A CONSTRUCT VALIDITY STUDY:
ACCOUNTABILITY FOR NURSING CARE

By
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The dissertation entitled, "A Construct Validity Study: Accountability for Nursing Care", by George D. Velianoff is accepted by the faculty of the School of Nursing, Indiana University, in partial fulfillment of the requirements for the Doctor of Nursing Science degree.

Dissertation Committee:

Chairperson

August 27, 1986
The purposes of this study were to: 1) expand upon the pilot study by Velianoff (1983) in order to define more precisely professional accountability for nurses in providing nursing care, 2) to test the construct validity of a tool developed to measure nurses' accountability in providing nursing care, and 3) contribute to a better understanding of accountability in nursing.

The theoretical and conceptual basis of the study included: 1) the pilot study of Velianoff (1983) that defined and attempted to measure accountability; 2) French and Raven's (1960) Social Bases of power that defined legitimate power; 3) Hirschman's (1970) Model of Exit, Voice and Loyalty that contained and defined the quality-consciousness construct as identified by Graham (1983); and 4) Rotter's (1954) Social Learning Theory as expanded by Nichols (1983) which defined and explored the locus of control construct. The more individuals perceived themselves as having legitimate power, being quality-conscious, and internally controlled, the more accountable they would be. Resulting hypotheses were: 1) the constructs of accountability, situation specific locus of control, legitimate power and quality-consciousness were mutually exclusive; 2) there would be a significant positive relationship
between accountability and situation specific control when controlled for years of experience in nursing; 3) there would be a significant positive relationship between accountability and legitimate power when controlled for years of experience in nursing; and 4) there would be a significant positive relationship between accountability and quality-consciousness when controlled for years of experience in nursing.

A sixty-one item Likert-type questionnaire was developed which included the scales to measure the four variables based on the literature review and items from existing tools. The questionnaire was distributed on a convenience basis to 500 registered nurses currently working in a large Midwest acute care private hospital. Data from 211 completed questionnaires representing a 42% return rate were used for analysis.

Factor analyses were conducted to determine valid items for each scale. Cronbach alphas for the scales were: situation specific locus of control .72; legitimate power scale .70; quality-consciousness scale .75; and accountability .75. These internal consistency reliability coefficients were considered acceptable. The items from the revised tools where factor analyzed to test hypothesis one. Only partial support was realized since quality-consciousness and locus of control items intercorrelated with the other items.

Pearson correlations and partial correlations were employed to test hypotheses two, three, and four. The partial correlation technique was necessary to allow control for the variable, years in nursing.

A significant, positive correlation coefficient was demonstrated between accountability and quality-consciousness. Although significant correlations were found between accountability and locus of control as well as between accountability and legitimate power, the correlations were negative. Controlling for years in nursing did not alter the magnitude of the correlation.
coefficients.

A post hoc analysis was conducted to see if any of the discrepancies found in the factor analysis could be explained. An analysis of variance technique was employed. A significant relationship between area of practice and the constructs was identified. Critical Care nurses were found to be more accountable, less quality conscious, had less legitimate power and were less internally controlled than OB/GYN and Med/Surg nurses.

Approved and accepted by [Name], Chairperson of Committee.
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Chapter I

Introduction

The evolution of nursing has been typified by professional nurses defining concepts, roles, and practice from moral, legal, and ethical perspectives. A good example of such a concept is accountability which has received much attention by the profession of nursing. Attempts to define the construct of accountability are numerous. These attempts compare and/or contrast accountability with the construct of responsibility, with legal interpretations of practice standards, and with policy statements by the nursing profession. Definitions based on these result in partial clarification of the concept, but not a clear, succinct, and objective definition of the construct. A common understanding of accountability in providing care should be possible. If one could identify the presence and measure the amount of accountability, the possibility of enhancing its development in nurses exists. In addition, it would be possible to investigate why some nurses who are engaged in practice are more concerned with providing care than other nurses.

Purpose

The purposes of this study were: 1) to expand upon the pilot study by Velianoff (1983) in order to define more precisely professional accountability of nurses in providing nursing care, 2) to test the construct validity of a tool developed to measure nurses' accountability in providing nursing care, and 3) to contribute to a better understanding of
accountability in nursing.

Overview of Constructs

An overview of accountability and a survey of the conceptual work by Velianoff is presented first. The theoretical bases for those constructs which were thought to influence one's accountability: quality-consciousness, legitimate power, and locus of control are then presented.

Accountability

The term accountability, as employed in this study, first appeared in the nursing literature in 1974 in an article by Gorman dealing with scientific accountability in nursing. Several events during that era contributed to the identification and use of the term accountability: 1) the quest to make nursing a science and development of a scientific base; 2) the push by society regarding ethics in health care; 3) the escalation of the woman's movement; 4) the rising costs of health care; 5) increased involvement of government in financing health care costs; 6) the increased scope of nursing and practice roles; 7) the increased number of litigation cases involving health care providers; 8) the increased nursing education requirements; 9) the development and increased awareness of the ANA Code of Ethics - Standards of Care; 10) the development and increased awareness of the patients' bill of rights, 11) the choosing of accountability as the watchword by the International Congress of Nursing; 12) increased consumer education about the health care arena; and 13) the increased awareness of nurses' role as patient advocate. Each event addressed the impact on nursing accountability legally, morally, and ethically both for the profession and the clinical setting. When the events were professionally oriented, the ethical aspects of accountability were
emphasized. Women's issues and societal needs tended to employ moral aspects whereas the scope of practical problems tended to be legal considerations of accountability.

Since 1974, many articles have addressed the need for accountability. Accountability has been equated with moral responsibility, or ethics, legal responsibility and autonomy in practice and authority. Also, the use of the term accountability has been utilized as a norm whereby the intent of the person using the term accountability is to try to convey a perception of being honest and having good intentions for society. Greenfield (1975) along with Lewis and Batey (1982) pointed out however, that research analyzing the construct accountability was non-existent. No definitive research or definition of accountability existed that encompassed the entire meaning of the construct.

Accountability supercedes responsibility (Greenfield, 1975). Responsibility is the standard imposed upon persons by law or society. Accountability is the standard persons apply to themselves which may or may not be consistent with the law or society's expectations. People are responsible for their actions and decisions, but they are accountable to their patients, themselves, clients, profession, employer, and peers (Fromer, 1981).

If a person is accountable to certain rules of behavior, then the behavior is predictable, at least in that particular area of activity. The predictability of behavior causes colleagues to view each other as reliable. Persons can however, go beyond their own predictability and reliability to discover why they behave as they do and reassess their values concerning their beliefs and actions (Fromer, 1981).

As part of a pilot study, Velianoff (1983) defined accountability conceptually and then attempted to operationalize the construct. A review

The literature also suggested other factors which influenced accountability. Social bases of power, as conceptualized by French and Raven (1960) were seen as influencing accountability. Power was defined as the ability to affect or influence. The perception of self, or self-concept, as defined by a review of personality theories including Social Learning Theories of Bandura (1976) and Rotter (1956), were also seen as influencing accountability based on the definition. Having the power to change things, in other words prescribe behavior, and possessing a certain personality were seen as necessary constructs in explaining accountability.

Another focus of the study was to see whether there was any difference in accountability among registered nurses working with acutely ill patients in critical care areas and with chronically ill patients. Strong, self-confident, powerful nursing individuals are typically associated with critical care areas and thus a difference was expected.

A sixty-one item questionnaire was constructed utilizing expert panel review and revision of other existing tools identified by Ward, Lindman, and Black (1978). The items were constructed employing a five-point summation rating scale and were focused on the constructs of accountability, social power as defined by French and Raven (1960), and the perception of self. One-hundred registered nurses were given the questionnaire. The registered nurses all worked in a large Midwestern facility. After adjustment of the items a
Cronbach alpha of .83 was reported for the accountability scale. The self and power scales were reported to have internal consistency reliabilities of .43 and .40 respectively. These reliabilities were considered low. The low alphas were attributed to difficulties in operationalization of the constructs and development of the tools to measure the constructs. A conclusion of the study was that the constructs of power, accountability, and the perception of self were too broad as defined. However, the accountability tool seemed reliable because of an alpha of .83. No differences were noted between registered nurses working with acutely ill and chronically ill patients.

Although the work by Velianoff (1983) addressed the professional's view of accountability, the conceptual definition did not specifically address accountability in giving nursing care. The term obligated was employed which seemed to strongly mean for the definition. In addition, the definition was too close to the social, group, legal, and moral definitions of accountability.

Accountability for Nursing Care

Continuing efforts in defining accountability focused on means to: 1) narrow the definition; 2) further delineate between responsibility and accountability; 3) incorporate why one would take action; 4) to identify related constructs, and 5) incorporate the nursing care setting. Dealing with the issue of obligation should resolve the first two concerns of narrowing and delineating the definition of accountability. An analysis of terms was conducted to identify a word to replace obligation as used by Velianoff (1983). Commitment, desire, intent, and obligation were considered. Intent was chosen as the preferred replacement since the term encompassed all the meanings of accountability. Intent encompasses obligation and commitment but not as strongly. Intent also encompasses desire but more forcefully in
meaning. Desire was felt not to contain an obligation or commitment. Obligation and commitment were also felt not to necessarily be due to a personal desire. Intent seemed to encompass a persona? desire and an obligation and commitment.

In an effort to determine what actions were possible and the rationale for taking them, the literature on accountability was again reviewed. Little direction was found. Logically, the professional standards of a group should guide members of the group in performing their functions. For nurses, this would mean using the professional guidelines in providing patient care.

When attempting to identify factors that enhance and/or impede one's accountability, three constructs were identified in the literature. French and Raven's (1960) legitimate power, Rotter's (1956) locus of control, and Hirschman's (1970) quality-consciousness were identified in reviewing the literature as related to accountability. A careful review of the constructs indicated they would not be part of accountability, but rather may influence the development of one's accountability.

Velianoff's (1983) original definition of accountability, the obligation an individual had toward something or someone, was too simplistic. Changing obligation to intent might better differentiate between accountability and responsibility. Some basis for action was needed. Accountability then, was defined as the personal intent toward something or someone which compels one to act based on an accepted standard. Specifically, nursing accountability was the personal intent to give nursing care to patients based on the professional (ANA) standards of care. Making these changes did not alter the earlier findings that power, locus of control and quality-consciousness were factors which influenced one's perception of accountability. Hirschman's (1970) quality-consciousness was a concern for the quality of one's service.
If one was internally controlled, one would exercise control over one's nursing care. Finally, possessing legitimate power would enable one to manipulate the setting to provide care. Consequently, accountability is employed throughout the remaining document as the personal intent toward something or someone which compels one to act based on an accepted standard.

Quality-Consciousness

Reviewing the literature for concepts related or similar to accountability resulted in the identification of Hirschman's (1970) construct of quality-consciousness. Hirschman (1970) defined quality-consciousness as an individual's sensitivity to, concern for and appreciation of the quality of goods and services, organizational policies, and procedures or job conditions. Hirschman (1970) described expected behavior when confronted with a decline in quality. For organizations, members leave (exit) due to dissatisfaction with the association's performance. Those individuals that are most quality-conscious, are most likely to speak out (voice) or be the first to exit in the face of declining quality. In addition to the construct, quality-consciousness, the amount of risk one is willing to take, and the amount of power or influence one perceives to have are all variables which predict the propensity to voice rather than exit when loss of quality is evident. Suspecting one's voice will add little to change the present organizational environment will cause those most quality-conscious to exit.

Graham (1983) tested Hirschman's (1970) model of consumer behavior under conditions of declining quality within the area of nursing turnover/retention. Graham (1983) suggested that the negative impact on quality care via reduced care to patients was related to French and Raven's (1960) five social bases of power, Hirschman's (1970) quality-consciousness and the willingness to risk factors. Graham (1983) further stated that the construct, quality-
consciousness, may embody an awareness of the fit between professional nursing norms and standards, ethics of the profession, and the practice opportunities available within organizations.

Power

French and Raven (1960) developed a typology categorizing influence and power. The five bases consisted of reward, coercion, legitimate, expert, and referent. The intent of French and Raven (1960) was that the power base resided in the relationship between the person, and the agent, and the perception of the agent by the person. The agent may be a norm, role, group or person. The agent influences the person who is the recipient of a power inducement.

French and Raven (1960) defined power as one's conscious ability to effect, to influence, to change other persons or events. Reward power is defined as the ability to mediate records while coercive power is defined as the ability to mediate punishments. Expert power is associated with an individual who is perceived as possessing specialized knowledge. Referent power is the power assigned to an individual who is desireable as an associate. Legitimate power is defined as the ability to prescribe others' behavior by virtue of one's position.

French and Raven (1960) contend that legitimate power results from internalized values accepted by the person permitting the agent to assert power. Legitimate power is always embedded in a role. Legitimate power is utilized in this study since the construct specifies power as inherent in one's role or position.

French and Raven's (1960) typology was based on Lewin's (1959) Field Theory. Lewin's (1959) Field Theory proposed a definition of power that combined all constructs. According to Lewin (1959), power is an induction
of forces of one entity upon another and resistance of this induction set-up by the recipient of the power induction. Power was seen as a combination of constructs having certain associated values such as agent, loci, time, and motive.

Following Lewinian theory, Cartwright (1959) proposed that power had several bases rather than being restricted to influence based on coercion or reward. Cartwright (1959) stated that the literature abounds with definitions of power created by each individual dealing with the construct. Cartwright (1959), citing definitions by Tawney, Russel, Parsons, Laswell, Kaplin, Bierstedt, Simon and Dahl, stated that all the definitions refer to the same phenomenon.

Eskala (1961) stated that power was related to task ability but only after a liminal value of opinion discrepancy has been exceeded. Further, social likeability and power are related.

A power survey by Nagel (1975) defined power as a relation, actual or potential, between the preferences of an actor regarding an outcome and the outcome itself. Nagel (1975) found five formulations of power in his survey but, stated that although power was used with great variety of meanings, the major definitions were related.

Further, Howard (1979) stated that all instances of power could be found on a continuum between physical force and purely rational necessity. The nature, use and limits of power vary depending upon the kinds of objects, things, persons or institutions in which it is present and over which it has influence.

Adams (1975) also proposed a definition of power. Power was defined as the probability that one actor in a social relationship will be in a position to carry out his own will despite resistance regardless of the basis on which the probability exists.
According to Clegg (1975), power must be defined operationally. The definition must be a model which is laid against reality. Logically, validity for the use of legitimate power is provided by Clegg's (1975) definition. Also, the studies presented elude to the notion that power may have several bases, but the power most frequently considered is legitimate because it is embedded in one's role or position. Legitimate power is used in this study since the area of concern is the individual's role or position as a nursing care giver.

**Locus of Control**

Rotter's (1954) Social Learning Theory was developed to explain how learning occurred. The concepts dealt with an individual's tendency to respond to a myriad of stimuli. Rotter (1954) believed that people interact within themselves and use the learned meanings of their interactions. Experience with and learned meanings of interactions influences decisions. The presentation of a stimulus causes an evaluation of the situation by the individual based on prior experiences with the stimulus and the value of alternatives before responding. The response is mediated by the perception of control generally and in the specific situation. Learned behavior is the observable response of the individual.

An expectancy is conceptualized as the degree to which an individual believes he is responsible for his own behavior. Expectancies are characteristic of an individual's response patterns and not a predictor in specific situations. Locus of control is defined as a belief about whether or not a relationship exists between behavior or actions, and reinforcements, or outcomes. In other words, locus of control is the perception of control or lack of control in situations. Internal locus of control is typified by the individual who perceives having control in a situation while external
locus of control is typified by the individual who perceives no control in a situation.

Although studies by Franklin (1963), Strodbeck (1958), Lessing (1959), Owens (1959), Shaw and Uhl (1969), Strickland (1972), and Duke and Lewis (1979), as cited by Lefcourt (1982), revealed the existence of an Internal-External (I-E) control phenomenon, other studies by Gore and Rotter (1963), Katz (1967), and Saloman, Houlihan and Perelius (1969), as cited by Lefcourt (1982), did not reflect measures of perceived control. Several studies have tested the Internal-External locus of control (I-E) scale with success and demonstrated that specific expectancies of control were manipulated experimentally and that generalized expectancies of I-E control were assessable.

Lefcourt (1982) stated that research often takes as equivalent the construct of locus of control. Scales may be used to classify subjects as if they were more or less external in orientation. The process of classification has led to the belief that people are internals or externals which implies processes that are not immediately relevant to the locus of control construct.

Liverant (1958) stated that constructs are given operational definitions in Social Learning Theory. Behaviors are functionally related - they change concomitantly. Liverant (1958) further stated that Rotter provided a great variety of behaviors in general about which predictions could be made. A decrease in the level of generality about needs by sub-categorizing them in terms of specific situations should increase the accuracy of prediction.

Although Crandall (1965) did not feel there had been a substantial demonstration that beliefs across reinforcement areas were consistent when using Rotter’s (1959) I-E scale, much valuable data may emerge from the consideration of separate measures of positive and negative reinforcement.
control expectancies. Further, Crandall (1965) concluded that if an investigator's purpose was to expand upon the nomological network within which locus of control may operate, then Rotter's (1959) I-E scale was sufficient.

Criticism of the locus of control construct and I-E scale have evolved from inaccurate selection and usage. The issues of criticism identified involve the quality and type of tool utilized to measure the construct and the definition of the construct itself.

Naditch and DeMaio (1975) reasoned that locus of control should relate to competence in areas that are important to the individual person. Naditch and DeMaio (1975) stated that the power of using locus of control measures was with the interaction of assessments about values and interests of the individuals being studied.

Nichols (1983) found that Rotter's original intent was that there exists a locus of control for both general expectancy and specific expectancy as a state-trait variable. The individual, presented with a stimulus, evaluates the situation based on prior experiences with the stimulus and the value of the alternatives prior to responding. The response is also mediated by the perception of control generally and in the specific situation. Further, Nichols (1983) defined locus of control general expectancy as the individual's proneness or tendency to perceive responses as either within or not within their control while locus of control specific expectancy was defined as the individual's perception of control or lack of control in a specific situation. Logically, the specific expectancy form would be the best predictor of a specific behavior. The specific behavior for this study would be giving nursing care.
Summary

The overview of constructs has placed each construct in its theoretical perspective. As yet, accountability has no theoretical orientation. Its roots were identified in the legal, moral, and ethical issues confronting nursing as a developing profession. Velianoff's (1983) early definition was expanded resulting in a general definition as the personal intent toward something or someone which compels one to act based on an accepted standard.

Possible factors which influence one's development of accountability were identified: Hirschman's (1970) quality-consciousness, Rotter's (1950) locus of control, and French and Ravens' (1960) legitimate power. These constructs were employed in the construct validity aspect of this study.

Assumptions

A major assumption in this study is that locus of control, legitimate power and quality-consciousness constructs influence the development of accountability. If nurses perceive themselves as having power due to their position and feel that they are in control, then over time, they will feel they can do whatever they want in terms of nursing care. Doing what they want in terms of nursing care should be mediated by their concern for and appreciation of the quality of nursing care and their personal intent to give nursing care to patients. Professional nursing standards are the values or norms which nurses operate under and are the basis of quality in giving nursing care. The more internal an individual's locus of control, the more perceived legitimate power and the higher level of quality-consciousness, then the higher the degree of accountability of the individual. Another assumption is that subjects are sufficiently knowledgeable about
the ANA's standards of care.

**Hypotheses**

Since accountability in giving nursing care is the personal intent to give care based on an individual's sensitivity to, concern for, and appreciation of the quality of nursing care, a positive relationship should exist between accountability and quality-consciousness. The more prescriptive ability one perceives to have by virtue of one's position, the more likely one will feel sufficient power to give the kind of nursing care one intends to give. Therefore, a positive relationship between legitimate power and accountability should exist. To act on a personal intent to give nursing care based on professional quality factors and by virtue of one's position, one must perceive the ability to give care as being within one's control. A positive relationship between accountability and locus of control should exist. The more control, more power, and more quality-conscious one is, the more accountable one would be in giving nursing care. Further, the more experience in giving nursing care, the more likely one will have developed a sense of legitimate power, an internal locus of control, be more quality-conscious, and a stronger sense of accountability. Thus, the hypotheses for this study were:

1. The constructs locus of control, legitimate power, quality-consciousness and accountability are mutually exclusive.

2. There will be a significant, positive relationship between situation specific locus of control and accountability when controlled for years of experience in giving nursing care.

3. There will be a significant, positive relationship between legitimate power and accountability when controlled for years of experience in giving
nursing care.

4. There will be a significant, positive relationship between quality-consciousness and accountability when controlled for years of experience in giving nursing care.

**Conceptual and Operational Definitions**

ACCOUNTABILITY - a personal intent toward something or someone which compels one to act based on a standard.
ACCOUNTABILITY FOR NURSING CARE - a personal intent to give nursing care to patients based on the professional (ANA) standards.

**Operational definition** - accountability is the individual's summed score achieved on a twenty-four item scale developed for this study.

QUALITY-CONSCIOUSNESS - an individual's sensitivity to, concern for and appreciation of the quality of patient care or services, organizational policies and procedures and/or job conditions.

**Operational definition** - quality-consciousness is the individual's summed score achieved on a nine item scale with a five point response pattern.

LEGITIMATE POWER - one's conscious ability to prescribe others' behavior by virtue of one's position.

**Operational definition** - power is the individual's summed score obtained on an eleven item scale devised for this study to measure legitimate power in providing nursing care.

LOCUS OF CONTROL - an individual's proneness or tendency to perceive responses as either within or not within their control in a specific situation.

**Operational definition** - locus of control is the individual's summed score achieved on a sixteen item scale revised for this study to measure situation specific locus of control.
Chapter II

Review of Literature

A review of pertinent research on quality-consciousness, legitimate power, and locus of control is presented. No research other than Velianoff's (1983) previously reported pilot study was found dealing with accountability.

Quality-Consciousness

The only study found that dealt with the construct of quality-consciousness in general was that of Graham (1983). Graham (1983) used Hirschman's (1970) theory to study job satisfaction of registered nurses. Graham (1983) utilized a convenience sample of 534 registered nurses practicing in seven general urban and rural hospitals to respond to her questionnaire. A 36.5% (154) response rate was realized.

Graham (1983) measured the variables of quality-consciousness, propensity to exit or voice, perceived influence, willingness to risk, and demographic items. Quality-consciousness was measured by forty-one items utilizing a summated rating scale based on the ANA (1973) Standards of Care. Subjects were asked to rate on a five point scale how important each of the forty-one items was to them as a professional nurse.

The Cronbach alpha for the quality-consciousness scale was .93. The Pearson product moment correlation was utilized to measure construct validity of the quality-consciousness scale with the item "How professional do you think nursing is?" A correlation of r = .01 was found which offered no support for the construct validity of the quality-consciousness scale. An ANOVA was utilized to test the hypothesis that perceived power, willingness of risk, quality-consciousness, and propensity to exit or voice will not
differ significantly due to subjects' level of education, position level, and reason for leaving former position(s). No differences were noted however, a trend was noted for the variable, position level, to influence the quality-consciousness of the nurse. Although older nurses seemed to be less quality-conscious, the more experienced nurses that practiced in a variety of settings were more quality-conscious. Multiple regression was conducted for the hypothesis that perceived power, willingness to risk, and the degree of quality-consciousness significantly predicted the propensity to exit or voice. The hypothesis was supported ($F = 7.1239, p = .001$) for quality-consciousness. The degree of quality-consciousness was a major variable in predicting the propensity to exit or voice.

Although construct validity for quality-consciousness was not attained, Graham (1983) stated that the measure used to assess the construct validity of the variable was problematic. Further, content validity for the variable was available from either published literature or from knowledgeable reviewers. The findings were deemed significant despite operationalization problems for the construct.

No other studies, economics or nursing, were found in the literature generally that employed the quality-consciousness construct. Although studies have been completed on nurse job satisfaction and retention/turnover, none have used the quality-consciousness construct specifically.

**Power**

Many studies have been conducted to test the French and Raven (1959) social bases of power. Most dealt with the coercive, reward, and expert power bases. A summary of these studies, adapted from and cited in Dieterly (1974), is presented in Table I.
Table 1
Summary of studies testing French and Raven's Power Bases

<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Power Base</th>
<th>Sample</th>
<th>Result</th>
</tr>
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<tbody>
<tr>
<td>Arson &amp; Golden</td>
<td>Expert</td>
<td>113 Sixth Grade</td>
<td>Expert power effected attitude.</td>
</tr>
<tr>
<td>Golden change.</td>
<td></td>
<td>graders</td>
<td></td>
</tr>
<tr>
<td>Bennis et al</td>
<td>Reward</td>
<td>90 Nurses</td>
<td>The more reward power the greater the influence of the supervisor.</td>
</tr>
<tr>
<td>Butler &amp; Miller</td>
<td>Reward</td>
<td>50 male undergrads.</td>
<td>Equal reward.</td>
</tr>
<tr>
<td>Croner &amp; Willis</td>
<td>Expert</td>
<td>34 undergrads.</td>
<td>Expert power effects influence in similar situations.</td>
</tr>
<tr>
<td>Levinger</td>
<td>Coercive</td>
<td>90 students</td>
<td>Greater coercive power the higher the rate of conformity.</td>
</tr>
<tr>
<td>French et al</td>
<td>Coercive</td>
<td>Air Force enlistees</td>
<td>Expert power increased the effectiveness of influence attempts.</td>
</tr>
<tr>
<td>French &amp; Snyder</td>
<td>Expert</td>
<td>48 students</td>
<td>Different situations result in the use of different power bases by the supervisor.</td>
</tr>
<tr>
<td>Snyder</td>
<td>Total Power</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Goodstat &amp; Kipnis</td>
<td>Expert</td>
<td>64 students</td>
<td>Subjects perceptions of power confederates effected by the degree of expertness attributed to him.</td>
</tr>
<tr>
<td></td>
<td>Reward</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Coercive</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ravens &amp; French</td>
<td>Legitimate</td>
<td>40 students</td>
<td>Attractiveness of supervisor varied with the degree of power, public conformity did not.</td>
</tr>
<tr>
<td></td>
<td>Coercive</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Zander &amp; Curtis</td>
<td>Referent</td>
<td>High School students</td>
<td>Referent power produced better scores than coercive power.</td>
</tr>
<tr>
<td></td>
<td>Coercive</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 1 (cont)
Summary of studies testing French and Raven's Power Bases

<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Power Base</th>
<th>Sample</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zipf</td>
<td>Coercive</td>
<td>102 female undergrads.</td>
<td>Resistive force greater for coercive than reward but amount power is the same for both.</td>
</tr>
<tr>
<td></td>
<td>Reward</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Warren</td>
<td>All</td>
<td>18 Grade Schools</td>
<td>Coercive and referent power were not significant.</td>
</tr>
</tbody>
</table>
From this initial research, power was explored from the perspective of being a situational influence or control mechanism. The influence or control within a specific situation was not inconsistent with French and Raven's intent. French and Raven (1959) stated that it is the interpersonal relationships that are important when looking at leadership and interpersonal power. Both persons must be considered. The initiator's perceptions of the relation were important to the understanding of the nature of the social bases of power and any discussion of social bases of power that did not account for the psychological forces which mediate the initiator's actions or potential acts would be theoretically incomplete.

Galinsky, Rosen and Thomas (1973) investigated the empirical distinctness and independence of French and Raven's (1960) hypothesized five bases of social power. One-hundred and ten public assistance workers comprised the sample. An eighty item questionnaire was distributed to these workers. The questions related to fellow workers' and supervisors' expert, legitimate, positive sanction (reward), negative sanction (coersive), and attraction (referent).

To test the distinctiveness and empirical unity of the five bases of power, a factor analysis was computed. An orthogonal analysis with Varimax rotation was utilized. Eleven factors were extracted with forty-seven percent of the variance accounted by these factors. The results were interpreted as supporting evidence in concluding that legitimate, expert, coercive, and reward power were independent empirical entities. Referent power items did not extract in the analysis as an independent factor. The authors felt that this finding was due to how the variable was measured. The authors stated that very few questions were asked regarding referent power and that this was the cause for not being able to extract the variable as an independent factor.
In 1974, Dieterly and Schneider conducted a study to estimate the relationships between participation in decision making, organizational orientation, and formal position with perceived power and organizational climate. Self-perceptions of power and climate were conceptualized as providing the background against which individuals estimate the appropriateness of their behaviors in the specific situation.

A sample of 120 male and female undergraduate students in a beginning psychology class were randomly assigned to one of twelve groups. Each student received a packet with instructions. The tasks were typical of organizational task delegation. A five-point summated rating scale was used to measure the variables.

Results revealed split-half reliabilities from 0.68 to 0.76 for the five power scales. Power dimension intercorrelations ranged from 0.24 to 0.52. An ANOVA was used to assess the data and a significance level of p<.10 was established.

There were several significant findings in the study. Self-perceived expert power in a customer oriented organization was higher if participative decision making was employed. Similarly, self-perceived expert power increased as position level in non-participatory decision making organizations. Self-perceived expert power scores decreased as position level increased in participative organizations. Coercive power increased as position level decreased in participative conditions while an increase in position level decreased coercive power in non-participatory organizations. Reward power increased in participatory organizations. Higher reward power was seen with customer oriented, participatory organizations. Legitimate and referent power had no effects.

According to Dieterly and Schneider (1974) discussions about power require
the identification of the power base. There were significant variations in the findings of their study depending on the base of power. Also, the service orientations of the organization influenced climate perceptions by the individuals.

Dieterly and Schneider (1974) explored the possibility that power, organization environment, and climate were not being measured as mutually exclusive constructs, they were measuring the same construct. Intercorrelations of the scales revealed that autonomy and position structure were independent of power with $r = 0.0637 - 0.2377$ for power with autonomy and $-0.0023 - 0.2341$ for power with position structure. The authors concluded that power and climate were distinct constructs.

The importance of Dieterly and Schneider's (1974) study to this study is two-fold: 1) it provides evidence for the use of French and Raven's (1960) typology as a conceptual approach, and 2) an organizational environment does affect perception of power. Therefore, the organizational climate associated with the development of self perceptions of power in the sample RNs utilized for this study should vary due to individual differences and not the organizational environment.

A study of Weaver (1981) utilized French and Raven's (1960) power typology, and Fiedler's (1964) situational favorableness construct. One-hundred thirty seven first level nursing managers from thirty hospitals were used. Three scales were utilized to measure the constructs. The Perceived Power Assessment Scale developed by Dieterly (1975), Group Atmosphere Scale developed by Fiedler (1964) and the Formal Position Power Questionnaire were employed.

Five hypotheses were tested using Pearson correlations and Spearman rho. Stepwise multiple regression was computed for the five power bases. A Cronbach alpha for the power bases were: .59 for coercive, .67 for reward, .61 for referent,
.65 for expert, and .48 for legitimate. Legitimate power was found to be correlated highest with expert power and slightly negative with reward power. Legitimate power was significantly related to age, length of time in the role, and formal education level.

Weaver (1981) concluded that a nurse manager's age, length of time in the role, and formal education level contributed to the perception of expert, reward, and legitimate power. Further, these conclusions were consistent with Dieterly's (1974) premise that the three power bases are in part founded on personal aspects of experience and training.

To see whether a relationship existed between organizational communication, structural variables, or power, and task performance, Rosen, Fallig and Roberta (1983) conducted a study utilizing two groups of subjects. Significant effects were found in decision making power among intra-group reception. High powered subjects received significantly more intra-group information than lower-powered subjects.

Path analysis results revealed that the strongest predictor of decision making performance was intra-group reception. The study utilized legitimate power as defined for this study since the authors looked at power inherent in one's position or role in the organization.

Hartmann (1982) utilized Kanter's Theory of Organizational Structure to study opportunity, power and relative numbers in order to develop a measure of job satisfaction. Hartman (1982) collected data from 276 managers in 9 businesses. Factor analysis was utilized to analyze the data. Three sub-scales were developed for structure and three sub-scales for satisfaction. The important finding related to the current study was that a scale for power/structure was developed based on the analysis. Unfortunately, no results were reported other than the development of the sub-scales validated
by the factor analysis process.

Neidlinger (1983) studied power in a professional association by exploring what association governance process related to issues before the nursing profession and what power resources were available within the organization. Twenty-two state nursing organizations were utilized. A seventy-one percent return rate was realized.

Neidlinger (1983) utilized the Nursing Care Systems Conceptual Framework, adapted from the University of Colorado School of Nursing, the Baldridge Political Model guided study and the Power Model. The power model was used to clarify how power was manifested through authority, or the right to take action, and influence the ability to affect behavior of others, inherent in one's position.

Results of the study revealed that groups with specific issues obtained less resources, had the most conflict and had little authority or influence. Groups with the most power were most active politically. An alpha of .95 was established for the questionnaire.

Dey (1984) explored the attribution of power, the measurement of the distribution of power in groups, identified factors that affect power, and theoretically synthesized the concept of power. The definition of power synthesized by Dey (1984) was that power is the potential to influence the behavior of others.

Exact methodology was not described, however, an objective technique was reported as being utilized to collect data. Two pilot studies were conducted within small groups. Sixteen groups were used.

Conclusions of this study were: that power was free-flowing, power positions differed depending upon process stages of the groups, high power level individuals were associated with independent power, and mid-power
members exerted more reactionary power. No explicit results were reported to
the question of factors that affect power. It appears that an assumption was
made that factors affecting power were of an individual nature.

A study by Tibbles (1983) tried to identify variables associated with
the sense of power as related to organizational effectiveness among nurse
managers. Two-hundred and fifty-eight nursing managers from nineteen short-
stay hospitals in Connecticut were utilized in the sample. A questionnaire
was sent to the participants.

Step-wise multiple regression was reported as being utilized to analyze
the data. The results reported were that nurse managers were not powerless.
Satisfaction with opportunities to make decisions in committees was also
reported. The feeling of powerlessness was reported however, with physician
relations, and inservice. No relationship was seen between age and education
with powerlessness. Although the study had some important information to
reveal, it is difficult to understand the transition from power to powerless-
ness.

A study by Feistritzer (1980) explored the perception of power by
Directors of Nursing. Thirty-four directors of nursing from Kentucky and
Ohio non-profit, non-governmental agencies were used as subjects. A
questionnaire was employed to measure the items. The questionnaire was
adapted from Dieterly (1975) since it was considered to be a reliable measure
of French and Raven's (1960) power bases. There were seven items for each of
the five power bases.

The alpha for the referent power scale was .33, for expert .34, for
legitimate .11, for coercive .66, for reward .78, and overall .64. Three of
the four hypotheses were rejected, however, a significant difference in the
perception of legitimate power between the directors of nursing was supported.
The directors did not perceive themselves to have legitimate power. Those with the most experience perceived themselves as having less expert power. The Ohio directors of nursing perceived themselves as having more expert power than those directors from Kentucky.

Graham (1983) studied the propensity to exit or voice by nurses engaged in hospital practice. Perceived influence was thought to contribute to nurses' propensity to voice or exit. A thirty-five item Perceived Power Assessment Form was revised from Dieterly (1975) for the study. A five point summated rating scale format was used. Cronbach alphas for referent, reward, expert, legitimate and coercive power were .66, .65, .62, .76, and .71 respectively.

The scales for legitimate, expert, coercive, and reward power were found to have some conceptual overlap when intercorrelations were computed. The findings of conceptual overlap were reported as being consistent with those of Dieterly (1975). Interestingly, as the attributes of experience, tenure, and age increased, Graham (1983) found that perceived legitimate power increased. More senior nurses also perceived more legitimate power as well as being more willing to risk. Graham (1983) also reported that perceptions of power were not significant predictors of the propensity to exit or voice.

Graham's (1983) study has implications for this study. More tenured, experienced and older nurses perceived to possess more legitimate power. Further, since perceptions of power were not significant predictors of the exit or voice phenomenon, they may be predictors of accountability.

**Locus of Control**

The literature identified two issues surrounding the locus of control construct: 1) quality and type of tool, and 2) evidence for the construct. An Ipsative scale was initially developed to measure the construct. Problems
were identified with the use of this tool by several researchers, as addressed in the following paragraphs, and lead to the use of Likert type formats. Also, construct validity was problematic. Since the introduction of the internal versus external control construct, substantial research support has accumulated.

Hersch and Scheibe (1967) examined the reliability and validity of Rotter's (1966) I-E scale. A twenty-nine item I-E Ipsative scale was administered to students of the Connecticut Service Corps. The Otis Mental Ability Test, Terman Concept Mastery Test and the D48 scale were also used to compare subjects' performance to the I-E scale.

Results indicated a consistency in the performance of subjects among the scales. The authors suggested that a diversity in the psychological meaning of externality existed between the subjects. A major conclusion of the study was that the I-E scale was valid and reliable, however, a multidimensionality existed for locus of control.

In 1973, Joe and Jahn conducted a study on one-hundred and twenty female and one-hundred and sixty-eight male students at Idaho State University. A forced choice (ipsative) format questionnaire was developed and administered in order to find out what the factor structure of the I-E scales was. The authors believed that a dichotomy existed in the I-E scale rather than a unidimensional interpretation of the scale.

A Varimax method factor analysis was performed. The results indicated that the I-E scale contained a general factor. Factor one was defined by items that pertained to the subjects' belief that success is due to the individual's skill or hard work rather than luck or chance. Factor two assessed the beliefs with regard to a citizen's effect on politics and world affairs.
Joe and Jahn (1973) state that their study suggested a binary response to the Rotter scale does not permit an assessment of degrees of belief in internal versus external control. Further, the multipoint response format would enhance the prediction of various additudinal and behavioral variables in relation to the locus of control construct. It was suggested that predictions of locus of control might be enhanced through the use of a six-point response format.

A study by Muldary (1979) tried to determine if the effect of a Power Action Training program would effect the locus of control of alcoholics under treatment. One-hundred and fifty-four males were used for the study. The subjects were randomly assigned to four groups. The control group and the experimental group each subdivided into internals and externals. The experimental group was given the power training program while the control group was not.

Results of the analyses showed that subjects were more external in orientation than normal non-alcoholics. Also, after the power training program, those individuals that were internal initially, scored even higher for internality post treatment. The authors believed that training someone to become more internal could affect the outcome of a program in rehabilitating alcoholics.

Another study by Brandt (1979) researched the relationship between locus of control, environmental constraint, length of time in the institution and twenty-one other variables to the morale and life satisfaction of the institutionalized elderly. An ANOVA and COVA were used for analyzing the data. Results revealed that individuals with an internal locus of control orientation had higher levels of morale than externals. Environmental constraint and locus of control were found to covary with life satisfaction as the dependent variable.
Wallston, Wallston, Kaplan and Maides (1979) developed the Health Locus of Control Scale. The assumption that a health related locus of control would provide more sensitive predictions of the relationship between an individual's locus orientation and health behavior was espoused. Also, by assessing a client's locus of control, the probability of a nurse understanding and predicting health behavior could be increased. The Health Locus of Control Scale, although not directly utilized in the present study, provided further support for the existence of the locus of control construct. The major problem however, with the Health Locus of Control is that generalized and specific expectancies have not been addressed and fully explored in relation to the construct in health behaviors and health orientations. The Health Locus of Control is more state like than trait.

Mendelson (1984) attempted to construct an adult locus of control scale capable of assessing both a generalized and specific expectancy for reinstatement. Forty-eight male and sixty-six female undergraduate students were used. The questionnaire was developed utilizing the Nowicki-Strickland Child I-E Locus of Control scale and the Morlowe-Crowne Social Desirability Scale. The final scale consisted of three sub-scales each consisting of specific expectancy statements dealing with athletic, academic, and interpersonal success.

The final scale was administered to forty-seven Phi Beta Kappa members, forty-six varsity athletes, forty-two fraternity-sorority officers and forty-seven introductory psychology students as control. The results supported the reliability of the scales. The scales were correlated with the Nowicki-Strickland scale. Significant test-retest reliability of specific locus of control was reported. Mendelson was successful in developing a reliable specific expectancy locus of control scale that could be used for adults.
Ackey (1984) examined locus of control as a moderator of job satisfaction. One-hundred and fifty-six graduate business students from a large Midwestern University were used to administer the questionnaire.

The variables identified in the study were: participative decision making, role conflict, role ambiguity, organizational climate, and task characteristics. Path analysis was performed and revealed that neither of the two hypothesized models fit the data. Task characteristics were directly influenced by participative decision making, locus of control, and situational favorableness. Locus of control was shown to have a significant moderating effect in a causal understanding of job satisfaction. Unfortunately, the issue of causality was not addressed in the study. Considering the current debate revolving around causality, some discussion would have been helpful in explaining the rationale for utilizing a causal approach.

Best (1984) assessed locus of control, cues to critical incidents of job behavior and cue rate on rater accuracy and response sets in a performance appraisal. Two-hundred and five University students were employed. The students watched a video portraying a manager dealing with a difficult subordinate. The subjects responded to the video by rating the managers performance. Leniency, control tendency, and halo effect were also measured.

No effect due to the halo effect was seen in this analysis. External oriented subjects were significantly more lenient in their ratings of the managers performance. Central tendency errors were also noted within this group. These findings correlate to the current conceptualization that externally controlled nurses would be less accountable. Logically, one could conclude that if externally controlled subjects were more lenient in their ratings, the less stringent they would be in terms of accountability.

Freed-Fragan (1984) built a model to explore control in an individual's
The individual was examined from a three dimensional approach: interrelationships between attitude toward control, self-concept, sexual orientation, locus of control, and stress. Two-hundred students in a large University were used. The questionnaire was developed from the Control-Attitude Scale, Rotter's I-E Scale, Personality Orientation Inventory, Sex-Role Inventory and the State-Triat Anxiety Inventory.

A positive relationship between attitudes toward control, and self-esteem, sex orientation and stress was found. Results identified a linear relationship between Control Attitude Scale and the Locus of Control (I-E) scale. People who were more democratic toward control, had the ability to share control in interpersonal relationships, have a higher self-esteem, are androgynous, and perceive stress as non-threatening.

Grande (1983) explored the relationship between locus of control, teacher behavior ratings, socioeconomic level, achievement test scores, IQ, and sex in relationship to grade report cards of third and seventh graders. Two school districts were employed to select subjects. Although statistical methods were not reported, the results are exciting. Locus of control was significantly correlated to report card grades. IQ, achievement test scores, and teacher ratings were also significantly correlated. A multiple regression analysis was performed to partial out the variables. Locus of control again contributed additional significant variance to report card grades. A correlation from this study could be that those students that were internally controlled, are more accountable.

Eller (1984) conducted a multidimensional situation specific analysis in relation to locus of control beliefs and psychopathology. Inpatient psychiatric patients were used in the study. Exact methodology and scales were not evident and would have been helpful in assessing the study.
Results of Euler's (1984) study were based on Pearson correlations and an ANOVA performed on the collected data. Internality was found to be negatively correlated with psychopathology. A positive correlation existed with ego strength. Chance beliefs were positively correlated and psychopathology and negatively correlated with ego strength. Powerful others was negatively correlated with ego strength, however, powerful others was not correlated with psychopathology.

Euler's (1984) study implies several notions pertinent to this study. First, if ego strength is related to power and control, then those with strong egos would be powerful and therefore accountable. Secondly, if powerful others is negatively correlated with ego strength, then those individuals would be accountable in relationship to weak ego strength individuals also.

Nichols (1983) expanded Rotter's Social Learning Theory in terms of locus of control. The purpose of Nichols' (1983) study was to modify the conceptualization of locus of control to separate the situation-specific state-nature from the generalized trait-nature.

Sixty-three nursing faculty and students were utilized. Two Likert-type tools were developed. The I-E scale was modified from Rotter's original ipsative tool which measured the generalized trait. A pain locus of control scale was also developed for the situation-specific construct. A pre and post test was given. After each subject took the pre-test, they experienced pain created by the submaximal effort tourniquet test followed by the post-test.

Cronback alphas were derived for the specific and general expectancy scales. Alpha for the specific expectancy scale was .81 for pre-test and .85 for post-test. The generalized expectancy scale alpha was .91 for both pre and post test for generalized expectancy scores. Situation specific scores
were significantly different pre to post test. Mean scores were more external post test.

Four hypotheses were developed for the study. The locus of control general expectancy was not significantly altered by pain. Locus of control specific expectancy was significantly and externally altered due to pain. There was no significant difference between amount of pain and locus of control general expectancy. There was no significant correlation between levels of pain and locus of control specific expectancy. The importance of these results is that support for a state-trait conceptualization of locus of control exists. A situation specific state nature and a generalized trait nature locus of control exists.

Summary

Quality-Consciousness as dealt with by Graham (1983) was the only study found employing the construct. Earlier work by Hirschman (1970) was the introduction of the construct into the literature. The quality-consciousness construct proved to be an important component in Graham's study.

Many studies researching legitimate power were identified. Although the majority of studies have used Clegg's (1975) definition of power, French and Raven's (1960) work was the basis for the majority of definitions utilized. The five social bases of power as identified by French and Raven (1960) continue to be used in research. The majority of power definitions, in the final analysis, are related to the original five social bases of power.

Dieterly and Schneider (1974) conducted a study about power and the organizational environment. The importance of the study is: 1) it provides evidence for the use of French and Raven's (1960) typology as a conceptual approach and, 2) environment of an organization does affect the perception of power by the employees.
Locus of control was originally proposed by Rotter (1966) and the Internal-External scale was developed. Two issues surround the locus of control construct: 1) the type and quality of tools designed and employed to measure the construct, ipsative verses Likert-type, and 2) the definition of the construct.

Joe and Jahn (1973) suggested through their study on the locus of control construct, that a binary response to the Rotter scale does not allow an assessment of degrees of belief in internal versus external control. A multipoint format in questionnaire design was also suggested to enhance the prediction of various attitudinal and behavioral variables in relation to the locus of control construct. Nichols (1983) provided support for Rotter's original general expectancies, however, the existence of a state or situation specific aspect to the construct was also clearly established.

In conclusion, the literature contains diverse and abundant support for the theoretical constructs. Issues revolving around definitions and operationalization of the constructs are evident. Even with these problems, these three constructs appear to be the best choices for assessing the construct validity of accountability.
Chapter III

Methodology

The methodology utilized for this study is presented. Descriptions of the subjects, data collection methods, instruments, and analyses are described.

Subjects

A convenience sample of 500 Medical-Surgical staff registered nurses (RN) in a large Midwest acute care hospital were requested to respond to a questionnaire. Licensed Practical Nurses (LPNs) were excluded due to possible biases. LPNs were perceived as serving roles that are different from RNs. Also, educational preparation of the LPNs is different than that of RNs. Any differences that may exist between the RN and LPN groups could cause an extraneous variable to be introduced into the study. Further, the accountability, legitimate power, quality-consciousness, and locus of control variables may be affected by the differences between the groups. No other restrictions were defined.

Human Rights

Subjects' human rights were safeguarded in three ways. First, approval of the research project was obtained after review by the school's Protection of Human Rights Committee. Secondly, complete confidentiality and anonymity was assured for all participants, and informed consent was obtained for participation in the study (see Appendix A). Thirdly, approval from the institution of the data collection site was obtained prior to administration of the instrument.
Data Collection

A cover letter explaining the purpose of the study, informed consent statement, and assurance of anonymity and confidentiality was given to each participant prior to completing the tool. Participation in the study was voluntary and there were no direct benefits or liabilities to the individual.

After clearance from the research review committee of the facility, central staffing provided the names and addresses of the RNs. All questionnaires were mailed to the participants for two reasons: 1) to assure better chances of each participant receiving the questionnaire and, 2) to reinforce that the participation in the study had no liabilities or expected rewards to the participants from an employee-supervisor standpoint, not related to the work setting. A self-addressed stamped envelope was included to facilitate and increase the return rate. A follow-up letter was sent to all subjects approximately two weeks after the initial mailing to remind participants that a) their participation was needed, b) that the questionnaire must be submitted as of the date listed, c) to thank the participants for their time and efforts, and d) that a copy of the results would be available for their review.

Instrument

A sixty-one item questionnaire was developed and utilized to measure the phenomenon of accountability based on several criteria derived from a evaluation of the literature, and existing tools. The items of the questionnaire were randomly arranged. The questionnaire
consisted of demographic variables and four scales; the predictor variables - legitimate power, locus of control, quality-consciousness, and the criterion variable - accountability.

Legitimate Power Scale

Power as originally conceived by French and Raven (1969) and later operationalized by Dieterly (1975), and later revised by Weaver (1981) and Graham (1983) was the construct employed in this study. Previous tools consisted of five scales which measured reward, legitimate, referent, expert and coercive power.

Dieterly (1975) measured perceived influence with a thirty-five item Perceived Power Assessment Form. Internal consistency reliabilities of .75 for expert, .78 for referent, .80 for legitimate, .81 for coercive, and .89 for reward power were reported. Weaver (1981) reported Cronbach alpha reliabilities of .65 for expert, .61 for referent, .48 for legitimate, .59 for coercive, and .67 for reward power. Graham (1983) reported Cronbach alphas of .62 for expert, .66 for referent, .76 for legitimate, .71 for coercive, and .65 for reward power. Weaver's (1981) and Graham's (1983) tools were based on Dieterly's (1975) study but revised to reflect the nursing situation.

The current power scale was adapted from Graham's (1983) study utilizing only legitimate power questions. Items were worded to reflect the intent of this study for nursing care. The eleven questions were arranged on a one to five summated rating scale with 1 representing "never", 2 "almost never", 3 "sometimes", 4 "almost always", and 5 "always" (see Appendix B). The higher the score, the more legitimate power the person perceives he/she has.
Quality-consciousness

A quality-consciousness scale with respect to nursing was developed by Graham (1983) who utilized a forty-one item summated rating scale derived from the ANA Generic Nursing Standards of Practice (1973). A Cronbach alpha of .92 was reported by Graham (1983) with a standard deviation of 11.44 and mean of 117.71 however, no validity was cited.

Graham's quality-consciousness scale based on the ANA standards of practice (1973) was used. Items that did no function as expected in Graham's study were omitted from this scale. Questions were arranged on a summated rating scale like the power scale (see Appendix B). The same five point response pattern was employed with the higher score representing high quality-consciousness.

Locus of Control

A tool for locus of control was originally developed by Rotter (1954) however, it was ipsative. Ipsative scale should not be employed for comparison across groups. In addition the reliabilities, independence and utility of this tool were questionable. Nichols (1983) utilizing Rotter's (1954) non filler items, developed two scales to measure locus of control. Twenty-four items were included in the situation-specific scale and thirty-three items on the general expectancy scale. Reliability was reported to be .91 and .81 respectively for the situation and general expectancy scales. The present scale was revised from Nichols (1983) situation-specific tool. Questions were re-worded to reflect the specific situation in this study, giving nursing care. There were sixteen items and the items were also arranged in a summated rating scale as the power and quality-consciousness scales (see Appendix B). The higher the score, the more internally controlled.
Accountability

The accountability tool was originally developed by Velianoff (1983). The items were developed based on the definition of accountability which addressed it as an obligation. A five point summated rating scale was developed with twenty-two items. Reliability was reported as .83 with a mean of 3.45 and a standard deviation of 17.43. Three items were deleted since they did not measure the domain. Twenty-four items comprise the final tool.

The current twenty-four item scale was revised to reflect the change in the definition of accountability by incorporating intent rather than obligation in each question. In addition items were made specific to provision of nursing care based on ANA standards. In other words, some aspect of the standard was addressed in each item. Items were reviewed to assure content was consistent with the new definition (see Appendix B). Specific questions were deleted based on the results of the pilot test. A five point pattern was utilized for the questions. The higher the score the more accountable.

Demographic Items

Seven demographic items comprised the final segment of the instrument. Questions related to participants' age, sex, level of education, current position, years of experience and present clinical setting were included. Rationale for the inclusion of the demographic items was to provide some comparisons among groups on the research variables and to provide a profile of the sample.

Data Analyses

The questionnaires were coded for all items and the data entered into
a DEC 10 computer for statistical analyses. The Statistical Package for the Social Sciences X (Nie, Hull, Jenkins, Steinbrenner and Brent, 1983) was the software used for the analyses. Results of the analyses are discussed in the following chapter.

A Cronbach Alpha was employed for internal consistency reliabilities. Means, standard deviation and frequencies for each item and variable were also obtained. Factor analysis was used specifically to test hypothesis one. Pearson product moment correlations were utilized to test hypotheses two, three and four. Partial correlations were performed to control for years in nursing in relation to the variables of legitimate power, quality-consciousness, locus of control and accountability. A post hoc analysis was conducted utilizing an Analysis of Variance in relation to area of practice and the variables.
Chapter IV

Results and Discussion

The findings of this study are reported and discussed. First, the demographic results are presented. Frequency data to selected questions are then presented. Scale reliabilities and validities followed by hypothesis testing, are reported. Discussion of the results follows the presentation of the findings.

Results

Demographic Results

A 42% return rate was realized (n = 211) from the original 500 questionnaire mailing. Employing questions inquiring about respondent's sex, age, years in nursing, position held, and educational level allowed comparison to the total population of registered nurses employed at the institution. A summary of the demographic data as compared to the population is presented in Tables 2 and 3.

Reliabilities and Validities

A series of two factor analyses utilizing an alpha extraction method were computed to identify construct validity items for each scale. Reliability data was subjected to the Cronbach Alpha method (see Table 4) compatible with the alpha extraction method utilized for the factor analyses.

The accountability scale contained twenty-four items originally. After the factor analyses, six items were deleted because they did not load on the first factor. The locus of control scale contained nine items of
Table 2
Demographic Summary

<table>
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<th>Sample Percent</th>
<th>Population Percent</th>
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<tr>
<td>Staff</td>
<td>200</td>
<td>94.8</td>
<td>96</td>
</tr>
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<td>Head</td>
<td>10</td>
<td>4.7</td>
<td>4</td>
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<td>Other</td>
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<td>0.5</td>
<td>-</td>
</tr>
<tr>
<td>Education</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AD</td>
<td>32</td>
<td>15.2</td>
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<tr>
<td>Diploma</td>
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<td>57.3</td>
<td>N/A</td>
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<tr>
<td>BSN</td>
<td>47</td>
<td>22.3</td>
<td>N/A</td>
</tr>
<tr>
<td>Graduate</td>
<td>11</td>
<td>5.2</td>
<td>N/A</td>
</tr>
<tr>
<td>Satisfied Being A Nurse</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>181</td>
<td>85.8</td>
<td>N/A</td>
</tr>
<tr>
<td>No</td>
<td>30</td>
<td>14.2</td>
<td>N/A</td>
</tr>
</tbody>
</table>

N/A = percents were not available

Table 3
Mean and Standard Deviation for Subjects' Age and Number of Years in Nursing

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>n</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>32</td>
<td>211</td>
<td>5</td>
</tr>
<tr>
<td>Years in Nursing</td>
<td>9.8</td>
<td>211</td>
<td></td>
</tr>
</tbody>
</table>
which were deleted after analyses. Two items were omitted from the original nine item quality-consciousness scale and four from the original twelve item legitimate power scale.

Table 4
Summary of Scale Analyses After Revisions

<table>
<thead>
<tr>
<th>Scale</th>
<th>No. of Items</th>
<th>Midpoint</th>
<th>Mean</th>
<th>S.D.</th>
<th>Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accountability</td>
<td>18</td>
<td></td>
<td>54</td>
<td>77.5</td>
<td>5.48</td>
</tr>
<tr>
<td>Legitimate Power</td>
<td>8</td>
<td></td>
<td>24</td>
<td>18.5</td>
<td>3.63</td>
</tr>
<tr>
<td>Locus of Control</td>
<td>7</td>
<td></td>
<td>21</td>
<td>14.4</td>
<td>3.57</td>
</tr>
<tr>
<td>Quality-Consciousness</td>
<td>7</td>
<td></td>
<td>21</td>
<td>28.0</td>
<td>3.94</td>
</tr>
</tbody>
</table>

Factor one for Accountability-Quality-consciousness accounted for 20.7% of the variance. Factor two accounted for 8.3% of the variance. Factor one for Legitimate Power-Locus of Control accounted for 28.6% of the variance while factor two accounted for 6.1% of the variance. Only moderate validity for each scale can be concluded.

Frequency data were obtained in order to review responses about certain questions dealing with the variables accountability, locus of control, legitimate power and quality-consciousness. The item, "I think I am accountable for my actions," was an attempt to elicit specific information about the subjects in relation to the variable of accountability. From the total responses, 77% of the subjects answered the question with "always" and 22.8% with "almost always." Therefore, 99% of the sample felt that they are accountable.

The subjects' response regarding legitimate power was elicited by the item, "I have little power to change the quality of the nursing care I give."
Disagreement with the statement was reported by 91% of the respondents. The implication was that the subjects did feel they had the power to change the quality of the nursing care they gave.

Quality-consciousness was explored most directly by the item, "There is not much use in my trying too hard to meet the ANA's standards of care." Of the total sample, 96.2% of the subjects responded to the contrary. Most subjects did feel there was utility in trying to meet the ANA's standards of care.

Item 9, "Giving good nursing care to my patients depends on my ability, luck has little or nothing to do with it", elicited direct information about the subjects' locus of control. Strong agreement with the statement was reported by 86% of the respondents. The subjects' answers imply the belief that their giving good nursing care is dependent upon ability (internal control) and not controlled by accident (external control).

Item 61, "Are you satisfied being a nurse", was included in the questionnaire. The purpose of including this question was two-fold: 1) to see whether or not the subjects were satisfied with being a nurse, and 2) to determine if the responses would be skewed if the subjects were not satisfied with being nurses. Dissatisfaction with one's job (career) would reflect dissatisfaction with the components of the job. Therefore, questions dealing with nursing care would be negatively skewed if one was dissatisfied with being a nurse. In response to the questions, 85% of the sample answered in an affirmative manner. Most nurses in this sample were satisfied with being nurses. The remaining subjects were slightly above or at the neutral point.

In conclusion, although the scale reliabilities are marginal (.70 to .75), they are adequate for this study's purposes. For the most part, the nurses indicated they felt they were accountable, had little legitimate power,
were internally oriented and were moderately quality-conscious. The scales were revised following factor analysis and all remaining analyses were computed utilizing the revised scales. Specific items were presented and information about the subjects in relation to the constructs was reviewed.

Hypothesis Testing

Hypothesis testing results for hypothesis one are presented followed by hypothesis two, three and four. Factor analysis was employed for hypothesis one. Zero order and partial correlations were computed to test hypothesis two, three and four.

Years in nursing was chosen as the controlling variable rather than age. The reason for this choice was that a trend had been noted in the literature suggesting that older individuals were entering into the educational arena. The consideration for this study was that an older individual, in terms of age, may not have been in nursing as long as a younger individuals. Years in nursing would be a better indicator than age when studying effects on the variables.

Hypothesis One. Legitimate power, accountability, situation specific locus of control, and quality-consciousness are mutually exclusive.

A factor analysis using an alpha extraction method with a varimax rotation was utilized to test the hypothesis. A five factor analysis was utilized since four factors were expected and the fifth factor would contain items that did not fit any of the scales. The results identified some problems. (see Table 5). Locus of control items loaded across three factors while quality-consciousness items loaded on two factors. Loadings had to be higher than .30 however, none of the loadings exceeded .52 which is only a moderate loading. Legitimate power and accountability items factored on
Table 5
Factor Loading by Scale Items

<table>
<thead>
<tr>
<th>Scale</th>
<th>Items/Factor</th>
<th>Amount of Variance Accounted For</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Accountability</td>
<td></td>
<td>25.6</td>
</tr>
<tr>
<td>2</td>
<td>-.31</td>
<td>.41</td>
</tr>
<tr>
<td>3</td>
<td>.45</td>
<td>-.09</td>
</tr>
<tr>
<td>6</td>
<td>.42</td>
<td>.17</td>
</tr>
<tr>
<td>7</td>
<td>.50</td>
<td>.00</td>
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<tr>
<td>11</td>
<td>.51</td>
<td>.32</td>
</tr>
<tr>
<td>16</td>
<td>.43</td>
<td>.16</td>
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<tr>
<td>22</td>
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<td>.31</td>
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<td>26</td>
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<td>.12</td>
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<tr>
<td>28</td>
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<tr>
<td>34</td>
<td>.25</td>
<td>.26</td>
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<td>40</td>
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<td>.22</td>
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<td>41</td>
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<td>45</td>
<td>.50</td>
<td>.17</td>
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<td>49</td>
<td>.31</td>
<td>.29</td>
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<tr>
<td>50</td>
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<td>.03</td>
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<td>.17</td>
</tr>
<tr>
<td>52</td>
<td>.32</td>
<td>.08</td>
</tr>
<tr>
<td>Locus of Control</td>
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<td>-.20</td>
</tr>
<tr>
<td>9</td>
<td>-.35</td>
<td>.31</td>
</tr>
<tr>
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<td>18</td>
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<td>.37</td>
</tr>
<tr>
<td>32</td>
<td>-.45</td>
<td>.40</td>
</tr>
<tr>
<td>Quality-Consciousness</td>
<td></td>
<td>.51</td>
</tr>
<tr>
<td>4</td>
<td>.31</td>
<td>.25</td>
</tr>
<tr>
<td>13</td>
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<td>27</td>
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<td>30</td>
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<td>44</td>
<td>.38</td>
<td>.34</td>
</tr>
<tr>
<td>48</td>
<td>.51</td>
<td>.19</td>
</tr>
<tr>
<td>Legitimate Power</td>
<td></td>
<td>-.29</td>
</tr>
<tr>
<td>12</td>
<td>-.42</td>
<td>.50</td>
</tr>
<tr>
<td>15</td>
<td>-.62</td>
<td>.21</td>
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<tr>
<td>20</td>
<td>-.36</td>
<td>.51</td>
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<tr>
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<td>-.62</td>
<td>.26</td>
</tr>
<tr>
<td>42</td>
<td>-.36</td>
<td>.29</td>
</tr>
</tbody>
</table>
the same factor. Again the loadings were only moderate with a .62 the highest loading. For the most part items loaded positively or negatively on the first factor.

A pair of three factor analyses were then conducted since covariance between quality-consciousness and accountability and between locus of control and legitimate power was speculated. Quality-consciousness and accountability items were factored in one analysis and legitimate power and locus of control items were in the other. In the first analysis, items two, six, eleven, which were measuring accountability, and items 29 and 46, which were measuring legitimate power, were in the third factor. All other items loaded on a factor as was expected.

Items two and six did not utilize "nursing care" in the question construction, rather the question asked about the patient's "care". The omission of the word "nursing" with "care" may have caused respondents to interpret these questions as asking about a different kind of care than nursing care. Since moderate loadings of these items occurred, they did not form another scale.

Variable eleven, although not related to variables two and six regarding care, utilized the word "responsible". The word responsible was included in an accountability item to assess whether or not the respondents would distinguish between accountability and responsibility. The word responsible was perceived by the respondents as different than accountability and was therefore factored out of the accountability variables. Velianoff (1983) distinguished between being responsible and accountable and thus further support was offered by the findings presented here. Variables twenty-nine and forty-six utilized the term "influence" when asking about legitimate power. Apparently, the word "influence" was
problematic for the subjects in responding to the power questions. The word influence may have been perceived as different from "power".

Although there were possible explanations for why items did not load on the appropriate factor, the fact remains that they did not. In view of the small amount of variance accounted for by the factors, there is more variance to be accounted for by these scales. Hypothesis one was rejected.

**Hypothesis Two.** There will be a significant, positive relationship between situation-specific locus of control and accountability when controlled for years of experience in giving nursing care.

The correlations revealed that locus of control and accountability were negatively related. A high score on the accountability scale correlated to a low score on the locus of control scale. The results demonstrated significant relationships among the constructs but opposite to the prediction (see Table 6). No change in the magnitude of the relationship occurred when years in nursing was controlled for via the partial correlation. Thus, the hypothesis was rejected.

**Table 6**
Zero Order Correlations (Upper Matrix)
Contrasted with Partial Correlations
Controlling for Years of Experience (Lower Matrix)

<table>
<thead>
<tr>
<th></th>
<th>Account.</th>
<th>Power</th>
<th>Quality</th>
<th>Locus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Account.</td>
<td>1.00</td>
<td>-0.47*</td>
<td>0.55*</td>
<td>-0.40*</td>
</tr>
<tr>
<td>Power</td>
<td>-0.47**</td>
<td>1.00</td>
<td>-0.37*</td>
<td>0.63*</td>
</tr>
<tr>
<td>Quality</td>
<td>0.55*</td>
<td>-0.36*</td>
<td>1.00</td>
<td>-0.26*</td>
</tr>
<tr>
<td>Locus</td>
<td>-0.40*</td>
<td>0.63*</td>
<td>-0.25*</td>
<td>1.00</td>
</tr>
<tr>
<td>Age</td>
<td>-0.07*</td>
<td>0.10*</td>
<td>-0.11*</td>
<td>0.10*</td>
</tr>
<tr>
<td>Years</td>
<td>-0.05</td>
<td>0.10***</td>
<td>-0.14**</td>
<td>0.11***</td>
</tr>
</tbody>
</table>

*p < .001; **p = .025; ***p <= .1
Hypothesis Three. There will be a significant, positive relationship between legitimate power and accountability when controlled for years of experience in giving nursing care.

Legitimate power and accountability were negatively correlated. A high score on the accountability scale was related to a low score on the legitimate power scale. Although there was a significant relationship, it was opposite that which was predicted. Controlling for years in nursing did not change the relationships (see Table 6). Hypothesis three was also rejected.

Hypothesis Four. There will be a significant, positive relationship between quality-consciousness and accountability when controlled for years of experience in giving nursing care.

Accountability and quality-consciousness were significantly and positively correlated. When years in nursing was controlled, the relationship did not change (see Table 6). The hypothesis was supported. A subject scoring high in the accountability scale, scored high on the quality-consciousness scale, regardless of their years in nursing.

Post-Hoc Analyses. Since discrepancies existed in the five factor analysis, an Analysis of Variance was performed to see if the variance could be explained by any of the possible intervening variables for which data existed. A summary of these ANOVA results is presented in Table 7. Area of practice was found to be a significant variable for power and locus of control with quality-consciousness indicating a trend in that direction also. Ordering was done by using cell means. The n's made no difference. Cell means are reported in Table 8. The ordering of the dependent variable means for legitimate power, locus of control, and quality-consciousness were the same: Critical care nurses the lowest and OB/GYN nurses the highest. Less than
Table 7
Summary of ANOVA- Analyses for Possible Intervening Variables

<table>
<thead>
<tr>
<th>Demog. Variable</th>
<th>Depend. Variable</th>
<th>Source</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area of Practice</td>
<td>Account.</td>
<td>Main</td>
<td>2</td>
<td>6.42</td>
<td>0.18</td>
<td>0.83</td>
</tr>
<tr>
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<td>Resid.</td>
<td>208</td>
<td>35.20</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Power</td>
<td>Main</td>
<td>2</td>
<td>40.94</td>
<td>3.16</td>
<td>0.04</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Resid.</td>
<td>208</td>
<td>12.95</td>
<td></td>
<td></td>
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<tr>
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<td>Main</td>
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</tr>
<tr>
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<td></td>
<td></td>
</tr>
<tr>
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<td>Locus</td>
<td>Main</td>
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<td>12.45</td>
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</tr>
<tr>
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</tr>
<tr>
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</tr>
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<td>Power</td>
<td>Main</td>
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<td>1.11</td>
<td>0.33</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Resid.</td>
<td>197</td>
<td>13.23</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Qual.</td>
<td>Main</td>
<td>2</td>
<td>49.45</td>
<td>3.02</td>
<td>0.05</td>
</tr>
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<td></td>
<td></td>
<td>Resid.</td>
<td>197</td>
<td>16.39</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Locus</td>
<td>Main</td>
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</tr>
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<td>Resid.</td>
<td>197</td>
<td>12.70</td>
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<tr>
<td>Satisf. with Nursing</td>
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<td>Main</td>
<td>1</td>
<td>0.09</td>
<td>0.003</td>
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<tr>
<td></td>
<td></td>
<td>Resid.</td>
<td>209</td>
<td>35.099</td>
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</tr>
<tr>
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<td>Power</td>
<td>Main</td>
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<td>47.02</td>
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<td>13.05</td>
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</tr>
<tr>
<td></td>
<td>Qual.</td>
<td>Main</td>
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<td>4.35</td>
<td>0.25</td>
<td>0.62</td>
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<td>Resid.</td>
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<tr>
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<td>Locus</td>
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<td>2.10</td>
<td>0.16</td>
<td>0.70</td>
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### Table 8
Summary of Cell Means for Area of Practice by Each Dependent Variable

<table>
<thead>
<tr>
<th>Area of Practice</th>
<th>Cell Mean</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>By Accountability</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Med/Surg</td>
<td>82.65</td>
<td>80</td>
</tr>
<tr>
<td>Critical Care</td>
<td>83.22</td>
<td>64</td>
</tr>
<tr>
<td>OB/GYN</td>
<td>82.73</td>
<td>67</td>
</tr>
<tr>
<td><strong>By Power</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Med/Surg</td>
<td>18.28</td>
<td>80</td>
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<tr>
<td>Critical Care</td>
<td>17.88</td>
<td>64</td>
</tr>
<tr>
<td>OB/GYN</td>
<td>19.39</td>
<td>67</td>
</tr>
<tr>
<td><strong>By Quality Consc.</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Med/Surg</td>
<td>32.38</td>
<td>80</td>
</tr>
<tr>
<td>Critical Care</td>
<td>31.08</td>
<td>64</td>
</tr>
<tr>
<td>OB/GYN</td>
<td>32.58</td>
<td>67</td>
</tr>
<tr>
<td><strong>Locus of Control</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Med/Surg</td>
<td>14.44</td>
<td>80</td>
</tr>
<tr>
<td>Critical Care</td>
<td>13.55</td>
<td>64</td>
</tr>
<tr>
<td>OB/GYN</td>
<td>15.24</td>
<td>67</td>
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</tbody>
</table>

### Table 9
Partial Correlations Controlling for Area of Practice

<table>
<thead>
<tr>
<th></th>
<th>Account.</th>
<th>Power</th>
<th>Quality</th>
<th>Locus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control for Area Practice</td>
<td>- .4760*</td>
<td>.5478*</td>
<td>-.4040*</td>
<td></td>
</tr>
<tr>
<td>Account.</td>
<td>1.000</td>
<td>-.4715*</td>
<td>.5479*</td>
<td>-.4081*</td>
</tr>
</tbody>
</table>
0.5 point difference among the areas however, was found for accountability. Critical care nurses were slightly more accountable, but least quality-conscious, significantly less internally controlled, and perceived themselves as having significantly less legitimate power in comparison to Med/Surg and OB/GYN nurses in the example. Controlling for area of practice however, did not significantly change the magnitude of the correlations (see Table 9).

For satisfaction with nursing, only thirty respondents indicated they were not. The unequal cell size probably explains the trend for legitimate power to differentiate between satisfaction and dissatisfaction with nursing.

When area of practice was controlled, it did not change the magnitude of pertinent relationships. All other variables hinted at trends but no real differences were found. Thus, it is reasonable to conclude that none of the measured variables were intervening variables.
Discussion

Initially, the factor analysis results did not support mutual exclusiveness as stated in hypothesis one. The final conclusion of moderate construct validity for accountability however, was made in light of hypothesis testing and data. Although the data for accountability and legitimate power supported construct validity, some problems with the quality-consciousness and situation specific locus of control constructs were identified.

The problem with quality-consciousness may be related to the definition of quality and quality indicators. Quality could be defined differently by each area of practice and each individual subject. There is a theoretical explanation for differences across services for quality-consciousness. Hirschman (1970) stated that one would voice or exit in the face of declining quality. If quality was defined differently by each respondent or each area of practice in this study, then, the ANA (1973) Standards of Care would not be valid indicators of quality. Although Graham's (1983) study does not support this interpretation, change in the health care environment, such as DRG's, from the time of Graham's study to the present, could have caused a change in the definition and/or indicators of quality.

The situation specific locus of control construct was also problematic in terms of the factor analysis and construct validity. The higher the quality-consciousness, the less internally controlled. Again, area of practice influenced these relationships. The Critical Care nurses were more accountable, but less internally controlled, quality-conscious and legitimately powerful than the OB/GYN and Med/Surg nurses.

Rotter (1954) defined locus of control as the perception of control or lack of control in situations. French and Raven (1960) defined legitimate
power as one's ability to change, effect or influence other persons or events by virtue of one's position or role. A strong positive correlation between power and locus of control was found. However, interpretation of the factor analysis data makes one question the validity of these constructs as being mutually exclusive. Rather, the existence of some similarity between the constructs may exist.

If one is not able to change a specific situation, then one could be perceived as being externally controlled. If control and power are similar, then possessing power also means being internally controlled.

Scale reliabilities in this study concur with those cited in the literature. The accountability scale reliability was slightly less reliable than that of Velianoff (1983). Graham's (1983) quality-consciousness scale reliability was higher than the quality-consciousness scale of this study. The locus of control scale reliability was about the same as Nichols' (1983) and the legitimate power scale was somewhat more reliable than others cited.

The reliabilities of the scales may have been improved if: 1) the words "nursing care" were used for each of the quality-consciousness items rather than just "care" as evidenced by variables 2 and 6, 2) the word "influence", in items 29 and 46 was replaced, and 3) omitting the word "responsible" from items 11 and 3. Obviously, some interpretive problems existed for the subjects in this study regarding the words influence, responsibility and the omission of nursing before the word care.

The respondents may have had difficulty with item 11, containing the word responsible, due to the definition of accountability. Velianoff (1983) stated that accountability supercedes responsibility. The factor analysis data supports this notion.

The correlation data failed to support hypothesis two and three.
Hypothesis four was supported. Conceptually, accountability, locus of control, and quality-consciousness were seen as being positively related. The more internally controlled, or able to change events or persons, the more legitimate power or ability to influence, one would have. If one was internally controlled, had legitimate power and was quality-conscious, then the higher personal intent, or accountable, one would be. Clearly, the data support the quality-consciousness - accountability conceptualization, but not the legitimate power and situation specific locus of control relationship with accountability. These relationships were negatively correlated.

The conceptualization was incorrect for the Critical Care nurses as evidenced in the post hoc analysis of variance. Initially, the Critical Care nurses were seen as powerful, controlling nurses and therefore, fit the expected relationships. Obviously, this was not the case. A logical analysis of the problem revealed that Critical Care nurses do not have control or power since the physicians prescribe and dictate specific and detailed orders and the Critical Care nurses' role revolves around accomplishing these tasks prescribed by medicine and dependent upon nurses. In order words, Critical Care nurses are more task oriented by virtue of their practice environment and need to initiate and complete medical protocols. However, since these nurses accomplish their tasks, they see themselves as accountable, in other words followed orders, and as quality-conscious since following orders and accomplishing tasks are the quality standards. Any further studies should give attention to this issue and at least separate the Critical Care nurses from the others. Finally, partial correlations to control for years in nursing were employed and no significant changes were noted. Older, more experienced nurses were
thought to be more quality-conscious, more internally controlled, more powerful due to their positions and roles and more accountable. However, a trend was noted for older, more experienced nurses to be less quality-conscious and more internally controlled. Although the data does not support the expected relationships between the four constructs, the data does support Graham's (1983) finding of a trend for older, more experienced nurses to be less quality-conscious.

Further, one must speculate that a cultural component may have affected the responses. If nurses are supposed to be accountable, externally controlled, not legitimately powerful but quality-conscious as part of the nursing culture, then respondents may have answered the questions as they are supposed to by the culture. Knowing the results would be disseminated may have influenced the subjects to respond based on cultural expectations, whether or not they agree with those expectations. The perception of one's role or position in a culture influences one's social behaviors as supported by Rotter's (1954) Social Learning Theory.

In conclusion, moderate construct validity and a positive correlation between accountability and quality-consciousness were found. Scale reliabilities may have been enhanced if certain items were re-worded. Controlling for years in nursing did not alter the relationships. Post hoc analyses identified area of practice as a significant variable. Critical Care nurses were less quality-conscious, had less legitimate power, were less internally controlled, but more accountable when compared to the Med/Surg and OB/GYN samples.
Summary, Conclusions, Limitation, Recommendations and Value of the Study

Summary

The purposes of this study were to: 1) expand upon the pilot study by Velianoff (1983) in order to define more precisely professional accountability for nurses in providing nursing care, 2) to test the construct validity of a tool developed to measure nurses' accountability in providing nursing care and, 3) contribute to a better understanding of accountability in nursing.

Conceptually, legitimate power, situation specific locus of control and quality-consciousness were seen as related to accountability. The more legitimate power, more quality-conscious one is and the more internally controlled, then the more accountable one would be. The theoretical and conceptual basis of the study included: 1) the pilot study by Velianoff (1983) that defined and attempted to measure accountability, 2) French and Raven's (1960) Social Bases of Power that defined legitimate power, 3) Hirschman's (1970) Model of Exit, Voice and Loyalty that contained and defined the quality-consciousness construct as identified by Graham (1983) and 4) Rotter's (1954) Social Learning Theory as expanded by Nichols (1983) which defined and explored the locus of control construct. These studies offered support for the inclusion of the constructs in this study.

Legitimate power was defined as the ability to influence or change
other persons or events due to one's position or role. French and Raven (1960) contend that legitimate power results from internalized values accepted by the person permitting an agent to assert power. In this instance, nurses assert power for nursing care due to their role as care givers.

Locus of control was defined as the perception of control or lack of control in situations. Rotter (1954) believed that internal locus of control was typified by the individual who perceives having control in a situation while external control was typified by the individual who perceives no control in a situation. Nichols (1983) identified a state-trait variable for locus of control both generally and in specific situations. For this study, locus of control specific expectancy was utilized since the focus was on staff nurses in providing nursing care specifically.

Quality-consciousness was defined as the individual's concern for the quality of goods and services. Hirschman (1970) first identified quality-consciousness and later was tested by Graham (1983). The intent here is that quality is measured by a standard. For nursing, the ANA (1973) standards of care would set the quality indicators for nurses in giving care. As accountability increases, one's concern for quality of service should increase.

Hypotheses tested were: 1) The constructs of accountability, situation specific locus of control, legitimate power and quality-consciousness were mutually exclusive, 2) there would be a significant positive relationship between accountability and situation specific control when controlling for years of experience in nursing, 3) there would be a significant positive relationship between accountability and legitimate power when controlling for years of experience in nursing and, 4) there would be a
significant positive relationship between accountability and quality-consciousness when controlling for years of experience in nursing.

A review of the literature demonstrated that empirical testing of accountability was confined to the pilot study by Velianoff (1983). Studies utilizing Hirschman's (1970) quality-consciousness construct were confined to the study by Graham (1983). Studies for the power typology and locus of control were reported and supported the operationalization of the constructs.

A sixty-one item Likert-type questionnaire was developed to measure the variables based on the literature review and items from existing tools. The questionnaire was distributed on a convenience basis to 500 registered nurses currently working in a large Midwest acute care private hospital. Data from 212 completed questionnaires representing a 42% return rate were used for analysis.

A series of two factor analyses were conducted to determine valid items for each scale. Reliability data were obtained for the valid measures of the four scales. The situation specific locus of control scale had a Cronbach alpha of .72. The legitimate power scale had a Cronbach alpha of .70 and the quality-consciousness scale had an alpha of .75. The accountability scale had a Cronbach alpha of .75. These internal consistency reliability coefficients were considered acceptable. A five factor analysis was computed to determine construct validity thereby testing hypotheses one. Moderate construct validity was concluded.

Pearson correlations and partial correlations were employed to test hypotheses two, three and four. The partial correlation technique was necessary to allow control for the variable, years in nursing.

A significant, positive correlation coefficient was demonstrated
between accountability and quality-consciousness. Although significant correlations were found between accountability and locus of control as well as between accountability and legitimate power, the correlations were negative. Controlling for years in nursing did not alter the magnitude of the correlation coefficients.

A post hoc analysis was conducted to see if any of the discrepancies found in the five factor analysis could be explained. An analysis of variance was employed. The ANOVA identified a significant relationship between area of practice and the constructs. Critical Care nurses were found to be more accountable, but less quality-conscious, had less legitimate power and were less internally controlled than OB/GYN and Med/Surg nurses.

Conclusions

Six conclusions were formulated. First, there was moderate support for the validity of the accountability construct. Factor analysis supported the validity of the construct. Further, reliability of the accountability scale was sought and acceptable internal consistency reliability was obtained.

Second, the factor analysis data identified aspects of the quality-consciousness construct, as operationalized in this study, that overlap with accountability. The items identified may lead to a better clarification of the accountability construct. If quality is defined as standards and accountability is defined as meeting those standards, then being accountable is achieving quality based on the standards identified.

Third, experience in nursing does not appear to be as important a variable as expected. A trend for older more experienced nurses to be less quality-conscious was noted. The magnitude of the correlation coefficient
did not change when years in nursing were employed.

Fourth, area of practice does affect one's perception of accountability. Critical Care nurses perceived themselves as more accountable than nurses in the OB/GYN and Med/Surg areas. One may choose a specific clinical area due to these reasons or one may develop these characteristics when employed in the specific clinical areas (situation specific locus of control).

Fifth, responsibility is different than accountability. Results from this study support Velianoff's (1983) notion that responsibility is distinguishable from accountability. Accountability was seen as superceding responsibility.

Sixth, the area of accountability is well worth continuing study. Currently, nurses are continually told that they must be accountable for their services to patients (nursing care). In order to facilitate and enhance the behavior of being accountable, the definition and related constructs must be identified.

Limitations

The only limitation identified for this study was the constituency of the staff nurse due to the legitimate power definition. Since legitimate power is embedded in a role or position, then the roles of nurses must be circumscribed to the specific job role or position. The role or position of nurse administrators may be different than the staff nurse role.

Recommendations

Based on the results and conclusions of this study, the following recommendations have been identified.
1. A replication of this study should be conducted in a setting utilizing a "true" primary nursing care delivery system. The type of delivery system may affect the perception of one's accountability in giving nursing care.

2. A replication of this study should be conducted in various hospital settings including those that have organized labor unions representing registered nurses. The presence of a labor union may affect the perception of one's accountability within a system in giving nursing care.

3. Further refinement of scale reliabilities utilized to measure accountability, legitimate power, situation specific locus of control and quality-consciousness in giving nursing care should be pursued.

4. Research efforts should be continued to clarify the relationship of management style and organizational philosophies with the variables. One's perception of accountability may change depending on the organizational climate.

5. The conceptual development and definition of a "responsibility" construct for use in nursing research would enhance further studies of the present topic.

6. Further research to explore the effects of area of practice on the constructs should be pursued. Does one choose area of practice because of like perceptions or are the perceptions of quality-consciousness, legitimate power and situation locus of control developed within the environment the person is put in.

Value of Study

Accountability in giving nursing care by registered nurses is a value
repeated throughout nursing. Due to the attention given accountability in nursing, an understanding of what accountability is and related constructs would be valuable. This study presented a definition of accountability and identified related constructs that affect accountability in giving nursing care.

Area of practice was identified as a significant variable when looking at accountability. The practice environment affects one's accountability. When attempting to increase one's accountability, the area of practice must be considered in order to affect a change. Further, one's perceptions of control, power and quality must be considered. The value of this finding is that any changes made to help nurses increase their accountability must be made in light of their practice setting. One strategy may not apply to all nurses.

Another value of this study is that instruments were developed in order to measure the constructs. Although further refinement of the scales should be pursued, fairly reliable tools have been introduced to measure the constructs.

Finally, the greatest value of this study is that it is the first study to be done on accountability in giving nursing care. The door to further research and further knowledge and enhancement of nursing is possible. The domain of nursing research now includes accountability in giving nursing care.
SON COMMITTEE ON PROTECTION OF HUMAN SUBJECTS

Exempt Research Checklist

Directions: This form is to be completed and submitted to the IRB when the investigator is contemplating the initiation of a research project which, in the investigator's judgement, is exempt from normal IRB review. If the response to any of the following items, 2A, 2B, 2C, 4A, 4B, 4C and 6, is "Yes," the research is not exempt and steps 2 and 3 should be followed. This completed form is to be sent to Carol Deeds, Rm 319. She will advise the investigator of its acceptance or denial of the claimed exemption.

Step 1. Does the proposed research involve any of the following? Respond to each item by checking the appropriate answer.

Yes No

□ ☑ 1. Normal educational practices such as achievement, aptitude and diagnostic tests, instructional strategies and techniques and curriculum development.

☑ ☑ 2. Questionnaires, surveys, interviews and participant observation involving individuals or groups wherein the investigator does not stress the subject experimentally or manipulate the subject's behavior.

If the answer to 2 is "yes," then answer A, B and C, below:

Yes No

□ ☑ A. Are the required responses recorded in such a manner that the individual responding can be identified directly or through identifiers linked to the subjects?

□ ☑ B. Could the responses, if they became known outside the research, reasonably place the subject at risk of criminal or civil liability or be damaging to the subject's financial standing or employability?

□ ☑ C. Does the research deal with sensitive aspects of the subject's own behavior such as illegal conduct, drug use, sexual behavior or use of alcohol?

☑ ☑ 3. Survey or interviews of elected or appointed public officials or candidates.

☐ ☑ 4. Observation of public behavior.

If the answer to 4 is "yes," then answer A, B and C, below:

□ ☑ A. Are the observations recorded in such a manner that the persons being observed can be identified directly or through identifiers linked to the subjects?

□ ☑ B. Could the observations recorded about the individual, if they became known outside the research, reasonably place the subject at risk of criminal or civil liability or be damaging to the subject's financial standing or employability?

□ ☑ C. Does the research deal with sensitive aspects of the subject's own behavior such as illegal conduct, drug use, sexual behavior or use of alcohol?

☐ ☑ 5. Data already collected such as public records and documents or the use of data or specimens already collected such as documents, pathological and diagnostic specimens which do not identify the subject.

☑ ☑ 6. Does this project include any procedures not listed above?

(continued on reverse)
Exempt Research Checklist

Only complete steps 2 and 3, below, if you have answered "yes" to any of items 2A, 2B, 2C, 4A, 4B, 4C or 6.

Step 2. Complete the Summary Safeguard Statement, attach a copy of your proposal and include any documents relating to informed consent such as consent forms or statements to be given to or read to the subjects.

Step 3. Send the Documentation of Review, the Summary Safeguard Statement and your proposal and informed consent material to Carol Deets in Room 319.

Title of Project: A Construct Validity Study to Develop A Tool for Accountability in Nursing Care

Principal Investigator: George D. Velianoff

Typed or Printed Name

Exemption Claim:

Accepted

Denied

The investigator may submit a brief summary of the proposed research, not to exceed the space provided below:

The purposes of this study are to 1) define professional accountability for nurses and 2) test the construct validity of a tool developed to measure nurses' accountability in providing care. A convenience sample of Medical/Surgical female staff registered nurses in a large Midwest acute care hospital will be employed to respond to the questionnaire. All questionnaires will be sent to the participants by mail for two reasons, 1) to assure better chances of each participant receiving the questionnaire and 2) to reinforce that the participation in the study has no liabilities or expected rewards to the participants from an employee-supervisor standpoint, i.e. not related to the work setting. A self-addressed stamped envelope will be included to facilitate and hopefully increase the return rate.
APPENDIX B
January 14, 1986

Dear Colleague:

I am a doctoral student in Nursing at Indiana University. I am conducting a research study as part of my requirements for the doctoral degree. The purpose of this study is to test the construct validity of a tool developed to measure nurses' accountability in providing care.

I would appreciate it very much if you would take part in this study by answering the enclosed questionnaire. If you take part in this study, there is no risk, or benefit to you directly; however, the results of this study should be a benefit to the profession. Your confidentiality and anonymity are assured because I have not requested your name on any of the forms and I have no way of knowing who did or did not participate.

Participation in the study is voluntary. Answering and returning the questionnaire indicates your consent to participate in the study. Please answer the questions honestly. It will take only about twenty minutes to complete all questions. After completing the questionnaire, place the questionnaire in the self-addressed stamped envelope enclosed. Mail it no later than January 29, 1986.

Thank you for your time and effort. A summary of the results of this study will be provided to the Assistant Vice President of Nursing so you can see the results too.

[Signature]

George D. Vellanoweth, RN
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<th></th>
<th>NEVER</th>
<th>ALMOST NEVER</th>
<th>SOMETIMES</th>
<th>ALMOST ALWAYS</th>
<th>ALWAYS</th>
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<tbody>
<tr>
<td>1.</td>
<td>My nursing care is governed by factors not controlled by me.</td>
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<td>2.</td>
<td>If I think something is wrong with the care of my patient, I will attempt to correct it.</td>
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<td>3.</td>
<td>I would do almost anything to help a patient in terms of his/her care.</td>
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<td>4.</td>
<td>It is important for me to interview patients to determine their need for assistance.</td>
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<td>5.</td>
<td>Patients should not expect me to perform nursing care at the same level continuously.</td>
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<td>6.</td>
<td>If there was a problem with a patient's care, I would take steps to resolve it.</td>
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<td>7.</td>
<td>It is important for me to prescribe nursing care for my patients.</td>
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<td>8.</td>
<td>Whenever something goes wrong with my patients' nursing care, it is usually because I have done (or not done) something.</td>
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<td>9.</td>
<td>Giving good care to my patients depends on my ability, luck has little to do with it.</td>
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<td>10.</td>
<td>I do not realize the extent to which my practice is controlled by accidental happenings.</td>
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<td>11.</td>
<td>I like being responsible for my patients' nursing care.</td>
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<td>12.</td>
<td>I have the ability to influence care provided to my patients.</td>
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<td>13.</td>
<td>It is important to me to determine the long term effectiveness of my nursing care.</td>
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<td>14.</td>
<td>It is important to me to prioritize my nursing care plan goals.</td>
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<td>15.</td>
<td>I have little power to change the quality of nursing care I give.</td>
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<td>16.</td>
<td>It is important for me to identify my patient's capabilities and limitations.</td>
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<td>17.</td>
<td>Without the right breaks, I cannot be effective in giving nursing care.</td>
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<td>18.</td>
<td>Other nurses who have not been hassled about the care they provide are just plain lucky.</td>
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<td>19.</td>
<td>When staffing on my unit is less than adequate, I cannot give as good care to my patients as I want.</td>
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<td>20.</td>
<td>Sometimes I feel I do not have enough control over the nursing care I give.</td>
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<td>21.</td>
<td>I would feel more obligated to giving nursing care if I were more autonomous.</td>
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<td>22.</td>
<td>It is important for me personally to give care to my patients.</td>
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<td>23.</td>
<td>My nursing practice is controlled to a great extent by accidental happenings.</td>
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<td>24.</td>
<td>When I feel stressed, I know that it is because I have not been giving quality nursing care to my patients.</td>
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<td>25.</td>
<td>There is not much use in my trying too hard to meet ANA's standards of care.</td>
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<td>26.</td>
<td>I initiate nursing measures for patients regardless of the repercussions that may arise.</td>
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<td>27.</td>
<td>It is important for me to create nursing care plans based on the patients' nursing nursing diagnoses.</td>
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<td>28.</td>
<td>Patients rely on me to answer their questions about my nursing care.</td>
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<td>29.</td>
<td>I try to influence patients to develop habits which better maintain their health.</td>
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<td>30.</td>
<td>It is important for me to invlove the family in direct care of the patient.</td>
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<td>31.</td>
<td>My superiors cannot expect me to work at my maximum level of practice.</td>
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<td>32.</td>
<td>I am directly in control of my nursing care.</td>
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<td>33.</td>
<td>I can do only as much as my superiors will let me do.</td>
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34. I desire to give my patients the best nursing care I can.

35. I enjoy discussing nursing care with my peers.

36. I control what happens in the nursing care of my patients.

37. I think I am accountable for my actions.

38. I have little control over how I practice nursing.

39. The more patients I am assigned, the more essential it is that I give good nursing care.

40. It is important for me to keep my patients informed about their progress.

41. I help patients regain their health because I feel compelled to do so.

42. Many times I feel I have little influence over the nursing care I provide.

43. If I take care of myself, I can avoid burnout.

44. It is important for me to develop a nursing diagnosis based on my assessment.

45. I do not like being responsible for my nursing actions.

46. I try to influence patients to develop habits that would regain their health.

47. I help my patients maintain health because they trust me to do so.

48. It is important for me to evaluate my patient's progress throughout his care.

49. The responsibility for giving nursing care to patients is the main function of a nurse.

50. It is my duty to respond to patients about nursing care they are receiving.

51. Society holds me responsible for giving good nursing care to my patients.

52. My superiors trust me to give good nursing care to my patients.

53. I am unable to change nursing practices of which I do not approve.

54. My decisions are not questioned by other nurses.

55. If I were promoted to a higher position of authority, I would be able to change the things I see wrong on my unit and work setting.

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I also need to know some general information. This information will help me know something about the type of nurses who take part in my study.

56. Sex? Female ______ Male ______

57. Age? ______

58. Years in Nursing? ______

59. Your current position? Staff ______ Head/Charge ______ Other ______

60. Education Level? A.D. ______ Diploma ______ BSN ______ Graduate program ______ Other ______

61. Overall, are you satisfied being an R.N.? Yes ______ No ______

62. Your current area of practice? Med/Surg ______ Critical Care ______ Other _______ (spec.)
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Mendelson, R. (1984). An attempt to construct an adult locus of control scale capable of assessing both generalized and specific expectancies for reinforcement (Doctoral dissertation, Emory University, 1985), 46, 2072-B.


