces research regarding cognitive developmental theory, nurse experience/credentials, moral development and conceptual level.

Nurse Experience/Credentials

At present, there are three types of programs that prepare individuals to practice as registered nurses: diploma, associate degree, and baccalaureate degree schools. Although these programs are different in terms of length, nature of organization of content, and learning experiences, they share a common objective: to prepare practitioners to provide direct services to patients (Johnson, 1966). There is limited current literature that provides information regarding nurses’ academic preparation and years of experience and any relationship to their moral and conceptual development.

Currently, the literature describes the associate’s degree and diploma nurse technically trained. The baccalaureate degree nurse is described as professionally...
Arguments have been made regarding the differences among these three types of nursing preparations. The main differences were noted in problem solving and leadership abilities, as discussed below.

According to Hover (1975), diploma and degree nurses do not generally function alike. Her study discovered a few similarities between the two groups and a larger difference when compared with patient care preferences, professional attitudes, and career plans. In this research, the participants consisted of 29 “diploma plus” graduates (diploma plus graduates did not go on to college), 20 degree nurses, and 54 in the diploma group (these nurses took some college courses after completing their diplomas).

It was reported that about a quarter of the diploma nurses preferred patients with particular diagnostic assignments. Hover (1975) found that the proportion of nurses who preferred patients who could actively participate in their care was greatest among the degree nurses and least among the diploma graduates. It was also found by Hover (1975) that diploma plus and degree graduates selected more than twice the number of patients requiring teaching and supportive care interventions as did the diploma graduates.

When asked to indicate the position they planned to hold in the future, diploma plus nurses were the highest in selecting nursing service position. This selection was lowest among degree nurses. As education increased, nurses had a tendency to aspire to positions in nursing education or research (Hover, 1975).

Johnson (1968) differentiated between the technical and professional practitioner. The literature indicated that the technical practitioner has a storage of which a fair
amount of knowledge has been gained and over which technical control is possible.

Johnson (1968) goes on to say that the technical practitioner is capable in the methodologies, techniques, and approaches.

Throughout the literature the associate degree and diploma nurse are described as technically trained. This type of practitioner makes judgments, but these judgments tend to be involved with the questions of when, where, and how rather than what and why. Johnson (1968) noted the professional practitioner to have a larger storage of nursing knowledge, which goes beyond empirical generalizations to theoretical constructs and schemes. Thus the practitioner is able, "to be pointed and selective in her observations and interpretations; to deal cognitively with the diffuse, the novel, and the unique; to predict the future course of events and to prescribe a course of intervention action which might be expected to change that’s sequence in desired ways and towards specific outcomes.” The professional practitioner is also described as intellectually skillful. The most important tools and skills used are perceptual acuity and conceptual ability. This practitioner is concerned with decision making as primary responsibility, with the activities revolving around the decision making process of assessment, prescription for action, and evaluation of outcomes (Johnson, 1968).

A study by Gray, Murray, Roy, and Sawyer (1977) found that there were differences in practice between technical and professional nurses. The purpose of the study was to determine if graduates of technical and professional programs would perform differently in specific nursing care scenarios and if differences were found, what they were.
The results of the study supported the hypothesis that there are differences in the performances of graduates from the technical and professional nursing programs at the University of Vermont. These differences were noted in the following areas: technical skill, teaching, leadership, giving support to the patient and family, interviewing for assessment purposes, actions in structured situations, and actions following observation.

In the areas of patient care, the associates degree (AD) nurse's primary concerns were those related to meeting the physical needs of patients. In contrast, the bachelors degree (BD) nurses were concerned with the meeting the psychological needs of the patients. In addition, the BD subjects showed concern with determining the cause of the patient problems as preventative measures. According to the authors, the AD subjects showed concern for the management of functions such as providing equipment and supplies, updating nursing care plans; the BD subjects showed concern for leadership functions such as teaching staff and initiating patient education programs. In this study, interesting differences were suggested in the scope of function that should be expected from BD graduates in the areas of teaching, anticipatory guidance, leadership, emotionally supportive actions, nursing process, use of knowledge, use of extra time, and relationship with co-workers (Gray et al., 1977).

In a study by Nelson (1978), baccalaureate, diploma, and associate degree nursing program graduates were evaluated regarding their perception of their competency in technical, communicative, and administrative skills and supervisors' perceptions of their competency. Differences were found among graduates' perceptions of their competency as well as in supervisors' perceptions of graduates' competency in skills examined.
Twelve null hypotheses were tested. The first four concerned graduates, the second group of four null hypotheses concerned supervisors, and the final four related to the mean difference of graduate supervisor perceptions of the graduate competencies. Data was obtained by means of a 38-item instrument, the Nurse Competency Inventory (NCI) which was developed by the investigator. The three areas of competency were technical skills, communicative skills, and administrative skills. A one-way analysis of variance was applied to the data and an $F$ ratio was obtained. Significance was set at $p = .05$. The $F$ tests regarding mean difference of graduate-supervisor perceptions of the graduates' competencies were significant.

According to Nelson (1978), as groups, baccalaureate, associate degree, and diploma nursing graduates perceived their degree of competency differently. Nelson (1978) also discovered that, as groups, supervisors of baccalaureate, associate degree, and diploma nursing graduates also perceived the graduates' degree of competency differently.

DiMarco and Hillard (1978) conducted a study which compared associate, diploma and baccalaureate degree nurses' state board test scores, quality of patient care, competency rating, supervisor rating, subordinates' satisfaction with supervision and self-report job satisfaction scores. The subjects for this study consisted of 25 baccalaureate degree nurses from five programs and 44 technical nurses from 4 associates degree programs. A 300 bed Midwest hospital employed the subjects with university affiliation providing facilities for medical, nursing and allied health education.
All subjects were in the role of team leader. The measure used for this study consisted of the following: State Board of Nursing Test Pool examination; Nursing audit of care plans; Competency as measured by the Competency Rating Scale (CRS); Professionalism in the areas ethics, job performance, responsibility, and presentation as a professional. Team Leader Responsibility as measured by history gathering, diagnosing, adjusting and implementing nursing care plans, and discharge planning; Assignment of Care which included knowledge and skill for assigning nursing duties to appropriate level of nursing personnel; Team Conferences which involved conducting conferences with team members to discuss patient care needs; Walking-Planning Rounds which involve observing patient behaviors and anticipating needs; Change of Shift Report which involves communicating to the next shift personnel the patient report; Supervisor Ratings as measured by the Performance Appraisal Report; Subordinates’ Satisfaction With Supervision as measured by the Job Descriptive Index (JDI), and Team Leaders’ Job satisfaction as measured by the JDI.

DiMarco and Hillard (1978) found that that despite that the technical nurse brings fewer years of education and training to the role as a team leader, the level of performance, supervisors’ rating and subordinates’ satisfaction with supervision as measured in this study seems to be as good as the 4-yr baccalaureate nurse (DiMarco & Hilliard, 1978). This study indicated that the associate degree and diploma programs prepared students as well as the baccalaureate nursing program.

DiMarco and Hillard (1978) also reported, that both groups seem to be as satisfied with various aspects of the job. The additional academic preparation of a baccalaureate nurse does not seem to provide an “edge” over the technical nurse, at least not in terms...
of team leader. According to the authors, it may be that the type of preparation received in the baccalaureate program manifests itself in superior performance in other nursing positions.

McCloskey (1981) conducted a literature review on the effectiveness of nursing education on job effectiveness. The literature selection was from three areas: competency, performance, and quality of care. The author found contradictory evidence on the value of baccalaureate nursing education. In a number of the studies, the baccalaureate degree nurse performed better or differently from the associates degree or diploma nurse (McCloskey, 1981). McCloskey (1981) also reported that the baccalaureate degree nurse had more leadership and supervisory skills (Jacobs, 1980; Meleis & Ferrell, 1974; Moore, 1967), was more care-oriented (Bullough & Sparks, 1975), more accountable (McQuaid & Kane, 1979; Moore, 1967), had more knowledge (Davis, 1972, 1974; Mandrillo, 1970), anticipated long-term needs (Gray et al., 1977; Jacobs, 1980), did planning and teaching (Jacobs, 1980; Schwirian, 1977, 1978, 1979), and considered the patient’s psychosocial need (Waters et al., 1972).

In some of the studies, McCloskey (1981) discovered that the diploma nurses’ performed better or differently. The diploma nurse performed more functions in practice (Davis, 1973), took physiological and cure-oriented actions (Bullough & Sparks, 1975; Waters et al., 1972), and had more self-confidence (Nelson, 1978). McCloskey (1981) reports that the associates degree nurse did not perform better than the diploma or baccalaureate degree nurse in any study did.

McCloskey (1981) found some methodological or conceptual weaknesses in the research. The analysis showed: (a) most studies compared baccalaureate degree nurse

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with associate degree nurse; few compared the baccalaureate degree nurse with several types of nurses; (b) many studies evaluated the perception of group performance rather than individual performance; (c) limited testing instruments are available; (d) several studies were found in Dissertation Abstracts and their findings are not widely known, and; (e) limited studies have included or controlled for multiple job setting variables and individual differences that affect job performance.

Johnson (1988) conducted a meta-analysis investigating the differences in performances of baccalaureate, associate degree, and diploma nurses. Johnson’s meta-analysis supported the argument that differences exist between nurses prepared in baccalaureate (BSN) degree and associates (AD) degree or diploma programs. It was found that BSN nurses generally perform professional nurse behaviors at a level above AD and diploma nurses. Also revealed was that there were no differences between AD and diploma nurses. The differences between professional and technical nurses can also be noted in the nursing performance of two groups of nurses. As expected, Johnson (1988) found that BSN nurses perform better than technical nurses in behaviors identified with professional education and practice; communication, knowledge, problem solving, professional role, and teaching. Technical nurses, in this analysis, tend to be more bureaucratically oriented and perform technical skills better.

Johnson (1988) was surprised to reveal that professional nurses’ autonomy and leadership behaviors did not differ from those with an AD or diploma in nursing. Johnson (1988) believed that although the variations in the magnitude of the effect for BSN education are seen across student features, the effect is not totally dependent upon whether the research was published, the date of the research, the region of the country,
or the rigor of the research design and the selection procedures. Johnson (1988) believed it is possible to conclude that BSN preparation does influence professional nursing practice.

However, Johnson (1988) also noted that the effect diminishes for professional nurses during their first years of practice and for those practicing in the hospital setting. The contention of Kramer (1981) that BSN nurses need an initial adjustment period and work experience to make the transition from the academic setting to a professional clinical nursing role appears to be verified (Johnson, 1988). Also, Johnson (1988) noted that the initial practice setting of the majority of BSN graduates is in the hospital. Perhaps the highly structured hospital setting inhibits the practice and expression of professional nursing behaviors.

Although the technical group resulted in greater variation in the size of the effect across study features, the conclusion that no differences exist between AD and diploma nurses is supported (Johnson, 1988). It was also found that AD graduates, like BSN graduates, need the one-year transition time to the work setting. Johnson (1988) has found that these findings are consistent with those reported by Dennis and Janken (1979) that the performance of AD and diploma nurses were similar, but different from BSN nurses. However, unlike the findings of this study, Dennis and Janken concluded that BSN nurses tended to outperform AD and diploma nurses in activities requiring leadership (Johnson, 1988). In McCloskey’s (1981) investigation, no differences were found in performance among nurses in different education programs.

The review of the literature contained central findings related to nurses’ experience/credentials. There continues to be controversy regarding the appropriate
level of nursing education. Studies have supported that the bachelor degree nurse is best prepared to manage the complicated client care needed in today's health care environment. Other studies have suggested that there are no significant differences regarding the diploma and associate degree prepared, as compared to the bachelor's prepared nurse.

**Cognitive Developmental Theory**

Early behaviorist research limited the concept of development to learning concepts of operant and classical conditioning. Individuals learn to associate stimuli responses and integrate that understanding into their developmental mind-set. Archenbach (1986) noted that development could be seen as the sum total of this association. The cognitive paradigm advances from defining development as the acquisition of responses to a definition that includes changes in the structuring of thoughts and behavior (Achenbach, 1986).

However, Blocher (1980) maintained that one of the most significant contributions of developmental theory is its emphasis on maintaining the essential integrity of the human experience. Changes that are viewed as developmental are also described as transitiuational, persistent, and complex. These cognitions, emotions, and overt behaviors occur over time and relate to the individual's personal experiences. The relationships among these component parts are viewed as reciprocal and rooted in transactions with the environment (Blocher, 1980).

In developmental theory, individuals are seen as active, information-seeking, and information-processing organisms who have a strong intrinsic motivation to find logical order, personal meaning, and reasonable predictability in their physical and
psychological environments (Blocher, 1980). Cognitive developmental theories share several basic assumptions:

1) Human motivation towards mastery and competence is intrinsic.

2) Cognitive development occurs in stages or structures, and each stage or structure represents the individual’s current style of making meaning of experiences.

3) Movement from one stage to another represents qualitative changes in the individual’s meaning-making system rather than quantitative changes.

4) Movement from one stage to another occurs in a hierarchical fashion.

5) Movement from one stage to another occurs from the least complex to the most complex stages, and this movement is irreversible.

6) Growth is dependent upon the interaction between the person and the environment.

7) Human behavior is a function of experience and level of cognitive complexity.

8) Cognitive development includes both physiological and psychological transformations.

9) Development occurs along specific domains (e.g., moral, emotional, intelligence) rather than across the entire realm of domains.

10) People operate in the stage they most frequently use; however, no one is completely in one stage at any particular time.

11) Cognitive development is culturally universal (McAdams, 1988).

According to the literature, development is based on each individual’s different learning history, the unique experiences provided by the environment, and the
individual's understanding of the world. There is not one single developmental theory is 
an adequate overall framework within which to comprehend human growth. The 
developmental perspectives of five of the chief developmental theorists are presented to 
provide an expanded theoretical framework.

According to a review by Sprinthall (1978), Dewey originally formed the idea that 
children and teenagers move through stages of development. Children and teenagers 
grow and develop in a series of qualitatively distinct, unique, and separate stages. 
These stages are succeeding stages which builds upon and is dependent upon the prior 
stage.

Piaget has been one of the noted figures concerning the cognitive growth and 
development of individuals. Piaget believed that children pass through distinct stages 
of intellectual development (Coon, 1992). His observations led him to believe that a 
process of assimilation and accommodation facilitates intellectual growth. Assimilation 
refers to using existing patterns in new situations. Accommodation is the act of using 
existing ideas and modifying them to fit new requirements. Piaget's stages of cognitive 
development build upon each other with one stage of development needing to be 
accomplished prior to movement to the next stage (Coon, 1992).

Kohlberg, another developmental theorist, based his work on the area of moral 
development. Kohlberg was interested in how individuals think about social problems. 
Kohlberg substantiated a theory that the process of making judgements formed through 
six developmental and sequential stages. These stages were parallel to that Piaget's 
cognitive developmental stages.
Moral Development

Lawrence Kohlberg (1981) believed that moral values are acquired through learning as the ability to think and reason becomes evident. Kohlberg identified three levels of moral development. The first level is the preconventional level. Consequences of actions, such as punishment, reward, or an exchange of favors determines moral thinking at this level. In the second level, conventional, the actions are guided by a desire to conform to the expectations of others or to the socially accepted rule and values. The third level, postconventional level, illustrates advanced moral development. Self-accepted moral principles are what guides behavior at this level.

Kohlberg and his associates hypothesized that people advance through the stages at different rates and that people fail to reach the “principled” postconventional stage (Coon, 1992). The preconventional stages (1 and 2) are most characteristic of young children or older delinquents (Nelson, Smith, & Dodd, 1990). Conventional group-oriented morals of stages 3 and 4 are characteristic of older children and most of the adult population. Kohlberg estimated that postconventional morality, representing self-direction and higher principles, is achieved by only about 20 percent of the adult population (Coon, 1992).

Ketefian (1980) conducted a descriptive study to investigate the relationship between critical thinking, educational preparation, and moral development of nurses. The instruments used by the author consisted of: the Glaser Critical Thinking Appraisal Test was to measure critical thinking; information on nurses’ educational preparation
from personal information sheets, and moral judgment was measured by Rest's Defining Issues Test (DIT). The following hypotheses were tested:

I. There is a positive relationship between critical thinking and moral reasoning.

II. There is a difference in moral reasoning between professional and technical nurses.

III. Critical thinking and educational preparation together will predict greater variance in moral reasoning than either variable taken separately.

The hypothesis that critical thinking would be positively related to moral judgement was tested by Pearson product moment correlation; the obtained coefficient of .5326 was significant at the .001 level. The hypothesis that there would be a difference between professional and technical nurses' moral judgements was tested through a one-way analysis of variance. The $F$ ratio ($F[1,77] = 9.6$) was significant beyond the .01 level. Ketefian's (1980) data also supported the hypothesis that critical thinking and education preparation would predict greater variance in moral judgement than either variable singularly [multiple regression analysis ($F[2,75] = 18.3, p=.01$)]. She also noted that critical thinking and education together accounted for 32.9 percent of the variance in moral judgement.

Felton and Parsons (1987) conducted a study of 227 BSN and 111 Master's degree nursing students to determine the influence of the level of formal education on three selected areas: ethical/moral reasoning, attribution of responsibility, and ethical/moral dilemma resolution. This study revealed that graduate students reasoned at higher levels than undergraduate students did.
One of the basic assumptions in the study of moral development is that people functioning at the principled level of moral reasoning live by a code of moral principles which includes respect for the dignity, values, and rights of others (Felton & Parsons, 1987). This is found relevant to the nursing profession and in nursing practice. It has been noted that all nursing situations involve some level of ethical decision making, a process described as cognitive (Bergman, 1973).

It has been inferred that education has been identified as the strongest correlate of advanced levels of moral reasoning. The research has supported that moral reasoning judgement increases significantly when an individual is in school. When an individual discontinues his or her formal education, levels of moral reasoning tend to crystallize (Rest, Davison, & Robbins, 1978). Crisham (1981) found that nurses with higher levels of education reasoned at higher levels than well-prepared nurses. It was also found that nurses at the AD level used lower stage or conventional level responses to nursing situations than did nurses with BSN or higher degrees.

Crisham's (1981) findings illustrate that master's degree nurses demonstrate significantly higher (p<.01) levels of moral development than BSN nurses. Felton & Parsons (1987) noted that Sleicher's (1978) study which included a sample of 16 "expert" nurses who were members of the American Academy of Nursing (of which 75% had earned doctorates) were more "moral" in their decision making than less educated subjects. More than 60% of the "expert" group were able to identify an ethical dilemma while only one third of the staff nurses with BSN degrees or
less could identify the ethical/moral dilemmas. Frome (1982) believes that nurses recognize ethical dilemmas exist but do not have the educational preparation for solving in an ethically responsible manner.

Felton and Parsons (1987) hypothesized that undergraduate and graduate nursing students would differ in their ethical/moral reasoning and attribution responsibility. It was further hypothesized that undergraduate and graduate nursing students would differ in the number of dilemmas resolved. The instruments used were the Defining Issues Test (DIT) and the Attribution of Responsibility Instrument (AR). The overall index of ethical/moral reasoning indicated that the graduate students had a higher mean score (M=28.21) than the undergraduate students (M=25.78). This finding suggests that formal education has an impact on overall ethical/moral reasoning levels as graduate students scored significantly higher than undergraduate students ($t = 3.00, p = .002$). This result supported previous research findings that formal education is a significant variable in the development of ethical and moral reasoning (Felton & Parsons, 1987).

Felton & Parsons (1987) noted that ethical/moral decision making requires critical thinking in order for responsible principled reasoning to take place. Further, principled decision making at higher levels of moral reasoning requires risk-taking.

Nursing research literature has generally supported Kohlberg’s theory (Omery, 1983). In the Felton & Parson’s (1987) study it was suggested that “nursing faculty should teach moral development and identify its linkage with other variables as a means of raising the level of moral development in nursing standards” (p.10). Mahon and Fowler (1979) argued that “Kohlberg’s theory provides a useful tool in the clinical education of nursing students. It is equally applicable to nurses in practice” (p. 12).
Nokes (1989) also cited that Murphy (1981) took the position that it is necessary to have professional nurses at a postconventional level of moral reasoning because conventional level reasoning is not as functional (p.64). Further, Kohlberg’s theory effectively provides a model for teaching (Nokes, 1989).

**Conceptual Development**

Conceptual Systems approach viewed personality development as an interactive function of the person’s level of personality development (or stage) and the environmental conditions encountered (Harvey, Hunt & Schroder, 1961). Optimal development was assumed to occur when the environmental conditions facilitated the “conceptual work” necessary for the person’s conceptual growth (Hunt, 1970). Hunt (1970) noted that when the environmental conditions were not optimal, then some form of arrestation was assumed to occur.

The construct of conceptual level describes the normal development of an individual interacting with its environment (Khalili & Hood, 1983). This interaction is based on the individual’s level of cognitive complexity and interpersonal style. Based on these two factors, one can infer that individuals at a low conceptual level are seen to require an environment that is characterized by high structure and that provides absolute rules (Khalili & Hood, 1983). These individuals have been described as having fixed or rigid ways of relating to the stimuli in the environment. These individuals tend to demonstrate their experiences in an absolute fashion. There is a tendency toward extreme and polarized statements and absence of tolerance for ambiguity and uncertainty (Khalili & Hood, 1983).
In contrast, individuals functioning at a higher or more abstract conceptual level are capable of addressing a larger variety of stimuli and can organize the needs of their environment to suite their requirements. Person functioning at higher levels can generate their own criteria for organizing and evaluating their experiences and, rather than requiring dichotomous distinctions, they can view more subtle relationships between element in their environment and can process these elements more completely.

Hunt (1971) made some revisions to his earlier conceptualization of development, and the more recent model has four stages of conceptual development. The lowest stage (stage 0.0) consists of unsocialized persons who resist and avoid external imposition. Ambiguity is not tolerated and the information received is very simple and concrete. In the lower-middle stage (stage 1.0), individuals are more concerned with acting in a socially acceptable manner, and information is processed in dichotomous (right-wrong or good-bad) categories. In the upper-middle stage (stage 2.0), absolutes are questioned and challenged. These individuals are more receptive to others’ ideas, are concerned with their own thoughts and feelings, and are striving for greater independence. There is a higher level of tolerance for ambiguity and uncertainty. The highest level of conceptual development (3.0) is illustrated by an interdependence between one’s self and one’s environment and maintains a clear understanding of one’s self, a selective openness to external imposition, and an avoidance of becoming dependent (Khalili & Hood, 1983).

Khalili & Hood (1983) conducted a longitudinal study of changes in conceptual level in college. The study revealed that when the conceptual level of students who participated in the study as seniors were compared with the scores they obtained as
freshman, a substantial increase in conceptual level had occurred over the 4 year period. The difference was not only statistically significant but also represented an average growth of $\frac{1}{2}$ a conceptual level stage—from midway in the first stage to slightly above the beginning of the second stage. This demonstrates that student's experiences in college elevate conceptual level development. Initially females’ conceptual level scores were significantly higher than male scores. In follow-up testing no significant differences were found between females and males.

Khalili & Hood (1983) also evaluated whether students who had persisted in college were different in conceptual level from those who dropped out. In this study only 101 of the original 169 who participated were still on campus 4 years later. The mean conceptual scores for the persistent and nonresistant groups were essentially equal.

It has been noted that students will gain in conceptual development over a 4-year period in college. Khalili & Hood (1983) investigated some of the experiences to evaluate whether these experiences were related to growth in conceptual development.

In an attempt to explore campus experiences that might enhance conceptual development, seniors were asked about their involvement in campus activities. The events consisted of cultural events, recreational activities, and work experiences. Student’s freshman scores were compared to their senior scores, and individual change in scores over a 4-year time frame. According to Khalili & Hood (1983), none of the correlations reached statistical significance. Khalili & Hood (1983) found few significant relationships between changes in conceptual level scores and the experiential
and demographic variables obtained on the questionnaire given to the students as seniors.

The seniors were also asked to rate their level of commitment to a career choice, religion, marriage, politics, and life-style. Khalili & Hood (1983) revealed that these areas were unrelated to conceptual level except for politics. Approximately \( \frac{1}{4} \) of the seniors reported they have a definite political commitment, and this group obtained significantly higher conceptual level scores as seniors than did the remainder of their peers.

This study by Khalili & Hood (1983) did illustrate a change from freshman year to sophomore year, which was equivalent to that gained during the 3 years between the sophomore and senior years. This finding supports the belief of many observers of students in higher education that the freshman year is the period when most change usually occurs (Khalili & Hood, 1983).

According to conceptual level theory, students at higher levels of conceptual levels can learn equally well in structured situations as in those requiring more independent work, whereas students at lower conceptual levels do well only in more structured classes (Khalili & Hood, 1983). Also, high-conceptual level students prefer independent thinking and action (Khalili & Hood, 1983).

**Summary**

A review of the literature focused on nurses’ years of experience, credentials, continuing education, and moral and conceptual development. Overall, it appears that the implication to use a cognitive developmental approach to assess nurses’ development is supported. The literature indicated the need for more current studies in
the field of nursing preparation, moral/ethical teaching and conceptual assessment.

Several inquires remain to be addressed. The following questions will be addressed:

1) Does the nurses’ years of experience and academic preparation influence moral and conceptual thought processes?

2) Is there a relationship between a nurses’ place of employment and moral and conceptual level?

3) Is there a relationship between the amount of non-required continuing education hours and moral and conceptual level?
CHAPTER 3
METHODS AND PROCEDURES

Chapter three will describe the design and methodology of the study. The following will be describe in this section:

1. Population
2. Data Collection and Procedures
3. Instrumentation
4. Research Design
5. Hypotheses
6. Critique
7. Ethical Considerations

Population

The sample used for this included 100 randomly selected registered nurses (RN). These nurses were employed at a hospital located in southeastern Virginia. According to the American Nurses Association’s (ANA) 1997 figures, the total population of registered nurses in the United States is 2,558,874. In the state of Virginia, the Virginia State Board of Nursing reported in 1997 that there were 75,983 registered nurses. The total population of RN’s employed by this facility were 396. Twenty-nine (29) nurses were employed on the surgical intensive care units (SICU), twenty-two nurses were
employed on the medical intensive care unit (MICU), eleven (11) were employed on the critical intensive care unit (CICU), thirty-one (31) were employed in the emergency room (ER), twenty-seven (27) were employed on the psychiatric unit, eighty-nine (89) were employed on the medical-surgical units, and the remaining total number of registered nurses at this facility (187) are employed on miscellaneous nursing units. Registered nurses receive licensure as a RN upon completion of their course work at a nursing school credentialed by their State Board of Nursing and successfully passing their State Board Nursing Examination for Registered Nurses.

**Data Collection Procedures**

Questionnaire packets were hand delivered to the randomly selected RN’s from the hospital. In order to notify the participants of this investigation, the researcher contacted each nurse manager for the units prior to delivering the packets. The participants were asked to complete and return the packet within a week to the investigator. A survey letter (Appendix A) was included which explained the purpose of the study.

The packets also included a Consent Form (Appendix A), a Request for Study Results (Appendix A), and the three research instruments (Appendix B). After dinner mints were enclosed in the packets as a form of a reward for completing the packet. The researchers name and address was made available to the participants for questions or concerns.
Instrumentation

The three instruments used to collect the data for the study were the General Questionnaire, Defining Issues Test (DIT), and Paragraph Completion Method (PCM).

General Questionnaire

The researcher developed the General Questionnaire. It was a one-page survey which asked participants general questions regarding their age, race, number of years as a registered nurse, work location, highest academic degree earned in nursing, and non-required continuing education activities.

Defining Issues Test (DIT)

The DIT was authored by James R. Rest and published by the Center for the Study of Ethical Development. It is an objective test of moral development. It provides the researcher with information about the process an individual encounters when judging what should be done in the given moral dilemma. The appropriate population in which the DIT may be used is between grades 9-12, college, and adults. The DIT produces 12 scores: Consistency Check, M (meaningless items) score, P (principled moral thinking) score, U (utilizer) score, D (composite) score, A (antiestablishment) score, and stage scores (2, 3, 4, 5A, 5B, and 6).

Sutton (1997) noted that an assessment of moral development that stems from cognitive development theories, like Kohlberg’s stages of moral development, involves a clinical interview in which the participant is presented with a situation and asked to make a decision and give an explanation for the decision. The actual score depends on the nature of the explanation. Sutton (1997) reports that this type of assessment is difficult because it requires trained interviewers, is time consuming, costly, and has been difficult...
with respect to Kohlberg’s theory due to the criteria for scoring the test were not clear and did change over a period of time. According to this review, the test tends to underestimate an individual’s developmental level because it requires the participant to provide a clear explanation for his or her thinking.

The DIT is described as a practical test of this application. Six dilemmas that are the same or very similar to Kohlberg’s interview schedule, are printed on a page, along with 12 questions. The subject taking the EST is asked to rate how important each question is in making a decision, what their decision is, and the rank of the four most important questions.

According to Sutton (1997) the reliability of the DIT is good. Test-retest correlations range from .71 to .82 for the P index, and .67 to .92 for the D index. For the shorter three-story test version test-retest correlations range from .58 to .77 for the P index, and .63 to .83 for the d index. The values for the Cronbach’s alpha .77 for the P score and .79 for the D score. Alpha values for the shorter version are .76 for the P score and .71 for the D score.

To establish criterion-group validity, mean scores for graduate students in moral philosophy and political science, college students, senior high school students, and ninth grade students were used to compare scores. Research has indicated that individuals are unable to “fake good” on the DIT (Sutton, 1997).

As for normative data, it was grouped by educational level: junior high, high school, college, professional school, graduates, and nonstudent adults. The scores on the DIT were positively correlated with education, IQ and age (for student groups) (Sutton, 1997).
In summary, Sutton noted that many aspects of this test are a model of instrument development in social sciences. It has good psychometric properties, is easy to administer, is inexpensive, and was based on established theory.

**Paragraph Completion Method (PCM)**

The PCM was developed by Hunt, Butler, Noy, and Rosser (1978) to assess an individual’s conceptual level. The PCM is a semi-projective measurement for the assessment of cognitive developmental-conceptual level (Hunt et al., 1978). The respondents are asked to write at least three sentences on six open-ended topics which are designed to produce Responses that indicate what the participant thinks about rule structure, authority relations, handling conflict and uncertainty. The PCM contains six themes, each on a separate page (Appendix B):

1. What I think about rules....
2. When I am criticized...
3. What I think about parents...
4. When someone does not agree with me...
5. When I am not sure... and
6. When I am told what to do...

A trained rater is used to score each response based on clinical judgement. The rater assigns a score from 0-3 (corresponding to Hunt’s level of conceptual development) to each subject’s Responses. The total score is determined by the average of the three highest scores. Concurrent validity was reported in the .20-.30 range when correlated with tests of intelligence and at .40 when correlated with the Kohlberg Moral Maturity Scale (Hunt, 1970; Hunt et al., 1978).
The interrater reliability from 26 studies was reported as a median r of .86. The PCM can be used on sixth graders through adults. On a one year test-retest reliability for studies involving subjects in grade six through eleven was reported at ranging from a score .45 to .56 (Hunt et al., 1978). Gardiner and Schroder (1972) noted that the validity of the PCM has been established over 100 studies and its' validity is generally accepted among the educational community.

**Research Design**

A descriptive and correlational research design was used to discover the relationships between variables. The study used an ANOVA and Pearson Correlation statistic. Gall, Borg, and Gall (1996) indicate that when the researcher is interested in describing the relationship between two or more variables, correlational statistics are often used for this purpose.

In this study, the multivariate correlational method was used. This method allows one to describe and explore the relationship between three or more variables at a time. Multivariate correlational methods allow the researcher to study how these factor, both singly and in combination, affect outcome variables (Gall, Borg, & Gall, 1996).

**Hypotheses**

The following include the null hypotheses investigated in this study:

(1) The years of experience as a registered nurse is not related to conceptual development and moral development of registered nurses as measured by the Paragraph Completion Method (PCM) and The Defining Issues Test (DIT).
(2) The academic degree of a registered nurse is not related to the conceptual development and moral development of registered nurses as measured by the Paragraph Completion Method (PCM) and the Defining Issues Test (DIT).

(3) The work setting of the registered nurse is not related to the conceptual development and moral development of registered nurses as measured by the Paragraph Completion Method (PCM) and the Defining Issues Test (DIT).

(4) The amount of non-required continuing education hours is not related to the conceptual development and moral development of registered nurses as measured by the Paragraph Completion Method (PCM) and the Defining Issues Test (DIT).

Critique

Threats to Internal Validity

The internal validity of an experience is the extent to which extraneous variables have been controlled by the researcher, so that an observed effect can be attributed solely to the treatment variable (Gall, Borg, & Gall, 1996). Extraneous variables are any variables other than the treatment variable that if not controlled, can affect the experiential outcome. If these extraneous variables are not controlled in the study, the researcher will not know whether observed changes in the experimental group is due to the experimental treatment or to extraneous variable.

History did not seem to impose any threat to this study because the packets were delivered by the investigator and completed within two weeks. Therefore, no extended amount was indicated, minimizing the possibility of other events to interfere with the experimental treatment.
Maturation was not a threat to this study because all participants are adults. Developmental issues, both physical and psychological, were not threats to this study because changes for these adult participants were not likely to occur.

The potential for participants to be "test-wise" in this study was not a threat, as well. Results will not be based on the experience of a pre-test.

As for instrumentation, a pretest and posttest was not administered therefore, the probability of learned gain will not be a threat.

Differential selection was not be threat because a control group will not be used for this study. Therefore, preferential treatment groups will not be an issue.

Experimental morality was not a threat to this study because the researcher obtained verbal consent from the nurse regarding their willingness to participate in this study prior to the packets being delivered. Attrition may have been a threat to this study due to some participants fearing that information provided on the survey may affect their employment. Precautions were made in the cover letter to the packet indicating all responses are confidential and would only be used for the intent of this researcher's study.

Selection-maturation was not be issue for this study due to adults only being used for this study. Children and adolescents were not part of the population for this study.

Experimental treatment diffusion, compensatory rivalry by the control group, compensatory equalization of treatments, and demoralization of control group was not be a threat because a control group was not used. Therefore, the possibility of other participants seeking entrance to a perceived preferred group is not an issue.
Threats to External Validity

The extent to which the findings of a study can be applied to individuals and settings beyond those studied is external validity. Gall, Borg, & Gall (1996) indicate that Glenn Bracht and Gene Glass (p.474-478) identified twelve factors that affect an experiment’s external validity. For this study, these factors are as follows:

Population Validity

(1) The extent to which one can generalize from the experimental sample to a defined population may be a threat to this study because of the sample size of RN’s used for this study. The total population of RN’s in this country is over two million people. This researcher randomly selected 100 RN’s from one geographic location to participate in this study for convenience, economics and rapid access to instrument data. Given the standardized minimum requirements for nurses to become RN’s in this country (i.e. instruction curriculum and state board examination) it is possible that the nurses randomly selected from this study share similar academic and years of experience as with other RN’s in this country. Therefore, findings maybe generalized to others nurses with the same demographic profile.

(2) Personological variables such as, ability, gender, anxiety level may impose a threat to this study. This is minimized by volunteer participation of subjects.
Ecological Validity

The concerns to which the results of an experiment can be generalized from one set of environmental conditions created by the researcher to different environmental conditions are ecological validity.

1. The researcher has provided explicit detail on how the study's conducted so that another researcher can replicate the study.

2. Multiple treatment inferences were not be a threat because multiple treatment were not be given.

3. The Hawthorne effect may have imposed a threat due to participants wanting to please the researcher, since the researcher is a fellow peer at the hospital and a registered nurse in the local community for the past 11 years.

4. There may have been eagerness by subjects to participate in the study due to its novelty. Therefore, responses on the surveys may have been more favorable due to a perceived desired response.

5. Experimenter effect was not be a threat because the researcher was the only person administering the surveys to subjects and a control group will not be used.

6. Pretest sensitization was not be a threat because a pretest was not be used.

7. Posttest sensitization was not be a threat because a posttest was not used.

8. Interaction of history and treatment effects may have been a threat due to events occurring in the environment that may have effected responses (i.e.
hospital accreditation renewal time, weather changes, and performance evaluation time).

(9) The measurement of the dependent variable was not be a threat since no pretest or posttest was administered.

(10) The interaction of time of measurement and treatment effects was not be a threat because the administration of the packets was completed at one time. Concerns regarding the administration of instruments over two or more periods were not an issue.

**Ethical Considerations**

This research study was submitted and approved by the Committee for Research and Human Subjects at the College of William and Mary before the research was implemented. Participant’s confidentiality was assured as well as voluntary participation.

**Summary**

In this preceding chapter, the researcher employed a descriptive and correlational research design to investigate the relationship among registered nurses years of experience, credentials, work location, completed non-required continuing education hours, moral development and, conceptual level. The objective of the study was to compare scores of the nurses from their DIT and PCM findings. Personal and demographic data was collected from all subjects. Ethical considerations were maintained.
CHAPTER 4
ANALYSIS OF RESULTS

The purpose of this study was to explore the relationship among registered nurses years of experience, credentials, work location, completed non-required continuing education hours, moral development, and conceptual level. The findings of this study will be described in this chapter.

Sampling Procedures

In May 1999, envelopes that contained the General Questionnaire (GQ), Paragraph Completion Method (PCM) and the Defining Issues Test-2 (DIT-2) were hand carried to sixty (60) registered nurses (RN) at a hospital located in Southeastern Virginia. In June 1999, a second batch of envelopes that contained the GQ, PCM and DIT-2 were hand carried to the remaining forty (40) RN’s at the same hospital.

The survey design used randomly selected 100 RN’s from the hospital. The researcher met the individual nurse managers for coordinating the research request prior to approaching the nursing staff. In June 1999, there were 4 time periods where the completed packets were collected from the site. The data collection process occurred from May 26, 1999 through June 18, 1999.

Demographic Data Results

One-hundred RN’s received survey packets by hand. Of the 100 packets

44
delivered, 45 were completed, yielding a return rate of 45%. Of the 45% of survey packets returned, one-hundred percent (100%) of the participants completed all of the information on each survey.

**Descriptive Data Results**

Descriptive data indicated that mean age of the sample was 39.80 years with a standard deviation of 9.95 and an age range of 23-67. The mean number of the years of experience for these participants was 4.16 with a standard deviation of 9.25, and a range of 1-39 years of experience (See Table 4.1).

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>S.D.</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>39.80</td>
<td>9.95</td>
<td>23-67</td>
</tr>
<tr>
<td>Years of Experience</td>
<td>14.16</td>
<td>9.25</td>
<td>1-39</td>
</tr>
</tbody>
</table>

Non-required continuing education hours were defined as the number of continuing education hours that were not required by the hospital site. These non-required continuing education hours exceeded what was required for the nurse to remain employed by the facility. The mean of non-required continuing education hours was 18.31 with a standard deviation of 24.5216, and a range from 0-100.

The nurse’s credentials were defined as the earned college degree of the participant. Of the 45 RN respondents; 22.2% (10) had a diploma; 22.2 (10) had an associate degree; 46.7 (21) had a bachelors degree; 8.9 (4) had a masters degree and there were no doctoral prepared nurses (See Table 4.2).
Table 4.2

Frequency of Earned Degrees

<table>
<thead>
<tr>
<th>Credentials</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diploma</td>
<td>10</td>
<td>22.2</td>
</tr>
<tr>
<td>Associates</td>
<td>10</td>
<td>22.2</td>
</tr>
<tr>
<td>Bachelors</td>
<td>21</td>
<td>46.7</td>
</tr>
<tr>
<td>Masters</td>
<td>4</td>
<td>8.9</td>
</tr>
<tr>
<td>Total</td>
<td>45</td>
<td>100</td>
</tr>
</tbody>
</table>

The work location of the participant was defined as the type of nursing unit in which the participant was primarily employed. There were 8.9% (4) of RN's who worked in the emergency room (ER); 42.2% (19) worked on the intensive care unit (ICU); 15.6% (7) worked medical-surgical units, and; 33.3% (15) worked for psychiatric services (see Table 4.3).

Table 4.3

Frequency of Work Location

<table>
<thead>
<tr>
<th>Work Location</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>ER</td>
<td>4</td>
<td>8.9</td>
</tr>
<tr>
<td>ICU</td>
<td>19</td>
<td>42.2</td>
</tr>
<tr>
<td>Medical/Surgical</td>
<td>7</td>
<td>15.6</td>
</tr>
<tr>
<td>Psych</td>
<td>15</td>
<td>33.3</td>
</tr>
<tr>
<td>Total</td>
<td>45</td>
<td>100</td>
</tr>
</tbody>
</table>

Respondent's conceptual level scores were obtained from the Paragraph Completion Method (PCM). The respondent's PCM scores yield a mean of 1.6156 with a standard deviation 0.4145, median of 1.50, a mode of 2.0 and a range from .00-2.20.

The respondent's level of moral development was obtained from the Defining Issues Test-2. The DIT-2 produces two scores, the DITN2 (moral development level)
and the DITP% (percent of weighed ranks attributed to postconventional items). The respondent's DITN2 scores yielded a mean of 36.5606, a standard deviation of 15.9082, a median of 42.4884, a mode of -0.25 and a range of scores from -0.25 to 68.12. The respondent's DITP had a mean of 38.4390, a standard deviation of 13.5979, a median of 40.00, a mode of 42.00 and a range of scores from 16 to 68 (see Table 4.4).

Table 4.4

Descriptive Data of DIT Scores

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>SD</th>
<th>Median</th>
<th>Mode</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>DITN2</td>
<td>36.56</td>
<td>15.90</td>
<td>42.49</td>
<td>-0.25</td>
<td>-0.25 to 68.12</td>
</tr>
<tr>
<td>DITP</td>
<td>38.44</td>
<td>13.59</td>
<td>40.00</td>
<td>42.00</td>
<td>16 to 68</td>
</tr>
</tbody>
</table>

The mean scores for the DITP% and PCM were also calculated according to educational level. The findings indicated diploma graduates to have a mean DITP% of 37.50 and mean PCM of 1.58. The associate degree nurses had a mean DITP% of 42.00 and a mean PCM score of 1.61. The bachelor's degree nurses had a DITP% of 34.74 and a mean PCM of 1.65. Lastly, the masters prepared nurses had a mean DITP% of 50.50 and a mean PCM of 2.13 (see Table 4.5).
Table 4.5
Mean Scores on the DITP% and PCM by Educational Level

<table>
<thead>
<tr>
<th>Degree</th>
<th>DITP%</th>
<th>PCM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diploma</td>
<td>37.50</td>
<td>1.58</td>
</tr>
<tr>
<td>Associate</td>
<td>42.00</td>
<td>1.61</td>
</tr>
<tr>
<td>Bachelors</td>
<td>34.74</td>
<td>1.65</td>
</tr>
<tr>
<td>Masters</td>
<td>50.50</td>
<td>2.13</td>
</tr>
</tbody>
</table>

Mean Scores

In this study, nurses scored a mean DIT2N2 score of 36.56 and a DIT2P score of 38.44. Which is generally similar than adults in general (M=40.0) (Rest, 1994). The mean PCM score was 1.62.

In comparison to mean scores of staff nurses (DITP=46.3), they scored lower. In comparison to other groups, they scored higher than seniors in high school (DITP=31.8) yet, lower than navy enlisted men (DITP=41.6) and, college students in general (DITP=42.3) (See table 5.6). Although 46.6% percent of the participants in this study had bachelor’s degrees, participants still scored lower than college students in general. As mentioned in chapter two, the literature reports that higher levels of education positively correlate with higher levels of moral reasoning therefore, one should use caution when interpreting these findings.

In comparison to some dissertation studies in the counselor/education profession, the participant’s DIT mean scores were lower than graduate student counselors (.50 for in coming students and .54 for out going students) (Brendel, 1996); lower than school
counselors (44.1) (Halverson, 1999); lower than counselor education students (.52) and, education leadership/special education students (.45) (Kolbert, 1998). Nurse participants in this study did, however, score higher DIT scores than student law enforcement officers in the intervention (mean DITP=31.75) and comparison (mean DITP=25.38) groups (Morgan, 1998).

Also, the PCM mean score of nurse participants in this study were 1.62, which were the same for the student law enforcement officers in a comparison group but lower than the intervention group (M=1.76). The PCM mean score was also noted to be lower than nationally certified counselors (M=1.97) (Diambra, 1997).

Table 4.6

Mean P Scores of Different Groups on the DIT

<table>
<thead>
<tr>
<th>Group</th>
<th>P-Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Moral Philosophy &amp; political science graduate students</td>
<td>65.2</td>
</tr>
<tr>
<td>Liberal protestant seminarians</td>
<td>59.8</td>
</tr>
<tr>
<td>Law students</td>
<td>52.2</td>
</tr>
<tr>
<td>Medical students</td>
<td>50.2</td>
</tr>
<tr>
<td>Practicing physicians</td>
<td>49.2</td>
</tr>
<tr>
<td>Dental students</td>
<td>47.6</td>
</tr>
<tr>
<td>Staff nurses</td>
<td>46.3</td>
</tr>
<tr>
<td>Graduate students in business</td>
<td>42.8</td>
</tr>
<tr>
<td>College students in general</td>
<td>42.3</td>
</tr>
<tr>
<td>Navy enlisted men</td>
<td>41.6</td>
</tr>
<tr>
<td>Adults in general</td>
<td>40.0</td>
</tr>
<tr>
<td>Senior high school students</td>
<td>31.8</td>
</tr>
<tr>
<td>Prison inmates</td>
<td>23.5</td>
</tr>
<tr>
<td>Junior high school students</td>
<td>21.9</td>
</tr>
<tr>
<td>Institutionalized delinquents</td>
<td>18.9</td>
</tr>
</tbody>
</table>

(Rest, 1994, p.14)

A comparison of the means was made of the highest and lowest PCM and DITP% scores. The four highest PCM scores had a mean score of 2.2 (see Table 4.7). The four
highest DITP% scores had a mean of 67 (see Table 4.8). The six lowest PCM scores had a mean score of 1.67 (see Table 4.9). The five lowest DITP% scores had a mean of 18 (see Table 4.10).

Table 4.7
Demographic Profile of the Highest PCM Scores

<table>
<thead>
<tr>
<th>#</th>
<th>PCM</th>
<th>DIT</th>
<th>Age</th>
<th>Yrs. Exp</th>
<th>Degree</th>
<th>Wk. Loc</th>
<th>NRCEU</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>2.2</td>
<td>26</td>
<td>46</td>
<td>25</td>
<td>Assoc.</td>
<td>Psych</td>
<td>7</td>
</tr>
<tr>
<td>13</td>
<td>2.2</td>
<td>44</td>
<td>57</td>
<td>35</td>
<td>Masters</td>
<td>Psych</td>
<td>96</td>
</tr>
<tr>
<td>16</td>
<td>2.2</td>
<td>62</td>
<td>5</td>
<td>17</td>
<td>Masters</td>
<td>Psych</td>
<td>50</td>
</tr>
<tr>
<td>28</td>
<td>2.2</td>
<td>42</td>
<td>43</td>
<td>15</td>
<td>Bachelor</td>
<td>ICU</td>
<td>50</td>
</tr>
</tbody>
</table>

Mean PCM = 2.2
Mean DITP% = 43.5
Mean Yrs. Experience = 23
Mean Non-Required CEUs Hrs. = 50.75

Table 4.8
Demographic Profile of the Highest DITP% Scores

<table>
<thead>
<tr>
<th>#</th>
<th>DITP%</th>
<th>PCM</th>
<th>Age</th>
<th>Yrs. Exp</th>
<th>Degree</th>
<th>Wk. Loc</th>
<th>NRCEU</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>68</td>
<td>1.7</td>
<td>47</td>
<td>22</td>
<td>Assoc.</td>
<td>Psych</td>
<td>24</td>
</tr>
<tr>
<td>7</td>
<td>66</td>
<td>2.0</td>
<td>48</td>
<td>27</td>
<td>Masters</td>
<td>Psych</td>
<td>20</td>
</tr>
<tr>
<td>16</td>
<td>62</td>
<td>2.2</td>
<td>52</td>
<td>17</td>
<td>Masters</td>
<td>Psych</td>
<td>50</td>
</tr>
<tr>
<td>29</td>
<td>66</td>
<td>2.0</td>
<td>49</td>
<td>14</td>
<td>Assoc.</td>
<td>ICU</td>
<td>60</td>
</tr>
</tbody>
</table>

Mean DITP% = 67
Mean PCM = 1.98
Mean Age = 49
Mean Years of Exp. = 20
Mean Non-Required Hrs. = 39

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Table 4.9

Demographic Profile of the Lowest PCM Scores

<table>
<thead>
<tr>
<th>#</th>
<th>PCM</th>
<th>DITP%</th>
<th>Age</th>
<th>Yrs. Exp</th>
<th>Degree</th>
<th>Wk. Loc</th>
<th>NRCEU</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>1.0</td>
<td>purged</td>
<td>67</td>
<td>39</td>
<td>Diploma Med/Sur</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>1.2</td>
<td>20</td>
<td>51</td>
<td>7</td>
<td>Assoc. Med/Sur</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>1.2</td>
<td>38</td>
<td>35</td>
<td>10</td>
<td>Bachelor ICU</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>36</td>
<td>1.2</td>
<td>40</td>
<td>39</td>
<td>12</td>
<td>Bachelor ICU</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>37</td>
<td>1.2</td>
<td>44</td>
<td>25</td>
<td>5</td>
<td>Bachelor Psych</td>
<td>44</td>
<td></td>
</tr>
<tr>
<td>39</td>
<td>1.2</td>
<td>42</td>
<td>40</td>
<td>18</td>
<td>Assoc. ICU</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

Mean PCM= 1.67  
Mean Yrs. Exp.= 15  
Mean DITP%= 36.8  
Mean Age= 43  
Mean Non-Req. CEU Hrs= 10

Table 4.10

Demographic Profile of the Lowest DITP% Scores

<table>
<thead>
<tr>
<th>#</th>
<th>DITP%</th>
<th>PCM</th>
<th>Age</th>
<th>Yrs. Exp</th>
<th>Degree</th>
<th>Wk. Loc</th>
<th>NRCEU</th>
</tr>
</thead>
<tbody>
<tr>
<td>34</td>
<td>16</td>
<td>1.7</td>
<td>50</td>
<td>25</td>
<td>Bachelor Psych</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>45</td>
<td>16</td>
<td>1.7</td>
<td>32</td>
<td>10</td>
<td>Bachelor ICU</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>18</td>
<td>1.5</td>
<td>53</td>
<td>24</td>
<td>Diploma ER</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>20</td>
<td>1.2</td>
<td>51</td>
<td>7</td>
<td>Assoc. Med/Sur</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>20</td>
<td>1.5</td>
<td>39</td>
<td>16</td>
<td>Bachelor ICU</td>
<td>100</td>
<td></td>
</tr>
</tbody>
</table>

Mean DITP% = 18  
Mean PCM = 152  
Mean Age = 45  
Mean Yrs. Exp. = 16.4  
Mean Non-Req. CEU Hrs. = 33

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Review of Null Hypotheses

The four hypotheses for this study were:

Null Hypotheses One

The first null hypothesis stated there would not be a statistically significant correlation (p<.05) among registered nurses years of experience and conceptual and moral development as measured by the Paragraph Completion Method (PCM) and Defining Issues Test-2 (DIT-2).

Results of Measures for Null Hypothesis One

A Pearson Correlational statistic was used to test the null hypothesis one with the years of experience as the independent variable in the equation. The dependent variables were the PCM and DIT-2 scores. The results yielded a correlation of -.031 for years of experience for the PCM score, a correlation of -.093 for years of experience for the DITN2 and a correlation of .185 for years of experience for the DIT2P. None of these correlations were significant at the .05 level; thus not rejecting the null hypothesis that there was no statistical correlation between nurses years of experience and moral and conceptual level as measured by the Defining Issues Test-2 (DIT-2) and the Paragraph Completion Test (PCM) (See Table 4.11).
Table 4.11

Hypothesis One: Pearson Correlation and Years of Experience with the PCM, DIT2N2 and DIT2P Scores

<table>
<thead>
<tr>
<th></th>
<th>R</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>PCM</td>
<td>-.031</td>
<td>.840</td>
</tr>
<tr>
<td>DIT2N2</td>
<td>-.093</td>
<td>.562</td>
</tr>
<tr>
<td>DIT2P</td>
<td>.185</td>
<td>.248</td>
</tr>
</tbody>
</table>

Null Hypothesis Two

The second null hypothesis stated that there would not be a statistically significant relationship between the academic degree of nurses and their conceptual level and moral development as measured by the Paragraph Completion Method (PCM) and Defining Issues Test-2 (DIT2).

Results of Measures for Hypothesis Two

An analysis of variance (ANOVA) was used for this hypothesis with the academic degree of the nurse as the independent variable and PCM and DIT-2 scores as the independent variable. The results yielded F values of .045 for the PCM scores, .423 for the DIT2N2 and 1.979 for the DIT2P. These F values were not statistically significant at the .05 level; thus not rejecting the null hypothesis that there was no statistically significant correlation among nurses credentials, moral and conceptual level as measured by the Defining Issues Test-2 (DIT-2) and the Paragraph Completion Method (PCM) (See Table 4.8).
Table 4.12
Hypothesis Two: ANOVA

<table>
<thead>
<tr>
<th></th>
<th>Sum of Squares</th>
<th>Df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>PCM Scores</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Groups</td>
<td>2.459E-02</td>
<td>3</td>
<td>8.196E-03</td>
<td>.045</td>
<td>.987</td>
</tr>
<tr>
<td>Within Groups</td>
<td>7.535</td>
<td>41</td>
<td>.184</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>7.559</td>
<td>44</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DIT2N2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Groups</td>
<td>335.686</td>
<td>3</td>
<td>111.895</td>
<td>.423</td>
<td>.738</td>
</tr>
<tr>
<td>Within Groups</td>
<td>9787.207</td>
<td>37</td>
<td>264.519</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>10122.893</td>
<td>40</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DIT2P</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Groups</td>
<td>1022.466</td>
<td>3</td>
<td>340.822</td>
<td>1.979</td>
<td>.134</td>
</tr>
<tr>
<td>Within Groups</td>
<td>6373.632</td>
<td>37</td>
<td>172.260</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>7396.098</td>
<td>40</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Null Hypothesis Three

The third null hypothesis stated that there would not be a statistically significant relationship between registered nurses’ work location and their conceptual level and moral development as measured by the Paragraph Completion (PCM) and the Defining Issues Test-2 (DIT-2).

Results of Measures for Null Hypothesis Three

An analysis of variance (ANOVA) was used to test this hypothesis with work location as the independent variable and the PCM and DIT-2 as the dependent variables. The results yielded F values of .084 for the PCM score, 1.655 for the DIT2N2 scores and 1.110 for the DIT2P scores. None of these F values were significant at the .05 level; thus not rejecting the null hypothesis stating no statistically significant correlation among nurses work location, moral and conceptual level as measured by the Defining Issues Test-2 (DIT-2) and the Paragraph Completion Method (PCM) (See Table 4.13).
null hypothesis four

the fourth null hypothesis stated that there would not be a relationship between nurse’s completed non-required continuing education hours and their conceptual level and moral development as measured by the PCM and DIT-2.

results of measures for null hypothesis four

A Pearson correlational statistic was used to test the hypothesis with the completed number of non-required continuing education hours as the independent variable and the PCM and DIT-2 scores as the dependent variable. The results yielded a correlation of .209 for the PCM scores, .191 for the DIT2N, .300 for the DIT2P. These correlations were not statistically significant at the .05 level; thus not rejecting the null hypothesis that there was no significant correlation among nurses completed non-required
continuing education hours, moral and conceptual level as measured by the Defining Issues Test-2 (DIT-2) and the Paragraph Completion Method (PCM) (See Table 4.14).

<table>
<thead>
<tr>
<th></th>
<th>R</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>PCM</td>
<td>.209</td>
<td>.169</td>
</tr>
<tr>
<td>DIT2N2</td>
<td>.191</td>
<td>.232</td>
</tr>
<tr>
<td>DIT2P</td>
<td>.300</td>
<td>.057</td>
</tr>
</tbody>
</table>

Summary

The preceding chapter reported the results of this investigation of the relationship among registered nurses years of experience, credentials, work location, completed non-required continuing education hours, moral development, and conceptual level. Descriptive statistics and data analyses of the specific research hypotheses were reported. It was noted that no statistical significance were found among registered nurses years of experience, credentials, work location, completed non-required continuing education hours, moral development, and conceptual level. The next chapter will discuss the research findings and their implications.
CHAPTER 5
DISCUSSION AND CONCLUSIONS

Introduction

In this chapter, a comprehensive discussion of the research findings will be provided. The chapter will begin with a brief overview of the hypotheses. Next, trends in the outcome data from Chapter 4 will be identified and an explanation for these trends will be discussed. Finally, the mean scores, limitations, and general conclusions from the research findings will be discussed. Recommendations for future research will be proposed.

Review of the Hypotheses

A summary of the null hypotheses presented in Chapter 2 is provided below:

1. **Hypothesis I**- The years of experience as a registered nurse is not related to the conceptual and moral development of registered nurses as measured by the Paragraph Completion Method (PCM) and the Defining Issues Test (DIT).

2. **Hypothesis II**- The academic degree of a registered nurse is not related to the conceptual and moral development of nurses as measured by the Paragraph Completion Method (PCM) and the Defining Issues Test (DIT).

3. **Hypothesis III**- The work location of the registered nurse is not related to the conceptual and moral development of nurses as measured by the Paragraph Completion Method (PCM) and the Defining Issues Test (DIT).
4. **Hypothesis IV**- The amount of non-required continuing education hours completed by the registered nurse is not related to the conceptual and moral development of nurses as measured by the Paragraph Completion Method (PCM) and the Defining Issues Test (DIT).

**Discussion**

**Years of Experience**

As pointed out in Chapter 4, the findings with regard to years of experience did not support a statistically significant relationship among nurses' years of experience and conceptual and moral development. This level of non-significance could be attributed to several reasons. First, the total number of registered nurses at the facility was 396. The total number of respondents was forty-five (45). This sample size may of not been representative of the total population of nurses at the research site.

Second, participants shared similar demographic profiles. This commonality among the participants may of lesson the possibility for more diverse test scores on the DIT and PCM.

Third, it may be proposed that the years of nursing experience does not promote development. In a study by Johnson (1988), it was noted that after the first year of nursing practice, skill levels and thought processes of various academically prepared nurses tend to plateau. It was found that upon graduating from nursing school, the majority of nurses become employed in the hospital setting. It is believed that the highly structured hospital setting may inhibit the creative practice and experience of nursing behaviors. It may be that the hospital setting does not foster the development of nurses...
due the strict regime of hospital policies and procedures and inhibits and limits nurses to practice outside the expected norms set by the hospitals standards.

This limitation on nursing practice with in the hospital setting, may not provide the simulation, growth, challenge, and support needed for nurses to enhance their moral reasoning abilities and foster higher levels of conceptual thought. As stated in Chapter 2, the research indicated the need for learning environments that support individuals with their dilemmas and struggles with moral and critical thinking issues. Hospital settings may not provide developmental growth opportunities due to the large number of staff that managers have to support; therefore, the accessibility for nurses to have some critical interaction with their managers is limited. Also, the rising acuity of patients that are hospitalized may not afford the nurse the physical opportunity or emotional energy to want to sit with peers or a mentor to discuss moral conflicts in nursing care or work through critical thinking dilemmas with others.

Lastly, the testing instruments may not of been sensitive enough to indicate a level of statistical significance. The Paragraph Completion Method (PCM) is a semi-projective test that was scored by a trained rater. With a few participants, their responses were noted as being “short” in length but based on the data provided the rater was able to score the answers. If this was different, that is, all responses on the PCM were of the desired length (three sentences); the scores may have reflected higher, statistically significant PCM scores. As for the Defining Issues Test (DIT), it is intended to capture how an individual reasons through moral dilemmas, not what an individual would actually do in a real life moral dilemmas.
Analysis of Mean Scores

Although a level of statistical significance was not obtained, a finding was noted regarding the average years of experience for the four highest PCM and DIT scores. A mean of 23 years of experience was noted for the four highest PCM scores. A mean of 20 years was noted for the four highest DIT scores. The mean score of years of experience for all participants was 14.16.

The average years of experience for participants in this study was 14.16 years. The highest PCM scores revealed a mean score of 2.2, which is indicative of individuals who challenge questions, who are more receptive to others’ ideas, and who are striving for greater independence. Their mean years of nursing experience was twenty-three years (23) (see Table 4.7). The highest DITP % scores revealed a mean score of 67, which is similar to those of moral philosophers and political science graduate students (Rest, 1994). Their mean years of nursing experience was twenty years (20) (see Table 4.8). The six lowest PCM scores revealed a mean score of 1.67, which is indicative of individuals who are more concerned with acting socially acceptable and information is processed in dichotomous categories. Their mean years of experience was fifteen years (15) (see table 4.9). The five lowest DITP% scores revealed a mean score of 18, similar to those of institutionalized delinquents (Rest, 1994). Their mean years of nursing experience was sixteen years (16) (see Table 4.10).

Although statistically significant conclusions can not be drawn from this data, it is noteworthy to report that the participants with the average highest PCM and DITP% scores also had the highest average years of nursing experience as compared to those with the lowest average PCM and DITP% scores.
Academic Degree

The findings with regard to the academic degree of nurses’ did not show statistical significance. This level of non-significance may be related to the same issues discussed regarding years of experience in the first hypothesis. As mentioned previously, the rigid hospital setting in the primary place of employment for most nurses upon graduating from nursing school. The key issue of working in a highly structured hospital setting was that it limits and inhibits the practice and expression of professional nursing behaviors. This may contribute to the reason why participants in the study statistically did not demonstrate a relationship among their credentials and their moral and conceptual development. Also, the homogeneity of the population coupled with the diminished differentiation in nursing practice, May of contributed to the non-significance.

Another finding was that of the highest PCM and DIT scores. Of the four highest scores, two individuals had a master’s degree, one person had an associate degree, and one person had a bachelor’s degree (See Table 4.7). Of the four highest DIT scores, two individuals had a master’s degree and two individuals had an associate degree (See Table 4.8). The six lowest PCM scores revealed that one person had a diploma, two had an associate’s degree, and three had a bachelor’s degree (See Table 4.9). The five lowest DIT scores revealed that two individuals had an associate’s degree and two had a master degree (See Table 4.10).

Although these findings were not statistically significant, it was noted that the four individuals with a master’s degree achieved higher scores on the PCM and DIT. Also, the four other individuals who scored higher scores on the PCM and DIT had college degrees versus diplomas. The lowest PCM and DIT scores revealed that two of
the eleven lower scorers had a diploma in nursing. This is supportive of the literature review in Chapter 2 that individuals with higher levels of education function at higher moral and conceptual levels. Since these findings were not shown to be statistically significant, one should be cautious in making conclusions.

Work Location

The findings with regard to work location did not reveal a level of statistical significance. As mentioned previously, this may be related to a sample size that is not representative of the actual population. Also, the homogeneity of the participants limited the ability to find significant differences among the nurses' work location as it related to their moral and conceptual level.

It was found that the four highest PCM scores, three of the nurses worked on the psychiatric unit (See Table 4.7). The four highest DIT scores revealed that three worked on the psychiatric unit as well (See Table 4.8). Although these findings were not found to be significant, it was noted that the trend of the nurses who worked on the psychiatric unit also scored higher scores on the PCM and DIT. These findings maybe attributed to the different type of work environment that psychiatric nurses are exposed to. On the typical psychiatric unit, a multidisciplinary team consists of psychiatrists, licensed social workers, licensed counselors, psychologists, psychiatric nurses, mental health technicians, recreation therapists, in-hospital teachers, crisis clinician, and a nurse manager. When reviewing the care needed for a client, members of the multidisciplinary team meet together to discuss the continued care needs of the client while in the hospital. At this multidisciplinary meeting, members share their thoughts, feelings, reactions, suggestions, and dilemmas regarding each individual patient. During this dialogue
among the team members, individuals may be providing feedback, support, or even confrontation. This process has been noted in the literature to provide an environment of support and challenge needed to foster higher levels of moral reasoning and conceptual development. This may be the reason why the higher scoring nurses on the PCM and DIT were working on the psychiatric unit versus the typical medical and/or critical care units where most of the care provided for the patient involves task-oriented functions with a physician directing the course of care.

Completed Non-Required Continuing Education Hours

The findings with regard to the completed non-required continuing education hours were not significant. The researcher believes that the level of non-significance may be related to the unclear definition of the term. In an informal survey, approximately 80% of the participants expressed their confusion regarding the definition of the term continuing education hours. Many of them said that they answered the best that they possibly could. If the term was made clearer to them, they may have been able to answer more accurately. The facility where the participants worked had no set definition of continuing education hours. What they did have is required annual inservices for staff to complete and unit-based specific competencies that they completed annually. The researcher suspects that the participants may have thought that any activity hours beyond the mandatory hospital required inservices were the non-required hours, but again, some participants indicated no hours completed.

Of the data that was reported, it was reported to see that the individuals who scored highest on the PCM had a mean score of 51 completed non-required continuing education hours (See Table 4.7). The individuals that scored highest on the DIT had a
mean of 38.5 hours (See Table 4.8). Individuals who scored the lowest on the PCM had a mean of 1.67 (See Table 4.9), and the mean for the lowest DIT scores for non-required continuing education hours was 32.8 (See Table 4.10). Although the higher scorers on the PCM and DIT revealed higher completed hours than lower scorers on the PCM and DIT, one should be cautious in making conclusions about this finding due to the ambiguity on the understanding of the term by most of the participants. Although it was not statistically significant, the higher scorers on the PCM and DIT reported the most completed hours, which supports the current literature that continued education correlates with higher levels of moral reasoning and cognitive complexity.

Another conclusion may be that continuing education experiences may not promote growth and development. It may be the quality of continuing education experiences rather than the quantity that promote growth. Most hospital continuing education programs consist of a one-day annual program where employees complete their unit specific competency skills check-off list and required hospital inservices. An example of their one-day annual training course content would be fire safety, hazardous materials, and cardio-pulmonary re-certification (CPR). This type of program for continuing education is viewed by nursing staff as tedious, stressful, physically, and emotionally exhausting. This limits the potential to enhance the growth and development of the nurses. Facilities may need to examine what other experiential activities may need to occur to make the continuing education process more meaningful and growth stimulating for the participant. This is important because in Chapter 2, the literature has supported that nurses are faced with complex patient care issues as well as moral reasoning concerns with some of the patients they are to care for. Promoting the
development of nurses from a moral and conceptual standpoint could assist in the process of nurse’s encounter when triaging the care of a complex patient scenarios.

Limitations of the Study

A number of limitations exist for this study. First, a limitation inherent to correlational research design is that of inability to establish cause and effect relationships (Borg & Gall, 1989). When significant correlation’s were found to exist between two variables, other causal inferences might be established which are equally likely; artifacts may occasionally cause the relationship rather than the independent variable(s) (Borg & Gall, 1989). A mistake sometimes made when doing causal-comparative research is assuming that the results are proof of a causal relationship (Gall, Borg & Gall, 1996). For purposes of this study, it was found that a statistical relationship did not exist between the dependent and independent variables.

A second limitation inherent to correlational research design is that of oversimplification. Many researchers have criticized relationship studies because this type of study breaks down complex abilities and behavior patterns into simpler components (Gall, Borg & Gall, 1996).

A third limitation inherent in relationship studies is that of using correlational statistics to identify variables related to complex behavior patterns or abilities (Gall, Borg & Gall, 1996). For example, this study attempted to find variables in nurses that correlate to higher conceptual level and moral development. This is difficult due to the lack of any set of characteristics of conceptual level and moral development specific to nurses.

Forth, general applicability of the results may be limited. Specifically, the results were gathered from a random sample of nurses from a hospital in Southeastern, Virginia.
and can only be generalized to that population. Other groups of nurses that share a similar demographic profile may be generalized from this study. However, true generalization of the data to this study to other nurses can not be recommended. The total number of respondents were forty-five (45), the small sample size decreased statistical power.

Fifth, subjects who elected to complete and return the survey packet could be inherently more interested in personal growth and development or may have other characteristics different than subjects who did not return the survey packet. This may have biased the results increasing representation of nurses with an interest in self-development and awareness versus nurses as a whole.

Sixth, on the General Questionnaire the term “non-required continuing education hours” was not clarified. Respondents may have understood this question differently, and their answers may reflect different interpretations.

Seventh, the nurses were asked to indicated their highest degree. Some respondents indicated being enrolled as s student in a bachelors or masters degree program. The General Questionnaire did not address this unexpected response. This may have less accurately represented the true level of academic performance obtained from the nurses.

**Conclusions**

In summary, this single study did not produce strong evidence that there is a statistically significant relationship among registered nurses’ years of experience, credentials, work location, completed non-required continuing education hours, moral
and conceptual development. It did, however, succeed in producing some encouraging information which may be useful in future efforts to answer the research question.

Establishing a set of characteristics for nurses’ moral development and higher conceptual thought is an ongoing challenge. This study contributed to the existing void in the research literature regarding the moral and conceptual development of nurses. The cognitive model asserts that behavioral and affective change are hypothesized to occur through the change of cognition’s (Beck, 1976). Beck (1976) had also noted that it has not been clearly demonstrated that changes in cognition causes changes in behaviors or affect. Therefore, the facilitation process of promoting higher conceptual thought and moral reasoning in nurses is also a challenge. Most educators would contend that the purpose of education is to promote skill building to meet the complex demands of personal and professional challenges.

Research has demonstrated that promoting higher levels of cognitive development along the lines of moral and conceptual development can enable individuals to function more effectively. Qualities of people with higher levels of cognitive development include a greater capacity to flex behavior to meet needs, having the ability to take on multiple tasks and perspectives, utilizing higher empathy levels, and maintaining an altruistic outlook (Peace & Sprinthall, 1998).

Ethical/moral decision making requires critical thinking in order for responsible principled change to be made (Felton & Parsons, 1987). It is believed that nursing programs need to prepare practitioners for the many dilemmas, varied viewpoints, and conflicts encountered in the nursing practice today.
Since the founding of modern nursing by Florence Nightingale in the mid-1800’s, nurses have been instructed to undergrid their practice with strong moral values (Duckett & Ryden, 1994). Traditionally, nurses have been illustrated as being of strong character which is a characteristic that is still imposed in modern nursing.

Preparing nurses to think ethically has been a challenge for nurse educators. There is a need for improved ethics teaching in nursing schools. It has been noted that the baccalaureate nursing programs replaced curricula that had been based on the medical model (e.g., units on medicine, surgery, pediatrics) with integrated curricula organized around the key concepts central to nursing practice (e.g., health, chronicity, pain, and loss) (Duckett & Ryden, 1994). This led nursing educators to view more holistic ways to managing the care of patients. This holistic view of nursing care encompasses ethical decision making on behalf of the patient.

They are different aspects of ethics that can be taught. Carper (1987) pointed out that an ethical pattern of knowing required an understanding of the body of moral knowledge. This does not infer that nursing students need a full program in moral philosophy. Duckett & Ryden (1994) have noted that the best known and most influential moral theories, and the principles and values those theories embody, are essential for providing students with the necessary formal grounding for making ethical decisions in their nursing practice. With this grounded body of knowledge, nursing students are then in the possession of the language for communicating about ethical issues with their peers and professional colleagues.

Another important aspect of learning ethics is centered around an enhanced awareness of circumstances in which values, duties, rights, principles, and/or needs are in
conflict (Duckett & Ryden, 1994). The way educators can approach this is by providing opportunities for students to case review situations they have encountered. In this context, faculty members can assist students in processing their gut-level sense of discomfort and provide insights into nursing situations in which the students are completely unaware of the existing conflicting values or violations of principles, such as justice and autonomy (Duckett & Ryden, 1994).

The next aspect in moral education is effectively implementing moral decisions that have been made. Moral action can be facilitated by enhancing interpersonal communication, assertiveness, and conflict resolution (Duckett & Ryden, 1994).

Duckett and Ryden (1994) have noted that ethics in nursing are possible if the students already have in place some normal moral emotions such as empathy, care, concern, and love. The authors also go on to assert that moral theory can be learned; sensitivity and reasoning skills can be enhanced; and effective ways of implementing moral choices can be mastered. Thus, nursing education programs that can integrate cognitive developmental principles of learning can be successful in encouraging higher levels of ethical reasoning.

In addition to learning a body of moral knowledge, students must also learn to think critically (Jones & Brown, 1991). It is believed that students’ skills in critical thinking about clinical problems can be the foundation in processing moral reasoning about the ethical aspects of nursing health care. Jones and Brown (1991) mention that educators agree that moral theories can be learned and critical thinking skills can be further enhanced. With this in mind, nursing educators may want to explore the facilitation of conceptual growth of students by providing critical thinking exercises that
would facilitate them along the conceptual level continuum. This may involve matching
the learning environment to the conceptual level of the students. Structured situations, at
least initially, should be appropriate for both higher and lower levels of conceptual levels.

A study by Khalili and Hood (1983) indicates that a statistically significant
increase in the conceptual level of college students occurs from freshman to senior years.
This study then explored what circumstances or experience may have contributed to this
enhanced conceptual level. A common denominator was student involvement with
extracurricular activities, but this finding was not statistically significant. An area of
statistical significance was that about \( \frac{1}{4} \) of the seniors stated that they had made a definite
political commitment, and this group obtained significantly higher conceptual level
scores than did the remainder of their classmates.

Consistent in the literature is that the exposure to higher education has positively
enhanced higher conceptual level. The researcher believes that this occurs through the
opportunity for collegial dialogue with professors who challenge and provide an
opportunity for students to dialogue their thoughts in an environment that promotes the
enhancement of critical thinking. Also it should be noted that the majority of studies are
conducted on college campuses where there is rapid access to students willing to
participate in research, in an environment that supports the research process. Continued
studies are needed to provide knowledge of how this process can work in other
specialized educational programs. This would increase and contribute to the body of
knowledge that already exists.
Summary

This chapter reviewed the hypotheses studied regarding the relationship among registered nurses’ years of experience, credentials, work location, completed non-required continuing educator hours, moral and conceptual development. A discussion was given regarding the findings of Chapter 4. The mean scores for the DIT and PCM were assessed and compared to similar professions. Lastly, conclusions were discussed regarding the findings, implications, and recommendations.
Appendix A

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June 12, 1999

Dear Fellow Registered Nurse:

Thank you for agreeing to participate in this dissertation study focusing on the relationship among registered nurses' years of experience, credentials, work setting, continuing education activities, moral and conceptual development. Your input is essential to the success of this investigation.

The attached three surveys will assist in measuring registered nurses’ characteristics:

1. General Questionnaire
2. Paragraph Completion Method
3. Defining Issues Test II

As a registered nurse and licensed counselor, I am interested in the personal and professional growth and development of registered nurses. This study is being conducted under the supervision of Dr. Victoria Foster of the College of William and Mary. Your responses will help in identifying developmental changes that occur and characteristic that exist in registered nurses. This information will provide important feedback to nurse educators.

It should take approximately 45 minutes to complete the entire packet. It will be appreciated if you would complete the enclosed forms by the date we arrange. Please seal and enclose all the items in the envelope provided for you. I will personally pick up your packet from you. A pencil has been provided for your convenience. Please enjoy the after dinner mints (enclosed) while filling out the survey forms.

Replies are confidential, however, as a safeguard (to avoid mixing-up packets), you are requested to code each instrument with the last four digits of your social security number. All results will be held in strict confidence.

Other phases of my dissertation research can not be carried out until I complete the analysis of this survey data. In return for your participation in this study, I will be glad to furnish you a copy of the final product at your request.

I thank you for agreeing to take part in this study. As a fellow registered nurse and mother, I realize your time is valuable. I appreciate your cooperation. If you have any questions or comments, please feel free to contact me at (757) 482-8537.

Sincerely,

Agatha C. Dado-Parks, Ed.S., RN, LPC
Principle Investigator
THE RELATIONSHIP AMONG REGISTERED NURSES' YEARS OF EXPERIENCE, CREDENTIALS, WORK SETTING, CONTINUING EDUCATION ACTIVITIES, MORAL AND CONCEPTUAL LEVEL

CONSENT FORM

I, ________________________________ , am willing to participate in a study of registered nurses. I understand that this study is being conducted by Ms. Agatha Dado-Parks, a doctoral candidate in counseling at the College of William and Mary, to explore the relationships of nurses’ experience, credentials, work setting, continuing education, moral and conceptual level. My involvement in this study will be approximately 45 minutes.

As a participant in this study, I am aware that I will be asked to complete three research instruments: the General Questionnaire, the Defining Issues Test (DIT), and the Paragraph Completion Method (PCM).

As a participant in this study, I am aware that participation is voluntary and that I may choose to withdraw at anytime during the study. I understand that a copy of the study will be mailed to me upon request, and by making such request, I waive my right of anonymity to Ms. Dado-Parks.

This study is conducted under the supervision of Dr. Victoria Foster, associate professor at the College of William and Mary/ School of Education and has been approved by the Human Subjects Research Committee. Dr. Foster can be reached at (757) 221-2321. By participating in this study, I understand that there are no obvious risks to my physical or mental health.

Confidentiality Statement

As a participant in the study, I am aware that all records will be kept confidential. Data obtained from the participant will only be used for purposes of this study and will only be shared with the researcher and designated faculty members on the doctoral dissertation committee at the College of William and Mary. Individual scores will not be used, only aggregate data. Only the last four digits of my social security number will define me.

I fully understand the above statements, and do hereby consent to participate in this study.

Participant’s Signature          Date
REQUEST FOR STUDY RESULTS

Check all that apply:

_____ I would like to receive a copy of this study when it is completed. I understand that by making this request I will not be able to maintain my anonymity.

My name and address are:

Name _____________________________

Address ____________________________________________
__________________________________________

The last four digits of my Social Security number are:

_____  _____  _____  _____
### Appendix B

**Contents**

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<td>Defining Issues Test Answer Sheet</td>
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</table>
GENERAL QUESTIONNAIRE

1. Last four digits of your social security number ______ ______ ______ ______

2. Your age: ______

3. Years of experience as a registered nurse: ______

4. Where do you work? (Indicate only one—If you float to other units, check the primary place where you work most often.)
   ___CCU    ___ICU   ___ER   ___Med/Surg  ___Mental Health
   ___Oncology   ___Rehab   ___Surgery   ___Other_________  

5. What is the highest nursing degree you have earned?
   ______Diploma
   ______Associates
   ______Baccalaureate
   ______Masters
   ______Doctorate

6. List any certifications and/or licenses you have attained (aside from your license as a registered nurse): ____________________________________________________________

7. How many hours of non-required continuing education activities have you completed in past 12 months? _______________hours

Thank you.
Paragraph Completion Method

Please write the last four digits of your social security number on the line below (for instrument matching purposes only):

______________________________

On the following pages, you will be asked to give your ideas about several topics. Please write at least three sentences on each topic.

There are no right or wrong answers, so give your own ideas and opinions about each topic. Indicate the way you really feel about each topic, not the way others feel or the way you think you should feel.

In general, spend about three minutes for each item.
1. When I think about rules...
2. When I am criticized...
3. What I think about parents...
4. When someone does not agree with me...
5. *When I am not sure*...
6. When I am told what to do...
Instructions

This questionnaire is concerned with how you define the issues in a social problem. Several stories about social problems will be described. After each story, there will be a list of questions. The questions that follow each story represent different issues that might be raised by the problem. In other words, the questions/issues raise different ways of judging what is important in making a decision about the social problem. You will be asked to rate and rank the questions in terms of how important each one seems to you.

This questionnaire is in two parts: one part contains the INSTRUCTIONS (this part) and the stories presenting the social problems; the other part contains the questions (issues) and the ANSWER SHEET on which to write your responses.

Here is an example of the task:

Presidential Election

Imagine that you are about to vote for a candidate for the Presidency of the United States. Imagine that before you vote, you are given several questions, and asked which issue is the most important to you in making up your mind about which candidate to vote for. In this example, 5 items are given. On a rating scale of 1 to 5 (1=Great, 2=Much, 3=Some, 4=Little, 5=No) please rate the importance of the item (issue) by filling in with a pencil one of the bubbles on the answer sheet by each item.
Assume that you thought that item #1 (below) was of great importance, item #2 had some importance, item #3 had no importance, item #4 had much importance, and item #5 had much importance. Then you would fill in the bubbles on the answer sheet as shown below.

1 2 3 4 5

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Item #:

0 0 0 0 0 1. Financially are you personally better off now than you were four years ago?

0 0 ♦ 0 0 0 2. Does one candidate have a superior personal moral character?

0 0 ♦ 0 0 ♦ 3. Which candidate stands the tallest?

0 ♦ 0 0 0 4. Which candidate would make the best world leader?

0 ♦ 0 0 0 5. Which candidate has the best ideas for our country's internal problems, like crime and health care?

Further, the questionnaire will ask you to rank the questions in terms of importance. In the space below, the numbers at the top, 1 through 12, represent the item number. From top to bottom, you are asked to fill in the bubble that represents the item in first importance (of those given you to chose from), then second most important, third most important, and fourth most important. Please indicate your top four choices. You might fill out this part, as follows:

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<tr>
<th>Item number:</th>
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<tr>
<td>Most important item</td>
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<td>Second most important</td>
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<td>0</td>
<td>♦</td>
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<td>Third most important</td>
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<td>Fourth most important</td>
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Note that some of the items may seem irrelevant to you (as in item #3) or not make sense to you—in that case, rate the item as "No" importance and do not rank the item. Note that in the stories that follow, there will be 12 items for each story, not five. Please make sure to consider all 12 items (questions) that are printed after each story.

In addition you will be asked to state your preference for what action to take in the story. After the story, you will be asked to indicate the action you favor on a seven-point scale (1=strongly favor some action, 7=strongly oppose that action).

In short, read the story from this booklet, then fill out your answers on the answer sheet. Please use a #2 pencil. If you change your mind about a response, erase the pencil mark cleanly and enter your new response.

[Notice the second part of this questionnaire, the Answer Sheet. The Identification Number at the top of the answer sheet may already be filled in when you receive your materials. If not, you will receive instructions about how to fill in the number. If you have questions about the procedure, please ask now.

Please turn now to the Answer Sheet.]
Famine — (Story #1)

The small village in northern India has experienced shortages of food before, but this year's famine is worse than ever. Some families are even trying to feed themselves by making soup from tree bark. Mustaq Singh's family is near starvation. He has heard that a rich man in his village has supplies of food stored away and is hoarding food while its price goes higher so that he can sell the food later at a huge profit. Mustaq is desperate and thinks about stealing some food from the rich man's warehouse. The small amount of food that he needs for his family probably wouldn't even be missed.

[If at any time you would like to reread a story or the instructions, feel free to do so. Now turn to the Answer Sheet, go to the 12 issues and rate and rank them in terms of how important each issue seems to you.]

Reporter — (Story #2)

Molly Dayton has been a news reporter for the Gazette newspaper for over a decade. Almost by accident, she learned that one of the candidates for Lieutenant Governor for her state, Grover Thompson, had been arrested for shop-lifting 20 years earlier. Reporter Dayton found out that early in his life, Candidate Thompson had undergone a confused period and done things he later regretted, actions which would be very out-of-character now. His shop-lifting had been a minor offense and charges had been dropped by the department store. Thompson has not only straightened himself out since then, but built a distinguished record in helping many people and in leading constructive community projects. Now, Reporter Dayton regards Thompson as the best candidate in the field and likely to go on to important leadership positions in the state. Reporter Dayton wonders whether or not she should write the story about Thompson's earlier troubles because in the upcoming close and heated election, she fears that such a news story could wreck Thompson's chance to win.

[Now turn to the Answer Sheet, go to the 12 issues for this story, rate and rank them in terms of how important each issue seems to you.]
School Board --(Story #3)

Mr. Grant has been elected to the School Board District 190 and was chosen to be Chairman. The district is bitterly divided over the closing of one of the high schools. One of the high schools has to be closed for financial reasons, but there is no agreement over which school to close. During his election to the School Board, Mr. Grant had proposed a series of "Open Meetings" in which members of the community could voice their opinions. He hoped that dialogue would make the community realize the necessity of closing one high school. Also he hoped that through open discussion, the difficulty of the decision would be appreciated, and that the community would ultimately support the school board decision. The first Open Meeting was a disaster. Passionate speeches dominated the microphones and threatened violence. The meeting barely closed without fist-fights. Later in the week, school board members received threatening phone calls. Mr. Grant wonders if he ought to call off the next Open Meeting.

[Now turn to the Answer Sheet, go to the 12 issues for this story, rate and rank them in terms of how important each issue seems to you.]

Cancer --(Story #4)

Mrs. Bennett is 62 years old, and in the last phases of colon cancer. She is in terrible pain and asks the doctor to give her more pain-killer medicine. The doctor has given her the maximum safe dose already and is reluctant to increase the dosage because it would probably hasten her death. In a clear and rational mental state, Mrs. Bennett says that she realizes this; but she wants to end her suffering even if it means ending her life. Should the doctor give her an increased dosage?

[Now turn to the Answer Sheet, go to the 12 issues for this story, rate and rank them in terms of how important each issue seems to you.]

Demonstration --(Story #5)

Political and economic instability in a South American country prompted the President of the United States to send troops to "police" the area. Students at many campuses in the U.S.A. have protested that the United States is using its military might for economic advantage. There is widespread suspicion that big oil multinational companies are pressuring the President to safeguard a cheap oil supply even if it means loss of life. Students at one campus took to the streets in demonstrations, tying up traffic and stopping regular business in the town. The president of the university demanded that the students stop their illegal demonstrations. Students then took over the college's administration building, completely paralyzing the college. Are the students right to demonstrate in these ways?

[Now turn to the Answer Sheet, go to the 12 issues for this story, rate and rank them in terms of how important each issue seems to you.]
Please read story #1 in the INSTRUCTIONS booklet.

Famine -- (Story #1)
What should Mustaq Singh do? Do you favor the action of taking the food? (Mark one.)

<table>
<thead>
<tr>
<th>Rate the following 12 issues in terms of importance (1-5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Is Mustaq Singh courageous enough to risk getting caught for stealing?</td>
</tr>
<tr>
<td>2. Isn't it only natural for a loving father to care so much for his family that he would steal?</td>
</tr>
<tr>
<td>3. Shouldn't the community's laws be upheld?</td>
</tr>
<tr>
<td>4. Does Mustaq Singh know a good recipe for preparing soup from tree bark?</td>
</tr>
<tr>
<td>5. Does the rich man have any legal right to store food when other people are starving?</td>
</tr>
<tr>
<td>6. Is the motive of Mustaq Singh to steal for himself or to steal for his family?</td>
</tr>
<tr>
<td>7. What values are going to be the basis for social cooperation?</td>
</tr>
<tr>
<td>8. Is the epitome of eating reconcilable with the culpability of stealing?</td>
</tr>
<tr>
<td>9. Does the rich man deserve to be robbed for being so greedy?</td>
</tr>
<tr>
<td>10. Isn't private property an institution to enable the rich to exploit the poor?</td>
</tr>
<tr>
<td>11. Would stealing bring about more total good for everybody concerned or wouldn't it?</td>
</tr>
<tr>
<td>12. Are laws getting in the way of the most basic claim of any member of a society?</td>
</tr>
</tbody>
</table>

Rank which issue is the most important (item number).

Most important item
Second most important
Third most important
Fourth most important

Now please return to the Instructions booklet for the next story.

Report -- (Story #2)
Do you favor the action of reporting the story? (Mark one.)

<table>
<thead>
<tr>
<th>Rate the following 12 issues in terms of importance (1-5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Doesn't the public have a right to know all the facts about all the candidates for office?</td>
</tr>
<tr>
<td>2. Would publishing the story help Reporter Dayton's reputation for investigative reporting?</td>
</tr>
<tr>
<td>3. If Dayton doesn't publish the story wouldn't another reporter get the story anyway and get the credit for investigative reporting?</td>
</tr>
<tr>
<td>4. Since voting is such a joke anyway, does it make any difference what reporter Dayton does?</td>
</tr>
<tr>
<td>5. Hasn't Thompson shown in the past 20 years that he is a better person than his earlier days as a shop-lifter?</td>
</tr>
<tr>
<td>6. What would best serve society?</td>
</tr>
<tr>
<td>7. If the story is true, how can it be wrong to report it?</td>
</tr>
<tr>
<td>8. How could reporter Dayton be so cruel and heartless as to report the damaging story about candidate Thompson?</td>
</tr>
<tr>
<td>9. Does the right of &quot;habeas corpus&quot; apply in this case?</td>
</tr>
<tr>
<td>10. Would the election process be more fair with or without reporting the story?</td>
</tr>
<tr>
<td>11. Should reporter Dayton treat all candidates for office in the same way by reporting everything she learns about them, good and bad?</td>
</tr>
<tr>
<td>12. Isn't it a reporter's duty to report all the news regardless of the circumstances?</td>
</tr>
</tbody>
</table>

Rank which issue is the most important (item number).

Most important item
Second most important
Third most important
Fourth most important

Now please return to the Instructions booklet for the next story.
Rate the following 12 issues in terms of importance (1-5)

1. Is Mr. Grant required by law to have Open Meetings on major school board decisions?
2. Would Mr. Grant be breaking his election campaign promises to the community by discontinuing the Open Meetings?
3. Would the community be even angrier with Mr. Grant if he stopped the Open Meetings?
4. Would the change in plans prevent scientific assessment?
5. If the school board is threatened, does the chairman have the legal authority to protect the Board by making decisions in closed meetings?
6. Would the community regard Mr. Grant as a coward if he stopped the Open Meetings?
7. Does Mr. Grant have another procedure in mind for ensuring that divergent views are heard?
8. Does Mr. Grant have the authority to expel troublemakers from the meetings or prevent them from making long speeches?
9. Are some people deliberately undermining the school board process by playing some sort of power game?
10. What effect would stopping the discussion have on the community's ability to handle controversial issues in the future?
11. Is the trouble coming from only a few hotheads, and is the community in general really fair-minded and democratic?
12. What is the likelihood that a good decision could be made without open discussion from the community?

Now please return to the Instructions booklet for the next story.

Rate the following 12 issues in terms of importance (1-5)

1. Isn't the doctor obligated by the same laws as everybody else if giving an overdose would be the same as killing her?
2. Wouldn't society be better off without so many laws about what doctors can and cannot do?
3. If Mrs. Bennett dies, would the doctor be legally responsible for malpractice?
4. Does the family of Mrs. Bennett agree that she should get more painkiller medicine?
5. Is the painkiller medicine an active heliotropic drug?
6. Does the state have the right to force continued existence on those who don't want to live?
7. Is helping to end another's life ever a responsible act of cooperation?
8. Would the doctor show more sympathy for Mrs. Bennett by giving the medicine or not?
9. Wouldn't the doctor feel guilty from giving Mrs. Bennett so much drug that she died?
10. Should only God decide when a person's life should end?
11. Shouldn't society protect everyone against being killed?
12. Where should society draw the line between protecting life and allowing someone to die if the person wants to?

Now please return to the Instructions booklet for the next story.

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Demonstration -- (Story #5)

Do you favor the action of demonstrating in this way?

Students demonstrate:

- Strongly Favor
- Favor
- Slightly Favor
- Neutral
- Slightly Disfavor
- Disfavor
- Strongly Disfavor

Rate the following 12 issues in terms of importance (1-5)

1. Do the students have any right to take over property that doesn't belong to them?
2. Do the students realize that they might be arrested and fined, and even expelled from school?
3. Are the students serious about their cause or are they doing it just for fun?
4. If the university president is soft on students this time, will it lead to more disorder?
5. Will the public blame all students for the actions of a few student demonstrators?
6. Are the authorities to blame by giving in to the greed of the multinational oil companies?
7. Why should a few people like Presidents and business leaders have more power than ordinary people?
8. Does this student demonstration bring about more or less good in the long run to all people?
9. Can the students justify their civil disobedience?
10. Shouldn't the authorities be respected by students?
11. Isn't it everyone's duty to obey the law, whether one likes it or not?
12. Is taking over a building consistent with principles of justice?

Rank which issue is the most important (item number).

Most important item: 1 2 3 4 5 6 7 8 9 10 11 12 Third most important: 1 2 3 4 5 6 7 8 9 10 11 12
Second most important: 1 2 3 4 5 6 7 8 9 10 11 12 Fourth most important: 1 2 3 4 5 6 7 8 9 10 11 12

Please provide the following information about yourself:

1. Age in years:
2. Sex (mark one): ○ Male ○ Female
3. Level of Education (mark highest level of formal education attained, if you are currently working at that level [e.g., Freshman in college] or if you have completed that level [e.g., If you finished your Freshman year but have gone on no further].)
   ○ Grade 1 to 6
   ○ Grade 7, 8, 9
   ○ Grade 10, 11, 12
   ○ Vocational/technical school (without a bachelor's degree) (e.g., Auto mechanic, beauty school, real estate, secretary, 2-year nursing program).
   ○ Junior college (e.g., 2-year college, community college, Associate Arts degree)
   ○ Freshman in college in bachelor degree program.
   ○ Sophomore in college in bachelor degree program.
   ○ Junior in college in bachelor degree program.
   ○ Senior in college in bachelor degree program.
   ○ Professional degree (Practitioner degree beyond bachelor's degree) (e.g., M.D., M.B.A., Bachelor of Divinity, D.D.S. in Dentistry, J.D. in law, Masters of Arts in teaching, Masters of Education [in teaching], Doctor of Psychology, Nursing degree along with 4-year Bachelor's degree)
   ○ Masters degree (in academic graduate school)
   ○ Doctoral degree (in academic graduate school, e.g., Ph.D. or Ed.D.)
   ○ Other Formal Education. (Please describe: __________________________________________________________)
4. In terms of your political views, how would you characterize yourself (mark one)?
   ○ Very Liberal
   ○ Somewhat Liberal
   ○ Neither Liberal nor Conservative
   ○ Somewhat Conservative
   ○ Very Conservative
5. Are you a citizen of the U.S.A.?
   ○ Yes ○ No
6. Is English your primary language?
   ○ Yes ○ No

Thank You.
Dilemma #6
Do you favor the action?

Rate the following 12 issues in terms of importance (1-5)

1. [ ] [ ] [ ] [ ] [ ]
2. [ ] [ ] [ ] [ ] [ ]
3. [ ] [ ] [ ] [ ] [ ]
4. [ ] [ ] [ ] [ ] [ ]
5. [ ] [ ] [ ] [ ] [ ]
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10. [ ] [ ] [ ] [ ] [ ]
11. [ ] [ ] [ ] [ ] [ ]
12. [ ] [ ] [ ] [ ] [ ]

Rank which issue is the most important (item number).
Most important item: [1 2 3 4 5 6 7 8 9 10 11 12]
Second most important: [1 2 3 4 5 6 7 8 9 10 11 12]
Third most important: [1 2 3 4 5 6 7 8 9 10 11 12]
Fourth most important: [1 2 3 4 5 6 7 8 9 10 11 12]

Dilemma #7
Do you favor the action?

Rate the following 12 issues in terms of importance (1-5)

1. [ ] [ ] [ ] [ ] [ ]
2. [ ] [ ] [ ] [ ] [ ]
3. [ ] [ ] [ ] [ ] [ ]
4. [ ] [ ] [ ] [ ] [ ]
5. [ ] [ ] [ ] [ ] [ ]
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7. [ ] [ ] [ ] [ ] [ ]
8. [ ] [ ] [ ] [ ] [ ]
9. [ ] [ ] [ ] [ ] [ ]
10. [ ] [ ] [ ] [ ] [ ]
11. [ ] [ ] [ ] [ ] [ ]
12. [ ] [ ] [ ] [ ] [ ]

Rank which issue is the most important (item number).
Most important item: [1 2 3 4 5 6 7 8 9 10 11 12]
Second most important: [1 2 3 4 5 6 7 8 9 10 11 12]
Third most important: [1 2 3 4 5 6 7 8 9 10 11 12]
Fourth most important: [1 2 3 4 5 6 7 8 9 10 11 12]
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