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SELF ACTUALIZATION AND INTERNAL CONTROL IN NURSING STUDENTS

by
David Walter Durka

A dissertation submitted in partial fulfillment
of the requirements for the degree of
Doctor of Philosophy
(Education)
in The University of Michigan
1973

Doctoral Committee

Professor Delmont K. Byrn, Chairman
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CHAPTER I

INTRODUCTION TO THE STUDY

The stress associated with caring for the injured, sick, and dying is well known. Demands are particularly heavy on registered nurses, who must be knowledgeable and technically adept, humanizing in patient care, and efficient in discharging supervisory duties. It is important that research provide information regarding the personal qualities, as well as the technical skills, which help nurses meet the rigors of their vocation.

Ideally, investigations should be conducted at several levels, prior to admission to a nursing program, during the nursing student's education, and subsequent follow-up of persons active in the field. The research reported in this dissertation covers one aspect of a nursing education program based in a community college. It was an attempt to clarify relationships between personal growth of students, and their performance and adjustment in the program. The findings of this study should not be interpreted as descriptions of the personal qualities of nurses who consistently provide quality service and find much satisfaction in their profession.

Self Actualization in Nursing

One term frequently used to describe the personal growth process is self actualization. Abraham Maslow has described it the following way:

> Self actualization means experiencing fully, vividly, selflessly, with full concentration and total absorption...making the growth choice rather than the fear choice of listening to the impulse voices, and of being honest and taking responsibility...Self actualization is not only an end state but also the process of actualizing one's potentials at any time, in any amount. (1971, pp. 45-47)

In spite of the relevance of self actualization theory to the nursing field, little research has been conducted in this area. This dissertation was conducted to help meet the need for such information on students in a registered nursing associate degree program.

A review of the literature pertaining to professional nurses revealed little research on self actualization. A computerized search using the DATRIX service[1] failed to reveal any such studies. Similar results were obtained in a review of Educational Research Information

---

[1]University Microfilms, DATRIX (Direct Access to Reference Information). A Computer Retrival System of Recent Doctoral Dissertations, Using Key Words in the Search. University Microfilms, A Xerox Company, Ann Arbor, Michigan 48106. Key Words used were inventory, dogmatism, nursing, actualizing, and self. Self actualization was not in the list of key words available.

Clearinghouse (ERIC) documents[2] dating back to January 1970. A review of nursing journals[3] revealed two related studies.

Kramer et al. (1972) reported no clear relationship between self actualization and role adoption of nurses with baccalaurate degrees. Dyer (1972) found significant relationships between job performance in veteran hospitals and personal histories and personality inventory scores of registered nurses.

A review of research which utilized Shostrom's Personality Orientation Inventory (POI), from a list provided by the Educational Testing Service (Shostrom, 1972), revealed three studies in nurses training. Green (1967) related POI scores to grade point average, clinical grade, and satisfaction with nursing. Using a sample of sophomore nursing students, she concluded that success in nursing was reflected in scholastic aptitude and higher POI scale scores of time competency, spontaneity, and self regard.

In a three year longitudinal study Illardi and May (1968) found:

---

[2]ERIC provides Lists and Abstracts, by Keyword, of Recent Research.

[3]The Journal of Nursing Education, Journal of Psychiatric Nursing, Nursing Outlook and Nursing Research, from 1970 to 1972, were reviewed.

> ...significant growth in the direction of self actualization occurs especially during the first year. The changes were in the direction of acceptance of self and others, greater awareness and acceptance of feelings and a more flexible application of values. Significant relationships were also found between family income and increases in POI scores with low income being associated with larger increases and high income with smaller increases. (Knapp, 1971, p. 15).

In a master's thesis, Shimmin (1969) reported that:

> Public health staff nurses in the category of 25 years of age or less were in the self actualizing range of the POI profile while the group of 26 to 35 year old nurses were below the mean norm self actualizing score for every scale except Nature of Man. (Knapp, 1971, p. 15)

The retrieval of a total of only five investigations supports a contention that self actualization research on nursing personnel is sparse. Other self actualization research on non-medical personnel but related to this doctoral study is reported in the section on the Personal Orientation Inventory.

Purpose of the Study

Two-year registered nursing programs provide, because of inherent limitations, compact, highly specialized technical education and training. Relatively little instructional time is available for personal development. Additionally, a community college program does not provide the residential environment which offers

paracurricular opportunities to examine one's values, and express ideas in a permissive atmosphere. These factors do not enhance opportunities for personal development in the direction of self actualization of future registered nurses.

These comments do not presume that the problem lies just in the community college programs or that a full solution lies in growth opportunities, e.g., encounter group, psychology of self and nursing courses. Careful selection of applicants and prudent retention policies, in-service training, and career upgrading are some other partial solutions to the difficulties in preparing highly competent and personally effective graduate nurses.

Sidney Jourard relates sadly humorous examples of how the services of nurses can be effected by insufficient personal development:

> There are nurses who cannot care for patients who are known to be immoral. One of our students mentioned that, in taking care of some young mothers illegitimate children who were having their babies in a local hospital, she would stay a minimum length of time and get out of the room as fast as she could. We can call this girl a "goodness specialist".
>
> There are white nurses who cannot care for Negro patients. Let us call these nurses "white specialists".
>
> There are nurses who are repelled by sex and who balk at taking care of patients who

> make passes. We might call these specialists "nurses of neuters."
>
> There are nurses who cannot take care of people whose behavior is at first bizarre and imcomprehensible, as is sometimes true of so-called psychiatric patients. We might call these nurses "normality specialists."
>
> There are nurses who can do what is called for only with patient unconscious on the operating table. A conscious patient induces anxiety, threat, bashfulness, etc. We might call these nurses "coma specialists." (1971, p. 203).

The major purpose for this study was to ascertain the importance of personal growth of nursing students. The research findings, together with self actualization theories, could be used to facilitate personal development discussions with the instructional staff and encounter sessions with nursing students.

A secondary purpose of the study was to provide information about the nursing students at Northampton Community College. This information will be used in the future for follow up studies on persistence in the training program, success on the registry exams and service in the nursing field.

The main focus of the study was an investigation of relationships of self actualization scores on a personal orientation inventory to:

1. Self, peer, and instructor rankings of students on the constructs on inner/

other directedness, and on time competency/incompetency;

2. Internal control expectancy, as measured by Rotter's Internal-External Control Scale;
3. Twenty-one dependent variables which include: nursing grade point average, age, marital status, satisfaction with the nursing program, and prior practical nurse training.

CHAPTER II

REVIEW OF RELATED LITERATURE

Chapter one indicated that self actualization research is sparse, and reviewed studies pertinent to this dissertation. Further research on self actualization, germane to the reliability and validity of the Personal Orientation Inventory, is covered in chapter three.

In chapter two an effort has been made to outline conceptual aspects of self actualization which are most pertinent to the dissertation. Observations of self actualization as a natural process of becoming, as a criterion state of being, and the relationship of self actualization to mental health are described. The chapter also includes a brief consideration of two concepts, inner/other directedness and time competency/ time incompetency, which provide a theoretical basis for quantifying the actualization process. The final section of the chapter reviews previous research findings on self actualization of non-nursing populations.

Self Actualization as Natural Motivation

Kurt Goldstein (1939) has been credited with first using the term self actualization to describe man's desire to fulfill himself, and to become actualized in what he is potentially. He comments:

> The potentialities of the organism are basic for all its activities...forces which arise from its tendency to actualize itself as fully as possible in terms of its potentialities (1940, p. 172).

Carl Rogers writes on a similar theme:

> Self actualization...is the mainspring of life. It is the urge which is evident in all organic and human life--to expand, extend, become autonomous, develop, mature--the tendency to express and activate all the capacities of the organism, to the extent that such activation enhances the organism or the self... (1954, p. 9).

Abraham Maslow (1954) has probably been the most prolific theorist on self actualization. In considering motivation toward self development, he described a hierarchy of needs. Greatly simplified, the hierarchy is such that a human being satisfies basic physiological needs, such as nurishment, warmth and sleep before attending to higher order needs, such as safety, belongingness, love, esteem and finally self actualization.

Maslow states:

> The specific form that these needs will take will of course vary greatly from person to person...the clear emergence of these (self actualization) needs usually rests upon prior satisfaction of the physiological, safety, love and esteem needs. (p. 92)

The fulfillment of needs can take many forms other than direct satisfaction. Need gratification can be manifested through the use of mechanisms such as substitution, sublimation, and compensation. Maslow

contends that deprivation of need-gratification leads to psychopathology by thwarting man's essential nature, a natural motivational system which he believes is good or neutral, not bad.

Self Actualization and Being

Clearly, self actualization is a process of unfolding, developing, and purposeful striving of the self. But self actualization can also be viewed as a criterion state, a psychology of being. Maslow discusses being versus becoming extensively and notes:

> Being psychology...concerns itself with ends rather than with means, i.e. with end-experiences, end values, end cognitions, with people as ends. (1962, p. 69)

Being states of consciousness are difficult to describe because of their uniquely personal nature. They are special occurences, profoundly religious moments, euphoric states, peak experiences, times at which a person senses great togetherness within himself and with his world. They are sometimes observed in the glow of a new bride, the seemingly effortless grace of a ballerina, or in broad concepts such as perfect love and complete sexual fulfillment.

Maslow provides a list of end values, or Being Values, descriptive of being states which he terms peak experiences:

1. wholeness; unity; integration; tendency to one-ness...

2. perfection; necessity; just-right-ness; just-so-ness...
3. completion; ending; finality; justice...
4. justice; fairness; orderliness; lawfulness...
5. aliveness; process; non-deadness, spontaneity...
6. richness; differentiation; complexity; intricacy...
7. simplicity; honesty; nakedness; essentiality...
8. beauty; rightness; form; aliveness...
9. goodness; rightness; desirability...
10. uniqueness; idiosyncrasy; individuality...
11. effortlessness; ease; lack of strain; striving...
12. playfulness; fun; joy; amusement; gaiety...
13. truth; honesty; reality; nakedness; simplicity...
14. self-sufficiency; autonomy; independence...

(1962, p. 78)

The list of Being Values are general, overlapping concepts.[1] They are descriptive of not only peak experiences but indicative of self actualization, if one accepts Maslow's notion that an important characteristic of self actualizers is their report of many more peak experiences than the average person.

It may be that during a state of being, vis à vis, becoming, striving, competing, things are perceived more the way they really are. For one is less apt to selectively perceive in terms of how things can be won, improved, or preserved for future use. The

---

[1]The concepts involved in Maslow's discussion of Being values are particularly significant in the wording of items on the Personal Orientation Inventory (POI).

realization of being values presents opportunities for an organism to depressurize and sense inner and outer worlds merging in synergistic harmony. These peak moments of harmony, realistic perception, and contentment strongly suggest conditions which replentish strength and mental health.

Self Actualization and Mental Health

After comparison of his own ideas with other literature Maslow (1962) has identified two elements which apparently permeate the theories to date. Maslow summarizes:

> Self-actualization is defined in various ways but a solid core of agreement is perceptible. All definitions accept or imply, (a) acceptance and expression of the inner core or self, i.e., actualization of these latent capacities, and potentialities, "full functioning," availability of the human and personal essence. (b) They all imply minimal presence of ill health, neurosis, psychosis, of loss or diminution of the basic human and personal capacities. (p. 184)

Self actualization and positive mental health are synonomous, but not identical. Both concepts specify freedom from gross psychic dysfunctions. Further similarities are evident in the list of characteristics of the healthy human specimen which Maslow provides:

1. Clearer, more efficient perception of reality.

2. More openness to experience.
3. Increased integration, wholeness, and unity of the person.
4. Increased spontaneity, expressiveness; full functioning aliveness.
5. A real self; a firm identity; autonomy, uniqueness.
6. Increased objectivity, detachment, transcendence of self.
7. Recovery of creativeness.
8. Ability to fuse concreteness and abstractness.
9. Democratic character structure.
10. Ability to love, etc. (1962, p. 148)

One difference between mental health and self actualization is quantitative. Mental health is often thought of in terms of modal behavior, so acts thought to be most common are deemed normal and healthy. But self actualization, when defined in Maslow's terms as a criterion state of being, is reached by very few individuals. Maslow studied psychological health and attempted to identify self actualized people. He used the concepts outlined in his books, especially chapter 3 of Motivation and Personality, to estimate the levels of self esteem and self actualization of numerous persons from history or presently living. Maslow (1954) reports "5 fairly sure and 8 probable...(cases of self actualized persons)" (p. 202).

The figures above reflect a qualitative difference between mental health and self actualization. Mental health implies coping, adjustment, and occasionally, self actualization. Self actualization presumes mental

health, plus a favorable person-environment fit which enhances self development. For example, a person who is managing to cope in an almost intolerable situation, impoverished, beaten, yet not defeated, can be demonstrating good mental health, remarkable resilience, and ego strength. But it is unlikely that the individual is developing fully, and it is questionable whether much self actualization will ever occur.

Self actualizers are seldom found in a tightly restrictive environment very long. Their ability to see beyond their immediate life-space, helps them alter the environment, or find new surroundings. Conversely, non-actualizers selectively perceive, grumble, and then merely adjust to situations. Jahoda (1958) provides further clarification on this point in her discussion of environmental mastery. She believes that individuals achieve mastery either by "passive" or "active" adjustment. Examples of passive adjustments include setting low aspirations, taking minimal risks, and rationalizing. Active adjustment requires decision making skills which is likely to result in self motivated behavior. For instance, active adjustment may mean leaving a dull, but secure job, even though, geographic relocation and a career change becomes necessary. Using Jahoda's terms, self actualizers

typically attain high levels of environmental mastery through "active" adjustment.

Maslow discusses the person-environment fit as an indicator of positive health with the concept transcendence of environment. His major point with transcendence of environment is that healthy individuals usually act harmoniously with their environment but behave autonomously if the need to exists.

In theory a favorable, growth producing environment offers the individual sufficient stimulation to keep a person challenged but not traumatized. Maslow similarly notes the environmental support-challenge idea, and alludes to the fact that a situation can be too comfortable.

> "From the point of view, then, of fostering self-actualization or health, a good environment (in theory) is one that offers all necessary raw materials and then gets out of the way and stands aside to let the organism itself utter its wishes and demands and make its choices (always remembering that it often chooses delay, renunciation in favor of others, etc., and that <u>other</u> people also have demands and wishes)." (Maslow, 1962, p. 349)

Interpersonally, self actualizers have an abundant capacity for detachment and liking for privacy. In other words, they are self governing persons, constitutionally resistant to acculturation. This is not to say that self actualizers are unlikeable, unresponsive,

self-programming robots. On the contrary they are often admired and loved for their confidence, realistic appraisal of things, decision making ability, and capacity to form deep loving relationships.

Before considering two general ways of conceptualizing self actualization, inner/other directedness, and time competency/time incompetency, one point of clarification seems necessary. The previous discussion regarding person and his environment should not suggest exclusivity between the two:

Maslow notes:

> The word "transcendence" is used for lack of better. "Independence of" implies too simple a dichotomizing of self and of environment, and therefore is incorrect. "Transcendence" unfortunately implies for some a "higher" which spurns and repudiates the "lower", i.e., again a false dichotomizing. In other words contexts I have used as a contrast with "dichotomous way of thinking," the hierarchical-integrative way of thinking, which implies simply that the higher is built upon, rests upon but includes the lower. (1962, p. 169)

Inner-directedness

Infants are totally dependent on elders and betters for survival. With maturity the need for environmental support diminishes. Gordon Allport discusses this in his treatment of the development of motives and notes:

> The course of life, broadly speaking, starts in infancy with total dependence, progressing in youth to relative independence, and achieving in adulthood a measure of social responsibility. (1961, p. 196)

The extent to which one achieves psychological self-support can be described using terms coined by David Reisman in 1950. He speaks of inner, and of other-directed persons and writes:

> ...the source of directions for the individual is "inner" in the sense that it is implanted early in life by the elders and directed toward generalized but nonetheless inescapably destined goals...The inner-directed person becomes capable of maintaining a delicate balance between the demands upon him of his life goal and the buffeting of his external environment. (1964, pp. 15, 16)

Reisman contrasts the inner-directed persons with the environmental dependency of the other-directed persons:

> What is common to all other-directeds is that their contemporaries are the source of direction...This source is of course "internalized" in the sense that dependence on it for guidance in life is implanted early. The goals toward which the other-directed person strives shift with that guidance: it is only the process of striving itself and the process of paying close attention to the signals from others that remain unaltered throughout life. (1964, p. 22)

Shostrom (1968) borrowed heavily from the writings of Reisman and Maslow to provide these succinct descriptions of inner and other-directedness.

> <u>The Inner-Directed Person.</u> The inner-directed person appears to have incorporated a psychic "gyroscope" which is started by

> parental influences and later on is further influenced by other authority figures. The inner-directed man goes through life apparently independent, but still obeying this internal piloting. The source of inner-direction seems to be implanted early in life and the direction is guided by a small number of principles. The source of direction for the individual is inner in the sense that he is guided by internal motivations rather than external influences. This source of direction becomes generalized as an inner core of principles and character traits.
>
> The Other-Directed Person. The other-directed person appears to have been motivated to develop a radar system to receive signals from a far wider circle than just his parents. The boundary between the familian authority and other external authorities breaks down. The primary control feeling tends to be fear or anxiety of the fluctuating voices of school authorities or the peer group. There is a danger that the other-directed person may become over-sensitive to "others" opinions in matters of external conformity. Approval by others becomes for him the highest goal. Thus, all power is invested in the actual or imaginary, approving group. Manipulation in the form of pleasing others and insuring constant acceptance, becomes his primary method of relating. (1968, p. 17)

The self actualizing person tends to utilize environmental support somewhere in between the extremes of inner and other-directedness. He has developed confidence in his own inner signals to the extent that stress does not usually bring breakdown and dependency. He is free to be to show affection in a non-solicitous, spontaneous manner, for his sense of well being is not likely dependent on the opinions of others.

Inner-other direction is an abstract, dynamic concept. Reisman points out "...no individual is ever entirely one or the other, particularly if his life is viewed as a whole, and not at any one moment ... However it is the tendency of inner-directeds to internalize a sort of "psychological gyroscope" (Murphy, 1947) (Reisman, 1950) which provides stability, and the opportunity to weigh inner and external signals in even the most difficult times. This stabilizing capacity is clearly an important attribute of anyone facing numerous decisions which directly effect the well being of others, e.g., physicians, nurses. Without it a medical person could be filled with doubts about whether he did enough for a patient that died, or experience extreme counter-dependence with every suffering patient contacted.

Our discussion of the self, self actualization, and inner/other-directedness has been imprecise and metaphorical. For these dynamic concepts of ideographic characteristics do not hold constant long enough to allow exact discourse. Keeping this limitation in mind, we continue in a similar vein, relating inner-other directedness to a key concept of self in an attempt to further emphasize the importance of psychological self support.

Horney (1950) speaks of a central inner force as being the real self. External signals, the expectation of parents, authorities, society, give rise to an idealized self. In her conceptual framework, health is a merging of the two selves into a congruent identity. Sidney Jourard (1971) proposes that the way to do this is through authentic behavior, "transparency," and reasonable self-disclosure. But the other-directed person is so dependent on supportive feedback from his environment, his solicitous stance frequently limits honest communication. Essentially noncommunicative relationships, or low quality communication patterns are formed. Lack of honest communication lessens the chances for a person to remain in touch with his natural thoughts, feelings, and impulses. The other-directed person spends enormous amounts of energy anticipating the needs of others and censoring his behavior. This depletes his resources available for meeting high order needs of esteem and self actualization. In extreme cases Horney claims this loss of self results in a neurotic cycle of confusion and ineffectiveness.

Time Competency

Time competence may seem to refer to busyness, productivity, and management of schedules, but the

time competent person keeps busy only in the sense that he senses involvement, and direction. He may be productive and is frequently creative, but this does not define time competency. Nor does the management of a schedule explain much beyond a rather routine clerical ability.

Time competency in connection with self actualization refers to the effectiveness which a person handles his past, present, and future.

Shostrom writes:

> The self actualized person is primarily Time Competent and thus appears to live more fully in the here and how...The self actualized individual's past and future orientations are depicted as reflecting positive mental health to the extent that his past is used for reflective thought and the future is tied to present goals. (1966, p. 15)

By contrast, the time incompetent person fails to see the meaningful continuity between past, present and future. Examples of past orientation, nonactualizing behavior include: prolonged periods of guilt over past failures, both real and imagined; anger and regret over missed opportunities and disappointments; excessive absorption in the way things were. Incompetence in the future dimension might involve fantastic schemes, detailed plans that can never be carried out; anxiety over things that will never occur. Time incompetence

in the present may be less common than the past or future dimensions. When it occurs it is typified by a present oriented person who is caught in a swirl of activity, which seems to be just something to do to fill a void. An extremely dramatic example is the behavior of an hysteric or a person in a manic state. A more common manifestation of present oriented, time incompetency is the behavior of a "busy body".

Summary

Self actualization is a very complex abstraction. It has permeated the writings of the humanistic psychologists, most notably, Maslow, Rogers, Perls, and Allport. Chapter two provides only brief consideration of this broad topic. Self actualization was described as a naturally motivated process of fulfilling progressively higher order needs and potentials. This process of becoming was contrasted with a discussion of self actualization as a state of being. That is an end or criterion state realized by few individuals.

The author has also indicated that certain personal orientations such as inner-directedness and time competency, as well as sound mental health and goal achievement are subsumed under, not equal to, self

actualization. Most research on complex human behavior, especially self actualization, necessitates much oversimplification. The merit of such investigations, which narrowly define broad concepts, lies in their ability to test theory and to produce clearer explanations. The study which is reported in the following chapters was undertaken in this spirit, without pretense of providing more than a glimpse at self actualization in nursing education.

CHAPTER III

RESEARCH DESIGN AND METHODOLOGY

Research Setting

Northampton Community College is a comprehensive educational institution offering college transfer, two-year career, continuing education, and certificate programs. The nursing curriculum is a two-year career program, combining on campus classes with supervised experience in the field.

> Graduates of this program are eligible to take the Registered Nurse Licensing examination. Practical experience in giving nursing care is provided in a variety of health agencies. Learning experiences are selected and supervised by college nursing faculty. Each nursing course builds on the previous course. Graduates are prepared to give safe, skillful nursing care to patients and to become contributing members of the nursing and health teams. (NCACC 1972-73)

Population

The population of interest was the freshmen and sophomore nursing classes, 1972-73 at Northampton County Area Community College. Students in the program completed general college courses, and nursing courses which require nursing experience in various clinical areas. In order to gain the practical experience students rotate through clinical areas in small groups.

Five nursing faculty, who are registered nurses holding master's degrees, were responsible for supervision and instruction of students in the clinical areas. Each instructor completed an Interpersonal Ranking form on the students in the groups she supervised.

The freshmen class numbering forty-six, was divided into four clinical rotation groups, each composed of eleven or twelve students. The sophomore class was smaller, totaling thirty-two students and was divided into three groups ranging in size from nine to eleven students.

Instruments

Personal Orientation Inventory

The Personal Orientation Inventory (POI) is an instrument which purports to measure positive mental health. It is based on concepts treated by humanistic psychologists, Maslow, Rogers, Perls etc. The POI is closely related to the "being values" and characteristics of actualizing persons which Maslow has described, and the inner/other-directedness ideas of Reisman.

The POI consists of 150 two-choice value judgements which seem important in the self actualization process.

Robert Knapp summarizes the orientation dimensions which are reported on scales:

> In responding to the POI, the examinee is asked to select the one statement in each pair that is most true of himself. Four major scales and ten subscales are used in comparing the examinee's responses to normative samples. Two of the major scales define a time ratio, two a support ratio. The time ratio assesses the degree to which one is reality oriented in the present and who is able to bring past experiences and future expectations into meaningful continuity. The support ratio defines relative automony by assessing a balance between other directedness and inner directedness. Other directed persons tend to be dependent; primarily inner directed persons tend to be self-willed. A self-actualized person transcends and integrates both orientations, and this transcendence expresses itself in an optimal ratio between other directedness and inner directedness. The subsidiary scales purport to tap values important in the development of the self actualizing individual; Self Actualizing value (SAV), Existentiality (Ex), Feeling Reactivity (Fx), Spontaneity (S), Self-Regard (S^r), Self-Acceptance (S^a), Nature of Man (Nc), Synergy (Sy), Acceptance of Agression (A), and Capacity for Intimate Contact (C). (Knapp, 1971, p. 1).

Reliability and Validity.--The POI is a relatively new instrument gaining popular use in the assessment of self actualization, and some of its correlates, for example, psychological adjustment, academic and vocational success.

In 1964 Shostrom reported that the Inventory significantly discriminated between self actualized and non-self actualized groups on 11 of the 12 scales.

Classification to the two groups had been made by certified clinical psychologists.

Shostrom and Knapp (1966) compared two groups of patients, one which was entering therapy, while members of the other had been in therapy on an average of two years. The group which was in advanced stages of therapy scored higher on the POI in the direction of self actualization. The advanced group also scored significantly lower (.01) on four scales of the MMPI, thus confirming reasonable expectations about differences among the groups.

Knapp examined the relationships between the POI and the Eysenck Personality Inventory (EPI), with a population of 136 undergraduate students (Knapp, 1965). The sample was divided into "high", and "low" neurotic groups according to scores on the EPI. Means for each group were then calculated on each of the POI scales. Knapp found all mean differences were significant at or beyond the .05 level, and concluded that both inventories appear to be tapping a common core of mental health. These studies are typical of other research reported in the POI Test Manual, and published research which suggest that the POI is a useful tool for the assessment of positive mental health.

The POI has been used in a number of studies which examined the relationships between self actualization and academic achievement. Lieb and Snyder (1968) reported no significant relationships between grade point average (GPA) in college and the inner/other support ratio. Stewart (1968) found a significant positive relationship between GPA and the POI scale C, capacity for intimate contact. Using a sample of over 400 college undergraduates, LeMay (1969) partialed his data and found significant positive correlations between POI scale I, inner-directedness scores, and GPA for the middle ability students in his sample.

An extensive review of studies including those concerned with clinical underachievement, counseling, and sensitivity groups, in which the POI was used can be found in the report "The Measurement of Self-Actualization and its Theoretical Implications" (Knapp, 1971). Numerous other studies are reported in the POI Test Manual which demonstrate the validity of the scales when compared with the Eysenck Personality Inventory, Minnesota Multiphasic Personality Inventory (MMPI), Sixteen Personality Factor Questionnaire (16PF), and the Guilford-Zimmerman Temperament Survey, (Shostrom, 1968). The studies which have a bearing on this research are cited in the particular section where they are most relevant.

Internal-External Control Scale

The Internal versus External Control Scale (I-E Scale) is a self-administered, 29 item personality inventory. Twenty-three items require judgements as to whether one believes that reinforcement is primarily contingent on one's internal forces, such as effort, skill and persistence, or is determined by forces beyond one's power, that is external determinants. Examples of external control expectancies are fate, heredity, and luck. Six of the items are non-scored "fillers".

Rotter developed the I-E Scale to measure generalized expectancies, which he believes are important concepts in the understanding of human behavior.

> In social learning theory (Rotter, 1954) it is presumed that the relationship between goal preference (reinforcement value) and behavior can be determined only by introducing the concept of the individual's expectancy, on the basis of past history, that the given behavior will actually lead to a satisfying outcome rather than to punishment, failure, or, more generally, to negative reinforcement (Rotter, 1960).

In recent years considerable research has been conducted using the Internal-External scale. After reviewing the literature Hersch and Scheibe made the following generalizations:

> (a) The test-retest reliability of the 29-item scale of I-E developed by

> Rotter is consistent and acceptable, varying between .49 and .83 for varying samples and intervening time periods. (b) Relationships and measures of intelligence have generally been nil (e.g., Cardi, 1962; Ladwig, 1963). There is, however, some evidence that the relationship may be weakly negative, with internal scores higher in intelligence. (c) Relationships to a measure of maladjustment (Incomplete Sentences Blank, ISB; Rotter & Rafferty, 1950) are perhaps curvilinear, perhaps nil, perhaps quite complex (Rotter, 1966). (d) The I-E scale has been useful in some cases for behavioral predictions, such as discriminating between social action volunteers and nonvolunteers (Gore & Rotter, 1963).

The development and theoretical bases upon which the Personal Orientation Inventory (POI) and the I-E Scale are constructed are quite different. But the I-E Scale was included in the study because of a notion that it taps personal beliefs which are similar, or at least secondarily related, to the values reported on the Inner-Directedness scale of the POI. See appendix D for a list of Internal-External Control Scale items. Score is the total number of underlined, that is external item, choices.

Interpersonal Ranking Form

The Interpersonal Ranking Form (IRF) is a two-item questionnaire which asks the respondent to rank order himself and peers in his clinical rotation group on two constructs, time competency and inner-

directedness. The wording of the items is an adaptation from the two major scales, Tc and I of the Personal Orientation Inventory.

Percentile ranks for each student were computed from the average ratings a student gave himself and received from his peers, and supervising instructors. The percentiles obtained were used as analytic variables in the analyses of the data. This rank order procedure was favored over a semantic differential, or a Likert type rating system, because it forces the respondent to make discriminations which he might not otherwise make. For example, on a Likert Scale it is possible to rank all peers very high in time competency, but the rank order method forces a range of ratings from low to high time competency.

The rank order procedure requires an assumption that all subgroups, clinical rotation groups in this case, are somewhat equal on the major variables. Otherwise, a statistical adjustment is needed to make the groups equivalent. In this study the assumption was made that the variables of interest were normally distributed throughout the groups in the sample.

Program Satisfaction Form

The Program Satisfaction Form (PSF) is a two-item questionnaire used to assess students' general

satisfaction with the nursing program. On a seven-point scale students were asked to indicate their satisfaction with nursing classroom instruction, and with their clinical field experiences, (See PSF in Appendix B). Space was provided for written comments, but these were not included in the recording of the data.

Procedure

At the beginning of the spring 1973 semester, faculty in the nursing department were asked to cooperate in a research study which would involve indicating their perceptions of students in the registered nursing program. They agreed. Ten weeks later two dates were set for the administration of the inventories. Announcements of the study were made in class to freshmen, and sophomores, and they were asked to cooperate in a study on the beliefs, and values students hold. It was explained that the study would help the researcher earn a doctorate, and assurances concerning confidentiality of the data were given.

Administration of personality inventories and the forms was accomplished in two group sessions during the final week of the spring semester, April, 1973.

At the first session, which was a regularly scheduled class, attended by forty-six students. At the second session, an optional course review meeting, information was gathered on the nineteen sophomores in attendance. The sophomore class totaled thirty-two students. Sample sizes differed because of difficulties scheduling group testing times late in the school year.

Each testing session lasted approximately eighty minutes. Students completed the inventories in the following order: Personal Orientation Inventory, Rotter Internal-External Scale, Interpersonal Ranking Form, Program Satisfaction Form. The inventories and forms were essentially self-administering. The additional instructions given to the students are reported in appendix A.

The five nursing faculty who were directly responsible for supervision of students in the clinical areas were contacted individually, and each agreed to complete an Interpersonal Ranking Form on the students they supervised. Freshmen received rankings from each of their three supervisors. Sophomores were ranked by two faculty. These reports were used to compute an average rank for each student on the dimensions of time competency and inner-directedness, as observed by instructors.

Two weeks after the students completed the inventories, spring semester grades became available. At that time additional information concerning students' family income, financial aid status, and grades for both semesters was obtained from student personnel files. This information together with the data from the inventories and forms was coded and put on computer cards for analysis. A list of this data and the format of classification appears in figure 1.

Summary of Research Variables

Self actualization.--The extent to which a student is self actualized, was inferred from his scores on the inner-directedness, and the time competency scales of the Personal Orientation Inventory (POI). Sholstrom writes:

> When a quick estimate is desired of the examinees' level of self-actualization, the Time Competence (Tc) and Inner-Directed (I) scales only may be scored. (1966, p. 7)

Criterion.--The criterion for complete support of a hypothesis was a positive (.05 level) relationship between the major POI scores, Tc and I, and the stated variables of that hypothesis. The criterion for partial support of a hypothesis was a positive

(.05 level) relationship between either Tc or I, and the variables of that hypothesis.

A secondary index of self actualization was statistically defined as the POI Tc (time competency) score times five, plus the I (inner-directedness) score. This weighting equalized the two scales in the statistical analyses, for there are approximately five times as many inner-directedness items on the Personal Orientation Inventory as there are time competency items. The combined score was not considered a criterion for support of an hypothesis, but was included to see if using a single self actualization score would yield strikingly different findings than the two separate, Tc and I, scores.

The main research question examined relationships between attained self actualization, and twenty-one dependent variables. The independent variable, self actualization, was discussed in the preceeding section. A list of the dependent variables and the method of classification is shown in Table one.

TABLE 1

Dependent Variables with Classification

Variable		Classification
1.	Age	Years of age
2.	Marital status	Married versus single, divorced, widowed
3.	Licensed practical Nurse (LPN)	LPN trained yes or no
4.	Academic aptitude	Composite score on American College test
5.	High School Rank	Percentile rank in graduating class
6.	Nursing grades	GPA in nursing courses year 1972-73
7.	Non-nursing grades	GPA in non-nursing courses year 1972-73
8.	Family income	Reported family income according to one of several levels ranging from $0-2999, to $15,000+
9.	Financial aid	Receiving financial aid based on need yes or no
10.	Employment	Hours per week of paid employment
11.	External Control Expectancy	Total of external choices on Rotter Internal-External Scale
12.	Self Rank Time Competency	Percentile Rank within Clinical Area group

TABLE 1 Continued

	Variable	Classification
13.	Self Rank Inner-Directedness	Percentile Rank within Clinical Area group
14.	Peer Rank Time Competency	Percentile Rank within Clinical Area group
15.	Peer Rank Inner-Directedness	Percentile Rank within Clinical Area group
16.	Instructor Rank Time Competency	Percentile Rank within Clinical Area group
17.	Instructor Rank Inner-Directedness	Percentile Rank within Clinical Area group
18.	Sex	Male or female
19.	Instructional Lecture Satisfaction	Student rating scale low 1---7 high
20.	Clinical Supervision Satisfaction	Student rating scale low 1---7 high
21.	Year in nursing program	Freshman or sophomore

Hypotheses

Organization of the study was based on five general hypotheses. These hypotheses were subdivided into specific statements which could be readily tested.

Hypothesis 1. Self actualization (SA) is related to Self, Peer, and Instructor ratings of time competency (Tc) and inner-directedness (I).

A. SA is positively correlated with percentile ranks of students on Tc and I as calculated from responses on the Interpersonal Ranking Form (IRF).

B. Personal Orientation Inventory time competency scores are positively correlated with Tc percentile rankings on the IRF.

C. Personal Orientation Inventory inner-directedness scores are positively correlated with I percentile rankings on the IRF.

Hypothesis 2. Self actualization is related to expectancy for internal reinforcement instead of external sources for control. More specifically, low scores on the Rotter Internal-External Scale will be associated with high POI scores on Tc, I, and SA.

Hypothesis 3. Self Actualization is associated with scholastic performance, and satisfaction with the nursing program. Time competency, inner-directedness,

and the resultant self actualization scores from the POI are positively correlated with:

A. grades in non-nursing courses,

B. grades in nursing courses,

C. satisfaction ratings of the clinical experiences,

D. satisfaction ratings of the lecture experiences.

Hypothesis 4. High self actualization scores are associated with certain personal characteristics:

A. Higher scholastic aptitude (American College Test Scores),

B. Older age,

C. Higher high school rank in graduating class,

D. Male sex,

E. Previous licensed practical nurse training.

Hypothesis 5. High self actualization scores are related to the following socio-economic factors:

A. Higher family income,

B. Non-receipt of financial aid

C. Fewer hours of paid employment per week.

Assumptions and Limitations

Assumptions.--The following assumptions are essential to the study. The Personal Orientation Inventory measures self actualization as it is

defined in the study. The major POI scales, time competency (Tc) and inner-directedness (I) are suitable indicators of self actualization. The POI constructs Tc and I and Internal Control, from Rotter's I-E scale, are sufficiently unidimensional to permit comparisons with behavioral ratings of students in the college and hospital settings. The interpersonal ranking forms provide valid assessments of time competency, and of inner-directedness orientations of nursing students. In other words, it is assumed that extraneous, uncontrolled variables such as, friendships, age, or physical appearance do not confound rankings.

Limitations.--The following statements indicate major limitations of the study. The instruments used in the study are the nonprojective type. Therefore much of the students thinking at an unconscious level is likely to be distorted or not reported at all. The Personal Orientation Inventory is based in part on humanistic and philosophical concepts and therefore lack a degree of objectivity found in strictly behavioral reports. The correlational analyses being proposed describe relationships and provide support for inferences, but do not substantiate cause and effect conclusions.

Broad generalizations to other nursing education programs are not recommended because of the specific nature of the sample population, all persons studied are caucasian from eastern Pennsylvania at one community college. Furthermore the population of interest includes only nursing students, therefore broader interpretation, such as community college students in general is not justified.

It may appear intuitively that higher self actualizing nursing students will become better nurses than their less actualizing peers, but this hypothesis has yet to be established. Longitudinal studies will be needed to test this point. The fact may be that certain actualizing qualities such as independence, creative thought, and sensitivity to one's own needs may foster disharmony on wards, or contribute to attrition from the nursing field.

Statistical Analyses

The data was processed at the Statistical Research Laboratory of the University of Michigan, using programs from the Michigan Interactive Data Analysis System (MIDAS). Details of the programs are documented in MIDAS, a manual which is continually updated (Fox, 1972). The

terms in this section which are italicized refer to computer programs from MIDAS used to analyze the data.

First, for descriptive purposes, the "Describe" program was used to obtain a mean, standard deviation, standard error of the mean, and minimum and maximum values on all variables.

Second, twenty-two dependent variables of nursing student characteristics and scores on the POI, plus a new analytical variable, self actualization, were intercorrelated. The variable, self actualization, was created from a weighted combination of Time Competency and Inner-Directedness, using the "Translation" program. The "Correlation" program computed product-moment correlation coefficients on the interrelationships of all variables in the study. A second "correlation" run was made when it was determined that considerable missing data on some of the cases resulted in a small number of cases being involved in the analyses. "Correlate" utilizes only cases for which there is complete information. The second computation eliminated some of the variables for which there was missing data. This resulted in a computation which used 37 instead of 19 cases.

Third, multiple linear regressions were performed between subsets of independent variables, and the POI

Time Competency (Tc) variable, and then the Inner-Directedness (I) variable. This "Regression" procedure was repeated, using self actualization, the combination of Tc and I, as an independent variable. These analyses yielded an analysis of variance for the regression, regression coefficients, and their related test statistics.

Finally, univariate t-tests were performed between the means of certain strata on selected variables. T-tests compared differences between married and non-married; Licensed Practical Nurses (LPN) and students who did not have prior training as an LPN; financial aid recipients and students not receiving financial aid, males and females; and freshmen and sophomores. The "Student" T-test program examined the null hypothesis that for each variable the means of the two strata are equal. The printout included strata means, variances, the t-statistic, and F-statistic which test the null hypothesis that the two strata variances are equal.

Summary

Chapter three described the research procedures used in the study. The sample consisted of 46 freshmen and 19 sophomore students enrolled in a two year

associate degree program preparing participants for registered nursing. The study was conducted at Northampton Community College, in eastern Pennsylvania, during the 1972-73 academic year.

Four instruments were administered. The Personal Orientation Inventory (POI), the major instrument, was used to assess level of self actualization. Rotter's Internal-External Scale was used to measure expectancies regarding locus of control. An ad hoc Interpersonal Ranking Form (IRF) was used to rank students on the dimensions of time competency and inner-directedness. A second ad hoc, Program Satisfaction Form was used to estimate students' levels of satisfaction with clinical, and with lecture experiences.

Data collection procedures were discussed. A table depicted how the gathered information was classified as variables. In order to organize research on relationships between the variables five working hypotheses were outlined. These general hypotheses related self actualization to:

1. Self, peer, and instructor rankings of students on the IRF,
2. Rotter Internal-External Scale scores,
3. Personal characteristics, age, aptitude, sex, etc,

4. Scholastic performance and nursing program satisfaction,

5. Socioeconomic factors, family income, employment, etc.

CHAPTER IV

PRESENTATION OF THE FINDINGS

Chapter four and the one which follows present analyses of the data and relevant discussion of the findings. This chapter presents the analyses in two sections. The first section contains reports of descriptive statistics: means, standard deviations, minimum and maximum values of the research variables.

The second section of the chapter is presented in five parts. Each respective part is stated in a general hypothesis and examines the relationship between self actualization and:

1. Time competency, and inner-directedness rankings given students by self, peers, and instructors,
2. Internal/External Control scores on the I-E Scale,
3. Academic performance and reported satisfaction in the nursing program,
4. Scholastic aptitude, age, and previous training as a licensed practical nurse,
5. Reported level of family income, financial aid status, and hours of paid employment per week.

Throughout this chapter, and the entire dissertation, self actualization is inferred from scores on the two major Personal Orientation Inventory (POI)

scales, time competency (Tc) and inner-directedness (I). Some of the analyses utilize a variable called self actualization, which is a weighted combination of the Tc and I scores (see Chapter three, Summary of Research Variables, for further explanation). As discussed earlier, the new derived variable is not a criterion of support for the hypotheses, but is included to see if a single score provides vastly different findings than the separate time competency and inner-directedness variables.

General Description of the Data

Before proceeding to tests of the five general hypotheses, a general overview of the data is presented as a beginning and basic reference point. Table 2 provides this information.

Sample size. Included in the descriptive measures of Table 2 is an N column which reveals the number of cases considered on a particular variable or comparison of variables. This is important in that some Michigan Interactive Data System programs used to analyze the data are written in such a way that only complete cases (those which have no missing data) are utilized in the computations. Of particular note is the missing information on family income (N = 41). This information was

TABLE 2

Means, Standard Deviations, Minimum, and Maximum

Values of the Research Variables

Variable	N	Mean	Standard Deviation	Minimum	Maximum
Age	65	24.21	7.36	18.00	50.00
American College Test Composite	53	18.83	4.56	8.00	26.00
High School Percentile Rank	56	56.85	26.04	4.00	98.00
Grade Point Average	65	2.86	.64	1.30	4.00
Nursing Grade Point Average	65	2.89	.69	1.50	4.00
Income	41	4.39	1.44	2.00	6.00
Current Employment	62	8.74	10.55	0.00	40.00
Rotter I-E Score	63	11.33	4.42	2.00	22.00
Self Time competency	51	54.88	29.00	0.00	92.00
Self Inner-directedness	52	57.84	26.70	0.00	92.00
Peer Time competency	65	47.83	17.79	13.00	97.00

TABLE 2--Continued

Variable	N	Mean	Standard Deviation	Minimum	Maximum
Peer Inner-directedness	65	46.58	17.55	10.00	81.00
Instructor Time competency	65	50.30	19.15	5.00	90.00
Instructor Inner-directedness	65	47.40	21.76	0.00	92.00
Lecture satisfaction	56	4.78	1.28	1.00	7.00
Clinical satisfaction	56	4.59	1.12	1.00	7.00
Year in nursing program	65	1.29	.45	1.00	2.00
POI Time competency	64	16.71	3.42	6.00	23.00
POI Inner-directedness	64	86.45	10.79	61.00	104.00
Self actualizing values	64	20.04	2.91	10.00	25.00
Existentiality	64	21.43	4.02	13.00	30.00
Freshmen	64	16.71	2.41	11.00	21.00
Spontaneity	64	12.23	2.85	6.00	17.00
Self regard	64	12.29	2.60	4.00	16.00
Self acceptance	64	16.10	3.28	9.00	26.00
Aggression	64	16.70	3.48	8.00	24.00
Self actualization	64	170.00	24.70	114.00	215.00

obtained from student personnel files, and like other missing data, probably resulted from a lack of information on the part of the respondent, resistance to divulge personal matters, mishandling of information in the files, or problems in coding the data.

Self actualization. It was assumed that both the Personal Orientation Inventory (POI), time competency (Tc), and inner-directedness (I) scores are valid indicators of self actualization. In developing a new variable, self actualization, an attempt was made to give both constructs equal weight. Self actualization was statistically defined as the I score plus five times the Tc score. This formulation was based on the fact that the POI consists of 125 inner/other support items and approximately one-fifth (23) as many time competency/ incompetency items.

The data in Table 2 provides partial support for this formulation, as the mean score on inner-directedness (86.45) is approximately five times the mean score attained on the time competency scale (16.71).

Program satisfaction. The mean scores on the two items of the Program Satisfaction Form are each shown in Table 1 to be near the midpoint (4.0) of the seven-point scale. The mean for the lecture satisfaction

score was 4.78, and for clinical satisfaction it was 4.59. One implication is that neither a "ceiling" nor a "floor" effect occurred on the responses to this ad hoc form. Figures 1 and 2 graphically depict the the frequency distribution of satisfaction ratings, clinical experiences, and classroom instruction.

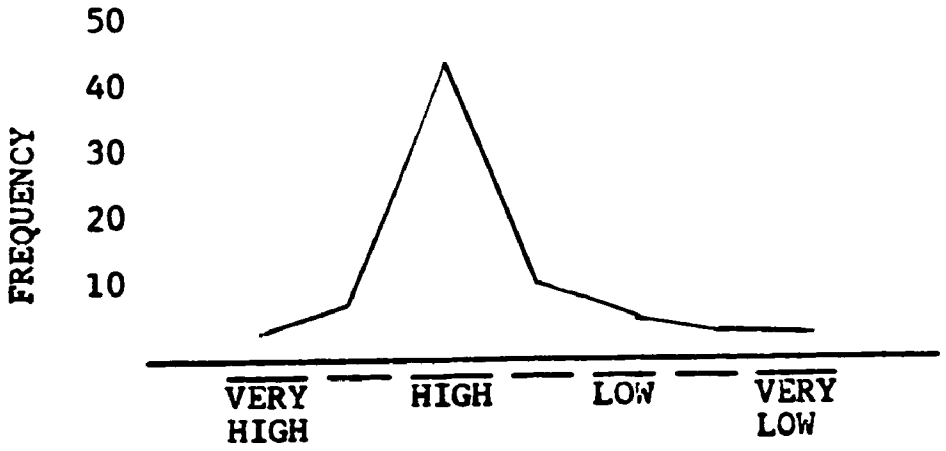


Figure 1.--Frequency Distribution of Satisfaction Ratings of Clinical Area Instruction

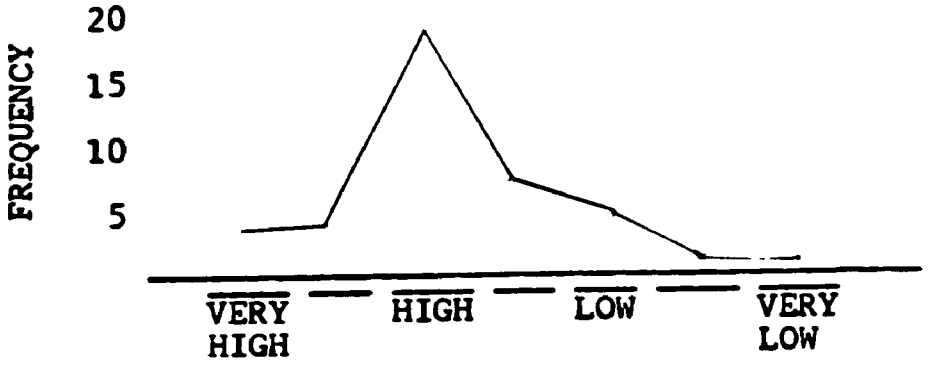


Figure 2.--Frequency Distribution or Satisfaction Ratings of Lecture, Classroom Presentations

Tests of Hypotheses

A report of the findings regarding the relationship of self actualization to five areas of consideration follows. Each area of investigation is introduced with a general hypothesis, followed by a presentation of analyses, and a discussion of the findings.

Hypotheses were tested with the use of linear regression and/or correlational procedures. Reports of the former are cited as partial correlation coefficients, with the latter referred to as product moment correlation coefficients, or just coefficients. Complete reports of a multiple regression, including F-statistic (and level of significance), partials, T-statistic (and level of significance), etc., appear only when an F-statistic is significant at or beyond the .05 level. If the F-statistic does not indicate statistical significance, an abbreviated report of the regression, which omits the T-statistic, is shown as is the case in Tables 3 through 5.

Hypothesis 1. Self actualization, as assessed by the POI, is related to self, peer, and instructor rankings of students on the dimensions of time competency and inner-directedness.

The regression between the derived variable, self actualization, and rankings of students produced a

non-significant F-statistic ($p < .2446$) shown in the right side of Table 3.

The partial contributions of the variables to the overall variance are not reported as the F-statistic did not reach the .05 level of significance.

TABLE 3

Regression of Self Actualization Against Self, Peer, and Instructor Ranks

Least Squares Regression

N = 46

Analysis of Variance of Self Actualization

Source	Degrees Freedom	Sum of Squares	Mean Square	F-Statistic	Significance
Regression	6	5056.2	842.69	1.3861	.2446
Error	39	23711.0	607.98		
Total	45	28767.0			

Multiple R = .41924 R-SQR = .17576 SE = 24.657

In order to further test hypothesis one, the regression procedure was repeated twice. Time competency was used as the dependent variable against self, peer, and instructor rankings, then inner-directedness was regressed against the rankings. Tables 4 and 5 show the overall variances in each regression were not significant at the .05 level.

TABLE 4

Regression of POI Time Competency Against Self, Peer, and Instructor Ranks

Least Squares Regression

Analysis of Variance of Time Competency N = 50

Source	Degrees Freedom	Sum of Squares	Mean Square	F-Statistic	Significance
Regression	6	81.568	13.595	1.0594	.4015
Error	43	551.810	12.833		
Total	49	633.380			

Multiple R = .35886 R-SQR = .12878 SE = 3.5823

TABLE 5

Regression of POI Inner-Directedness Against Self, Peer, and Instructor Ranks

Analysis of Variance of Inner-directedness N = 46

Source	Degrees Freedom	Sum of Squares	Mean Square	F-Statistic	Significance
Regression	6	995.45	165.91	1.5398	.1910
Error	39	4202.20	107.75		
Total	45	5197.70			

Multiple R = .43763 R-SQR= .19152 SE= 10.380

Discussion

The findings do not indicate any significant relationships between self actualization, as determined by Personal Orientation Inventory scores and rankings of students (time competency and inner-directedness) on the Interpersonal Ranking Form. In order for the hypothesis to be validly supported a chain of circumstances would have had to occur. Some crucial links in that chain are outlined as follows:

1. High self actualizers (HSA) exhibit behavior which is in concert with their values,

2. Self, peers, and clinical area instructors accurately perceive these behaviors and interpret them as indications of time competency and inner-directedness.

3. HSA complete the Personal Orientation Inventory in the direction of self actualization,

4. Self, peers, and instructors report HSA accordingly on the Interpersonal Ranking Form, i.e., do not rank students on some other dimension such as friendliness, scholastic or nursing ability,

5. Converse results of the above are obtained for low actualizing students.

It was likely that some of the above-mentioned conditions were not present; therefore, support for hypothesis one was not established.

Other plausible explanations of the non-significant findings raise questions as to the validity of the POI, inaccuracies of reports by untrained observers, and broadly related topics of self-disclosure and cognitive dissonance. This discussion is limited to research variables which probably intervened in the process of ranking students on the dimensions of time competency and inner-directedness.

Table 6 shows correlation coefficients between self, peer, and instructor rankings, and twelve other variables. Intercorrelations among the rankings reached statistical significance in eleven out of fifteen comparisons (all positive correlations). This suggests considerable commonality among the rankings. A further look at Table 6 reveals that age was the main variable correlated with peer and self rankings on time competency and inner-directedness. Instructors' rankings were significantly correlated with grade point averages achieved in nursing and in non-nursing courses.

Self and peer reporters appear to have based judgments on an older-is-wiser notion, while instructors seem to have based their reports on behaviors which earn students higher grades (studiousness, compliance, etc.). These findings heighten doubt of the ability of untrained observers to analyze personal orientation characteristics.

TABLE 6

Correlations Between Self, Peer, and Instructor Rankings--and Selected Variables

Variable	Self Time competency	Self Inner-directedness	Peer Time competency	Peer Inner-directedness	Instructor Time competency	Instructor Inner-directedness
Age	.4771*	.4452*	.4872*	.4559*	.0854	.3218
High school rank	-.3523*	-.4679*	-.0880	-.1360	.2342	.0316
Grade point average	.2605	.3877*	.1955	.1934	.3624*	.3739*
Nursing Grade point average	.2320	.3865*	.2921	.3614*	.3826*	.3745*
Self Time competency	1.0000	.4784*	.5899*	.5052*	.2322	.2818
Self Inner-directedness	0.0000	1.0000	.2959	.5739*	.1911	.3546*
Peer Time competency	0.0000	0.0000	1.0000	.6013*	.4159*	.4480*
Peer Inner-directedness	0.0000	0.0000	0.0000	1.0000	.4194*	.4519*
Instructor Time competency	0.0000	0.0000	0.0000	0.0000	1.0000	.7394*
Instructor Inner-directedness	0.0000	0.0000	0.0000	0.0000	0.0000	1.0000
POI Time competency	.2800	.1965	.0567	.1932	-.0557	-.1704
POI Inner-directedness	.2121	.3218	.1321	.1956	-.0866	.0865

N = 37 Df = 35 R@.950 = .3246 R@.990 = .4182 *p < .05

Hypothesis 2. Self actualization is related to scores on Rotter's Internal-External (I-E) Scale.

It was expected that an inverse relationship would be found between POI scores and I-E scores. That is, high scores on the major POI scales of time competency and inner-directedness were expected to be negatively correlated with high (external control) scores on the Internal-External Control Expectancy Scale. The findings shown in Table 7 do not support the hypothesis.

TABLE 7

Correlations Between Rotter I-E Scores and Selected Variables

Variable	Coefficient
POI Time Competency	-.167
POI Inner-directedness	-.168
POI Self actualization	-.184
Self rank Time competency	-.236
Self rank Inner-directedness	-.283
Peer rank Time competency	.037
Peer rank Inner-directedness	.057
Instructor rank Time competency	.131
Instructor rank Inner-directedness	.067

N = 37 Df = 35 R@.950 = .3246 R@.990 = .418

An inverse relationship was found, as predicted, but the magnitude of the relationship was not great enough to establish statistical significance.

Discussion

Chapter three provides a review of the instruments used in the dissertation and suggests that the Personal Orientation Inventory (POI) and the Internal-External (I-E) Scale were developed from vastly different theoretical bases. Both are essentially tools for investigating aspects of an individual's characteristic way of thinking and behavior. Both have demonstrated capacity for discriminating between "healthy" and "unhealthy" subjects.[1] It seemed reasonable to examine the amount of overlap between these instruments.

The findings suggest several interpretations for the sample population:

1. Self actualization, as assessed by the POI, is not closely related to the generalized expectancies of reinforcement which the I-E Scale purports to measure.

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1. Paul Hersch (1967) summarizes the research, "I-E is found to relate consistently to measures of maladjustment, with internal scores less maladjusted... with internal scorers describing themselves as more active, striving, achieving, powerful, and effective."

2. A relationship between the instruments may exist but be masked in the analysis because it is complex, i.e., multidimensional, or curvilinear.
3. A relationship between self actualization and internal control may be undetected because of intervening variables, e.g., socially desirable answers effecting the responses.

Hypothesis 3. Self actualization is related to scholastic performance and reported level of satisfaction in the nursing program.

Correlations between the principle POI scales and grade point averages in nursing, and in non-nursing courses, plus satisfaction ratings of the clinical and the lecture experiences are presented in Table 8.

TABLE 8

Correlations Between Principle POI Scales, and Grade Point Averages, and Nursing Program Satisfaction

POI	Non-nursing Courses GPA	Nursing Courses GPA	Clinical Satis.	Lecture Satis.
Time competency	-.1541	-.0779	.2614	-.0792
Inner-directedness	-.1010	.0080	.1226	-.0446
Self actualization	-.1493	-.0527	.2344	-.0739

Correlation Coefficients
N = 37 Df = 35 R@.9500 = .3246 R@.9900 = .4182

The findings presented in Table 8 indicate no significant relationships between POI major scales and the variables of interest in hypothesis three.

Discussion

It seems reasonable that highly time competent persons tend to be outstandingly effective on any learning task where their competence does not lead them to be overly critical, impatient, or easily bored. Likewise, inner-directed individuals would be at an advantage in any situation where independent thought and action are

called for, other things being equal. Finding no relationship between self actualization and academic performance suggests several interpretations.

Grades.--It may be a fact that self actualizers do not need or desire high grades to provide personal satisfaction, so they do not achieve as highly as they might if grades were more rewarding. A second interpretation is that intervening factors masked significant relationships between self actualization and college grades. For example, academic aptitude, situational problems, and demands may not have been normally distributed throughout the sample and prevented the more self actualizing students from attaining higher grades. Any such interpretations will have to remain tentative because many possible extenuating factors in the home life situations and personal motivational systems were not researched.

Related studies.--Three other studies examining the relationship of self actualization to academic achievement in college provide interesting considerations of this topic. A study by Leib and Snyder (1967) investigated the relationship between Personal Orientation Inventory scores on the inner-directedness scale and college grades of over three hundred students in an introductory psychology class. No significant

relationship was found. The researchers reported the possibility that self actualization and achievement are not directly related but are related secondarily through separate relationships with other variables.

LeMay (1969) studied the relationship between POI inner-directedness scores and college achievement at three levels. The data from his sample of undergraduates were analyzed with regard to low, middle, and high ability, as indicated by scores on the Scholastic Aptitude Test. No significant relationships were found for the low or high ability subgroups. Partial correlations between self actualization and achievement were negative and significant for the middle ability group.

McClain and Andrews (1972) studied extremely gifted students who were candidates for Woodrow Wilson Foundation Fellowships. The Personal Orientation Inventory scores of these students were compared with over two hundred other college seniors and were found to be similar on all but one subscale.

In sum, the findings of this dissertation, and related studies, suggest that there is no simple and direct relationship between self actualization and academic achievement in college.

Satisfaction.--An examination of the second part of hypothesis three found no relationship between self actualization and satisfaction with the lecture and the clinical experiences in the nursing program. This hypothesis was based on Maslow's writing about self actualizers' abilities to adjust and even transcend their environment. It was felt that self actualizing nursing students would tend to sense greater involvement in the acquisition of skills and knowledge, while overlooking features of the program which might seem unnecessary or undesirable, and thereby report higher satisfaction.

The expectation of a direct relationship between satisfaction and self actualization is not entirely consistent with Maslow's (1968) thoughts. He states:

> "...When we examine people who are predominantly growth-motivated, the coming-to-rest conception of motivation becomes completely useless. In such people, gratification breeds increased rather than decreased motivation, heightened rather than lessened excitement. They grow upon themselves and instead of wanting less and less, such a person wants more and more of, for instance, education."

Because satisfaction is relative to one's wants and expectations, and self actualizers tend to want more, the findings appear to be reasonable. High self actualizing nursing students may not have been satisfied with the program because of their high level of needs.

Two issues related to the satisfaction reports of students worthy of discussion concern grades and interpersonal relationships. Table 9 shows the correlations between satisfaction reports and: grades, POI scores, and interpersonal self actualization rankings by self, peers, and instructors.

Contrary to what might be expected, no significant relationship was revealed between satisfaction and grades in nursing and non-nursing courses. Significant correlations were found ($p < .05$) between satisfaction and instructor rankings of students on self actualization. This could be interpreted as a mutual admiration situation. The instructors feel that certain students are well-integrated, i.e., time competent and inner-directed, for these students are highly satisfied with the instruction and supervision of the nursing program. Alternatively, these students who are especially receptive of positive regard from instructors sense a need to excel, and their studious behavior results in the attainment of higher grades than their peers.

Hypothesis 4. Self actualization is associated with personal characteristics of older age and higher scholastic aptitude.

Table 10 shows the correlational statistics obtained in three separate multiple linear regressions involving POI major scales and students' ages, and

TABLE 9

Correlations Between Satisfaction Reports, and Selected Variables

Variable	Lecture Satisfaction	Clinical Satisfaction
Non-nursing courses	.1300	.0182
Nursing courses	.0883	-.0240
POI time competency	-.1541	-.0779
POI inner-directedness	-.1010	.0080
POI self actualization	.0739	.2344
IPR self actualization (Self)	.2291	.1722
IPR Peer self actualization	.0275	.2258
IPR Instructor Self actualization	.3459*	.4163*

N = 37 Df = 35 R@.950 = .3246 R@.99 = .4182 * p < .05

Legend POI Personal Orientation Inventory

IPR Interpersonal Ranking Form

TABLE 10

Regressions of POI Scores Against Age, and American College Test (ACT) Composite Scores

Time Competency Against Age and ACT Scores

Source	Degrees Freedom	Sum of Squares	Mean Square	F-Statistic	Significance
Regression	2	59.82	29.910	8.4497	.0397*
Error	49	424.85	8.670		
Total	51	484.67			

Multiple R = .35182 R-SQR = .12342 SE = 2.9446

Variable	Partial	Coefficient	Standard Error	T-Statistic	Significance
Constant		13.426	2.8901	4.6455	.0000
Age	.31532	.16421	.70602-1	2.3259	.0242*
ACT Composite Score	-.03939	-.26682-1	.96705-1	-.27591	.7838

Inner-directedness Against Age and ACT Scores

Source	Degrees Freedom	Sum of Squares	Mean Square	F-Statistic	Significance
Regression	2	33.060	19.020	.17301	.8417

Self Actualization Against Age and ACT Scores

Source	Degrees Freedom	Sum of Squares	Mean Square	F-Statistic	Significance
Regression	2	2149.7	1074.80	2.1393	.1295

* $p < .05$

composite scores on the American College (aptitude) Test.

The only significant ($p < .05$) relationships shown in Table 10 existed between POI time competency and older age.

Discussion

Hypothesis four was only partially supported. No significant relationship was established between POI inner-directedness and age or scholastic aptitude. The regression of the derived self actualization variable against age and scholastic aptitude resulted in non-significant findings.

The hypothesis between age and self actualization was based on the fact that:

1. Older persons, that is individuals several years beyond recent high school graduates, have had more opportunities than their younger peers to profit from successes and learn from failures. For instance, they are more likely to have been employed full time or be managing a household and possibly raising a family.

2. They are demonstrating considerable self-direction by deciding to attend college, rather than passively accepting a course of life which has been set years earlier.

3. During the application for admission interview, older students have been informed of the challenges of

the two-year nursing program and the competition with youngsters who have no family responsibilities, yet they have decided to accept the challenges. Any or all of the above factors may have effected the close relationship with time competency.

Age, or some correlate of age, appears to have facilitated time competency among the nursing students. It seems reasonable to expect a similar relationship would exist between older age and another dimension of self actualization, namely inner-directedness. The latter relationship was not established.

Table 11 may provide some clarification as to why older age and inner-directedness were not significantly related. The relationships between older age and nursing employment are positively ($p < .01$) related. It can be speculated that employment more commonly experienced by older students fostered other-directedness. Specifically, employment as a nurse's aid, practical nurse, or corpsman may have encouraged personal orientations which are highly dependent on guidance and supervision. A related situation is discussed in Chapter five. A comparison of married and non-married students showed the married group to be ($p < .05$) older. The interpretation offered is that marriage (and parenthood) demands

considerable self-sacrifice, sensitivity, and reactivity to the needs of others. All of which produce an orientation which tends to be assessed as less inner-directed.

TABLE 11

Correlations of Age, Nursing Experience, and Current Employment

Variable	Age	Nursing Experience	Current Employment
Age	1.000	.4245**	.2974
Nursing experience		1.000	.5246**
Current employment			1.000

N = 37 Df = 35 R@.950 = .3246 R@.990 = .4182

** p < .01

Aptitude.--The hypothesis that academic aptitude and self actualization would be positively correlated stems from a commonly held notion that older-is-wiser. This weakly held contention was not supported. It should be pointed out that this was clearly not a test of the time-worn adage, for "wiser" is not the same as scholastic aptitude. Furthermore, the hypothesis test suffers an internal weakness because older students may

have come from educational situations which are different from the education settings of more recent graduates.

Hypothesis 5. Self actualization is related to socioeconomic factors.

Correlations of self actualization (Personal Orientation Inventory major scale scores) with reported family income and number of hours of paid employment per week are presented in Table 12.

TABLE 12

Correlations Between POI Self Actualization, Family Income, and Current Employment

	Correlation Coefficients	
POI	Family Income	Current Employment
Time competency	-.3327	.2438
Inner-directedness	-.2495	.1710
Self actualization	-.3221	.2313

N = 17 Df = 15 R@.9500 = .4821 R@.9900 = .6055

The correlations cited above do not support hypothesis five. Unfortunately, much missing data reduced

the number of cases considered to only seventeen. A repeat of the correlational analyses, eliminating some variables for which much data was missing (notably family income) raised the number of cases considered to thirty-seven. The second set of results shows no significant correlations between current employment and Personal Orientation Inventory assessments of self actualization.

A t-test between recipients and non-recipients of financial aid is discussed in Chapter five. The results of that comparison indicated no significant difference between recipients and non-recipients on the POI time competency and inner-directedness variables.

Discussion

Maslow's hierarchy of needs theory states that as basic needs are met, higher order needs, e.g. esteem, love, and ultimately self actualization, are fulfilled. It follows that persons who are in serious financial need, struggling to pay food, shelter, and clothing bills may have less opportunity to work on higher order needs. That is, assuming that their bills and concerns are not a concomitant of a guru-like life style which circumvents things which most people think of as basic necessities.

If the hierarchy of needs theory has validity for the sample population and has not been too oversimplified,

then non-support of hypothesis five is an issue of weakness in design. The major weakness probably lies in the indicators used to ascribe socioeconomic status: family income, current employment, and financial aid status.

Annual family income provides, at best, only a rough indication of an individual's socioeconomic situation. The unadjusted income figure used in this study did not consider other important related factors. For instance, a family of three is clearly in a different position of need than a family of six. (The largest family in the study totaled eight members.) How much money is spent, or saved, and what the spending priorities are may be far more significant in determining personal growth opportunities than the amount of annual family income.

Employment outside college may be less a factor of neediness than the ability to handle studies, set high expectations and be ambitious, or a willingness to reduce social life.

Financial aid is of limited usefulness as an indicator of economic status and neediness because of policies and conditions at the Northampton Community College Financial Aid Office. Financial aid is awarded on a first-come-first-served basis with preference given to in-county residents. Some students refuse financial aid

despite need, as identified by the director of financial aid. Some awards go to students in cases where financial need was not clearly established.

A second problem in testing hypothesis five pertains to limitations of the sample population. In spite of a wide range in ages, marital statuses, and scholastic abilities (see Table 1 for descriptive statistics of the whole sample), the sample is quite homogeneous with respect to formal education, geographic location, nationality, race (all caucasians) and other demographic characteristics. A better test of the relationship between self actualization and socioeconomic standing would consider variables which tap the cultural characteristics, recent personal histories, and near aspirations of a broad sample of humanity.

Summary

Chapter four presented analyses of the data and discussion of the findings related to five general hypotheses. Each hypothesis examined the relationship of Personal Orientation assessments of time competency (Tc), and inner-directedness (I), and self actualization (a combination of Tc and I), to personal, situational, and background variables of nursing students.

It was hypothesized that self actualization is related to:

1. Higher time competency and inner-directedness rankings given students by self, peers, and instructors,
2. Lower (more internal) scores on Rotter's Internal-External Scale,
3. Higher grades in nursing and non-nursing courses, higher satisfaction ratings of the clinical and lecture experiences in the nursing program,
4. Higher scholastic aptitude (scores on the American College Test), older age, and previous training as a licensed practical nurse,
5. Higher reported level of family income, non-financial aid status and fewer hours of current employment.

The only hypothesis which was partially supported linked higher time competency and older age ($p < .05$).

The discussion of each finding related a brief rationale for each hypothesis, limitations and problems with the investigation, and related theory, research, or data in this study which would help interpret the

findings. In the ensuing discussion it was concluded that self and peer rankings of time competency and inner-directedness were significantly correlated with older age. Instructors ranked students who achieved high nursing and non-nursing grades high on time competency and inner-directedness. A significant correlation ($p < .05$) was found between instructor ranks of students' self actualization and students' reported satisfaction. The findings suggested that self, peer, and instructor rankings of time competency and inner-directedness were generally unreliable.

CHAPTER V

COMPARISONS OF SUBGROUPS

The preceding chapter discussed analyses of the data on Personal Orientation Inventory assessments of self actualization in relationship to variables of the entire sample population. Chapter five discusses comparisons of five categorical subgroups of the sample population on 31 background performance and personal variables.

T-tests were used to examine differences between the means of research variables of the following five stratifications:

1. Married and non-married (unmarried, divorced, widowed) students,
2. Licensed Practical Nurses and students without prior licensed practical nurse training,
3. Financial aid recipients and students not on financial aid,
4. Male and female nursing students,
5. Freshmen and sophomores.

Univariate t-tests were used to compare the means on 31 variables shown in table 13.

Only those t-test results which approached the .05 level of significance, or appeared to have had

some bearing on an interpretation are cited. In a few instances there was some question as to whether the distribution of specified variables was the same in the two strata. When this question arose, two non-parametric analyses, Mann-Whitney test, and a Median test were computed.[1]

Married and Non-married

In this stratification all persons not living with spouse (unmarried, divorced, widowed) were considered to be non-married. A review of the data showed all married students were female. Nine of the forty-five non-married students were male. Further reference to the possible influence of the sex variable is treated in the discussion of inner-directedness and marriage.

Table 14 presents t-test results which indicate that married were statistically ($p<.05$):

1. Older,
2. Achievers of higher grades in nursing courses,
3. Employed less, with housework not coded as paid employment,
4. More time competent according to peer reports (instructors reports showed a trend $p<.11$),

[1]Hays (1963) provides a discussion of these tests.

TABLE 13

Variables Considered in Subgroup (T-test) Comparisons

1. Age
2. LPN training
3. Years nursing experience
4. Current employment
5. Self Time competency
6. Self Inner-directedness
7. Peer Time competency
8. Peer Inner-directedness
9. Instructor Time competency
10. Instructor Inner-directedness
11. Grade point average
12. Nursing grade point average
13. Financial aid
14. Lecture satisfaction
15. Clinical satisfaction
16. American College Test (ACT) Verbal Scores
17. ACT Math Score
18. ACT Composite Score
19. Family income
20. Year in nursing program
21. High school percentile rank
22. POI Time competency
23. POI Inner-directedness
24. POI Self actualizing
25. POI Existentiality
26. POI Spontaneity
27. POI Self regard
28. POI Self acceptance
29. POI Feeling reactivity
30. POI Acceptance of aggression
31. Rotter I-E scores

TABLE 14

Comparison of Married and Non-Married Nursing Students

On 31 Background Performance and Personal Variables

Variable		Married	Non-married	T-test	Degrees of Freedom	Significance*
Age	Mean	29.105	22.196	T = 3.7837	63	.0003*
	Var.	82.544	29.761	F = 2.7736	18, 45	.0028
	Size	19	46	PROB(1ST MEAN > 2ND SAMPLE) =		.9972
Current Employment	Mean	4.000	10.682	T =-2.3445	60	.0224*
	Var.	62.588	120.040	F = 1.9179	43, 17	.0731
	Size	18	44	PROB(1ST MEAN < 2ND SAMPLE) =		.9939
Nursing grade point average	Mean	3.157	2.782	T = 2.0161	63	.0481*
	Var.	.362	.507	F = 1.3990	45, 18	.2218
	Size	19	46	PROB(1ST MEAN > 2ND SAMPLE) =		.9797
Self Time competency	Mean	67.733	49.528	T = 2.1121	49	.0398*
	Var.	468.350	914.030	F = 1.9516	35, 14	.0904
	Size	15	36	PROB(1ST MEAN > 2ND SAMPLE) =		.9877
Instructor Time competency	Mean	56.211	47.870	T = 1.6171	63	.1109
	Var.	390.290	344.740	F = 1.1321	18, 45	.1109
	Size	19	46	PROB(1ST MEAN > 2ND SAMPLE) =		.9345
Peer Time competency	Mean	58.842	42.717	T = 3.6247	63	.0006*
	Var.	241.470	275.940	F = 1.1427	45, 18	.3915
	Size	19	46	PROB(1ST MEAN > 2ND SAMPLE) =		.9996

TABLE 14--Continued

Variable		Married	Non-married	T-test	Degrees of Freedom	Significance*
Peer	Mean	52.263	44.239	T = 1.7006	63	.0939
Inner-directedness	Var.	280.760	306.760	F = 1.0926	45, 18	.4346
	Size	19	46	PROB(1ST MEAN > 2ND SAMPLE) =		.9512
Instructor	Mean	55.947	43.870	T = 2.0872	63	.0409*
Inner-directedness	Var.	448.720	450.870	F = 1.0048	45, 18	.5178
	Size	19	46	PROB(1ST MEAN > 2ND SAMPLE) =		.9759
POI	Mean	81.474	88.556	T =-2.4945	62	.0153*
Inner-directedness	Var.	123.490	101.210	F = 1.2201	18, 44	.2875
	Size	19	45	PROB(1ST MEAN < 2ND SAMPLE) =		.9873
POI	Mean	19.211	22.378	T =-3.0628	62	.0032*
Existentiality	Var.	15.287	13.877	F = 1.1016	18, 44	.3822
	Size	19	45	PROB(1ST MEAN < 2ND SAMPLE) =		.9970
POI	Mean	15.684	17.156	T =-2.2964	62	.0250*
Feeling	Var.	7.005	4.861	F = 1.4411	18, 44	.1605
Reactivity	Size	19	45	PROB(1ST MEAN < 2ND SAMPLE) =		.9776
POI	Mean	11.263	12.733	T =-2.1196	62	.0381*
Self regard	Var.	5.538	6.790	F = 1.2262	44, 18	.3271
	Size	19	45	PROB(1ST MEAN < 2ND SAMPLE) =		.9816
POI	Mean	15.526	17.200	T =-1.7853	62	.0791
Acceptance of	Var.	11.041	12.027	F = 1.0893	44, 18	.4374
Aggression	Size	19	45	PROB(1ST MEAN < 2ND SAMPLE) =		.9585

*p<.05

Legend: POI Personal Orientation Inventory

5. More time competent according to self reports,
6. More inner-directed according to instructor reports (peer reports showed a trend $p<.09$),
7. More other-directed according to the POI,
8. Lower scores on POI subscales: existentiality, feeling reactivity, self regard, (acceptance of agression, trend $p<.07$).

Data in table 14 reveals non-homogeneity in subgroup variances (F-statistic $p<.01$) on the variable of age. Two non-parametric tests were computed, with the results shown in table 15, indicating that marrieds in the sample were significantly older than non-marrieds.

TABLE 15

Non-parametric Comparisons of the Age Variable of Marrieds and Non-marrieds

TEST OF AGE	SIGNIFICANCE LEVEL
MANN-WHITNEY U = 202.50	.0007
MEDIAN TEST	.0005*

STRATUM	N	AVG. RANK	MEDIAN = 22.000		
TOTAL	65		N<	N>	N=
Married	19	45.342	3	14	2
Non-Married	46	27.902	29	14	3

*p<.05

Discussion

Age.--It is not surprising that marrieds tended to older than non-marrieds. This relationship between marriage and age could be expected until advancing age reverses the trend by death (or divorce).

Employment.--The finding that marrieds were employed less than non-marrieds is probably an artifact of the coding. Housework and raising a family, activities closely associated with marriage, were not coded as current paid employment.

Achievement.--The grade point average for marrieds was significantly higher than the average of non-marrieds. Neither group had academic preparation or nursing experience which would indicate potential for higher grades in the nursing courses. Specifically, no significant differences were noted with regard to grades in high school, scores on the American College Test, or higher number of licensed practical nurses in the groups.

It appears that married (and older) students attained higher grade averages in nursing courses, than

did non-marrieds, because of greater motivation. Judging from counseling experiences with several dozen nursing students over the past three years, the writer believes married students frequently attach special significance to achievement in the nursing program. They are aware of the personal and family sacrifices necessitated by their studies. They know that successful completion of their training can lead to increased family income. For some of the marrieds high achievement symbolizes their goodness as a wife.

In addition to higher general motivation, the married students appeared to focus their efforts more clearly toward the nursing courses than did non-marrieds. This is indicated in the finding that marrieds attained no higher grade point average in non-nursing courses, than did non-married students, but their grade average was much higher in nursing courses than those of the non-married group.

A secondary interpretation of the difference in nursing grade achievement by the two groups relates to Maslow's Hierarchy of Needs Theory. To the extent that students' basic needs are met they should be free to pursue higher order (learning) need fulfillment. It would seem that married students have most of their basic needs routinely fulfilled. For marrieds, con-

cerns about food, shelter, clothing, transportation, and social life are systematized around, and with, a mate. Additionally, the marriage partner can provide a sense of security, acceptance, and emotional support more consistently than is found in most informal, non-marriage relationships. This may enable the married student to concentrate more fully on her studies.

Time competency.--Marrieds were ranked significantly higher ($p<.05$) than non-marrieds (single, divorced, and widowed) on time competency ratings by self, and by peers. Rankings by instructors were similar, but only near the trend ($p<.11$) level.

These rankings have been discussed in chapter four (hypothesis 3) and it was concluded that extraneous variables, age and grades, confounded the ranking process. Personal Orientation Inventory assessments suggest no difference between marrieds and non-marrieds on the dimension of time competency.

The most compelling interpretation of the findings is that marrieds were no more time competent in a general sense (which would be indicated on the POI), but seem more time competent when in the college situation. They appear to be more time competent because they express fewer fears, regrets, past frustrations, and deep concerns about the future while interacting in the

nursing program. Their emotional needs seem to be met at home by a mate, or by other marrieds. The non-marrieds probably tend to share more problematic concerns with persons associated with the nursing program, because emotional support from significant others, boyfriends, parents, is less available on a consistent basis outside the college.

A second possible interpretation, which is less likely than the first, is that marrieds were ranked higher because of intervening variables which were not studied. For instance, greater physical attractiveness, and social poise, may have created a halo effect which influenced higher rankings for marrieds on time competency. Married status, itself, complete with wedding ring, may have exerted a subtle force which suggests that one has a social stamp of approval, achievement, competency, and time competency, etc.

A third interpretation is that time competency rankings reported on the Interpersonal Ranking Form were effected by secondary relationships with other variables. Chapter four discussed the influence of age, and academic performance in the nursing program on rankings of time competency, and inner-directedness. From that discussion it can be concluded that marrieds tended to receive higher time competency

rankings because of their maturity (older age), and better academic performance in the nursing courses.

In sum, this writer believes that married nursing students were no more time competent, in a general sense than their non-married peers, but acted in a more time competent manner while in hospital and college settings. This was because their life at home provided consistent and systematic fulfillment of many personal needs, which are harder to satisfy without a mate and home base. Furthermore, the appearance, and concomitant rankings, of marrieds as more time competent was enhanced by their achievement of higher grades in nursing courses, and appearance of maturity as suggested by older age (29 year average versus 22 years for the non-marrieds).

Inner-directedness.--It has been noted earlier that all marrieds were female, and some of the non-marrieds in the sample were male. It is highly unlikely that the inclusion of males in the non-married sample confounded the analyses, because males and females provided similar findings on all variables relevant to time competency and inner-directedness. (The comparison of male and female nursing students is discussed in the following section).

Marrieds averaged significantly ($p<.01$) lower on the Personal Orientation Inventory inner-directedness

scale. This finding of other-directedness cannot be readily generalized to other situations. The data is too scant to support conclusions about relationships between inner/other-directedness, and marriage, so the following statements are offered as tentatively held notions, only partially supported by data.

The data in table 14 shows that the responses by married students to the POI produced subscale scores which indicate lower existentiality ($p<.01$), feeling reactivity ($p<.02$), self regard ($p<.03$), and a trend toward lower acceptance of aggressive feelings ($p<.07$). This personal orientation picture portrays marrieds in the sample as diminishing their needs to be assertive, independent, and aware of their own feelings, especially aggressive feelings. In comparison with a single peer she is probably less apt to show strong displeasure and sense inherent self-worth. She is likely to be quite dependent on her husband, and children for feelings of worth and accomplishment. Such a wife-mother role may be a functional adaption in many traditional marriages, but it probably limits some areas of self growth and development.

Self Actualization.--According to one line of thinking (Maslow, 1954, 1962) self actualizing people possess and utilize a great capacity to love and

become deeply involved with significant others. It could be expected that married nursing students would be more self actualizing than their non-married, "unattached" peers. Marital rewards and commitment would appear to attract self actualizing persons, and facilitate their further development.

The findings of this study do not confirm such broad generalizations about marriage and self actualization. Married students were higher in Personal Orientation Inventory assessments of time competency, but lower in inner-directedness. Marrieds were generally ranked as more self actualizing by self, peers, and instructors, than non-marrieds, but some sources of unreliability of these rankings have been discussed. In summary, it is most probably that marrieds were more self actualizing in some aspects of their personal orientation, e.g. time competent behavior, but they were less actualizing than non-marrieds in other respects, e.g. autonomy, inner-directedness.

Licensed Practical Nurse (LPN) Trained and Non-LPN Trained

Table 16 shows the significant differences between the registered nursing students with prior Licensed

Practical Nurse training and students in the registered nursing program without LPN training. Students with LPN training:

1. Scored higher on the POI time competency scale ($p<.05$)
2. Were ranked higher on time competency by peers (trend $p<.06$),
3. Were ranked higher on inner-directedness by self (trend $p<.07$) peers (trend $p<.06$), and instructors, (trend $p<.06$)
4. Achieved higher grades in nursing courses ($p<.02$)
5. Attained lower composite scores on the American College test ($p<.001$), (and showed a trend $p<.10$ toward lower percentile rank in graduating high school class).

Discussion

Time competency.--The group of students with previous licensed practical nurse experience scored significantly ($p<.05$) higher Personal Orientation Inventory scores on the time competency scales than their non-LPN peers. Self and instructor rankings did not concur with this finding, and peer rankings of licensed practical nurses was higher only at a trend ($p < .06$) level.

TABLE 16

Comparison of Licensed Practical Nurse (LPN) Trained

and Non-LPN Trained On 31 Background Performance and Personal Variables

Variable		LPN	Non-LPN	T-test	Degrees of Freedom	Significance*
POI	Mean	18.357	16.306	T = 2.0188	61	.0479**
Time competency	Var.	6.862	12.425	F = 1.8106	48, 13	.1214
	Size	14	49	PROB(1ST MEAN > 2ND SAMPLE) =		.9857
Peer	Mean	55.267	45.490	T = 1.9103	62	.0607
Time Competency	Var.	264.070	311.550	F = 1.1798	48, 14	.3834
	Size	15	49	PROB(1ST MEAN > 2ND SAMPLE) =		.9690
Peer	Mean	57.600	43.653	T = 2.8529	62	.0059**
Inner-directedness	Var.	283.110	271.940	F = 1.0411	14, 48	.4317
	Size	15	49	PROB(1ST MEAN > 2ND SAMPLE) =		.9943
Instructor	Mean	57.067	44.980	T = 1.9295	62	.0582
Inner-directedness	Var.	453.350	449.900	F = 1.0077	14, 48	.4615
	Size	15	49	PROB(1ST MEAN > 2ND SAMPLE) =		.9642
Self	Mean	71.600	54.268	T = 1.8693	49	.0676
Inner-directedness	Var.	354.270	766.850	F = 2.1646	40, 9	.1088
	Size	10	41	PROB(1ST MEAN > 2ND SAMPLE) =		.9819
Nursing	Mean	3.266	2.785	T = 2.4068	62	.0191**
Grade	Var.	.530	.437	F = 1.2136	14, 48	.2970
Average	Size	15	49	PROB(1ST MEAN > 2ND SAMPLE) =		.9821

TABLE 16--Continued

Variable		LPN	Non-LPN	T-test	Degrees of Freedom	Significance*
ACT	Mean	16.083	19.850	T =-2.7155	50	.0091**
Composite	Var.	20.629	16.951	F = 1.2169	11, 39	.3086
Score	Size	12	40	PROB(1ST MEAN < 2ND SAMPLE) =		.9884
High School	Mean	47.000	60.143	T =-1.6608	54	.1025
Percentile	Var.	660.000	656.760	F = 1.0049	13, 41	.4645
Rank	Size	14	42	PROB(1ST MEAN < 2ND SAMPLE) =		.9408

*p<.05
**p<.01

Legend: LPN Licensed Practical Nurse
ACT American College Test

The spurious results may have been obtained because of the difficulty which some students experienced in trying to assess time competency. Immediately after the data had been gathered in the testing session with freshmen, three students expressed their difficulty in ranking themselves, and peers on the time competency construct. Two of the faculty expressed similar concerns in relationship to knowing "what their clinical students are really like". Problems associated with obtaining reliable rankings on the Interpersonal Ranking Form and the implications of the findings are discussed in chapter six.

Inner-directedness.--Neither group, LPN or non-LPN, was distinctly higher on POI inner-directedness. Yet the licensed practical nursing group averaged higher (trend) rankings on inner-directedness by self ($p<.07$), peers ($p<.06$), and instructors ($p<.06$). From this it can be concluded with some degree of assuredness that the LPN's did not have a significantly higher inner-directedness orientation than their colleagues, but were more inner-directed in a specific situation, the nursing program. Their self-supportive, independent behavior was likely due to their familiarity with nursing procedures, and the confidence that stems from already having successfully provided patient care.

Grades.--The licensed practical nursing (LPN) group averaged far lower ($p<.001$) composite scores on the American College Test (ACT), an instrument commonly used for the selection and advisement of college applicants, than their non-LPN peers. Table 16 also shows that students with previous LPN training tended ($p<.10$) to occupy lower percentile ranks in their high school graduating classes. These test scores and high school records both predict that the LPN group should receive lower grades in college studies, than the non-LPN trained group.

The licensed practical nurse group, and the non-LPN groups received similar grade point averages in non-nursing courses, but the students with prior LPN training received significantly ($p<.02$) higher grades in registered nursing courses. A single composite average for each student was computed which included both clinical and lecture course grades for two semesters during the 1972-73 academic year. Therefore it is not possible to say whether LPN trained students excelled in mainly the applied clinical work, the theoretical studies, or in both curriculum areas.

Previous clinical training and experience probably helped LPN trained students understand, remember, and apply new material in the registered nursing program.

It is also highly probable that these students attained higher grades because of a higher level of expectation which was fostered by awareness of their competitive learning advantage.

Recipients and Non-recipients of Financial Aid

Table 17 shows a comparison of nursing students who receive financial assistance with their peers not receiving assistance. Financial aid recipients:

1. Attained much higher ($p<.001$) American College Test scores,
2. Were ranked significantly higher ($p<.05$) in graduating high school classes,
3. Tended ($p<.11$) to earn higher grades in non-nursing courses,
4. Come from families with lower incomes ($p<.10$).

TABLE 17

Comparison of Financial Aid Recipients and Non-recipients
On 31 Background Performance and Personal Variables

Variable		Recipient	Non-recipient	Test Statistic	Degrees of Freedom	Significance
American College Test composite score	Mean	21.615	17.744	T = 2.8551	50	.0062**
	Var.	5.089	21.985	F = 4.3195	38, 12	.0046
	Size	13	39	PROB(1ST MEAN > 2ND SAMPLE) =		.9998
High school percentile rank	Mean	70.286	51.854	T = 2.2693	53	.0215*
	Var.	399.140	707.180	F = 1.7717	40, 13	.1328
	Size	14	41	PROB(1ST MEAN > 2ND SAMPLE) =		.9933
Grade point average	Mean	3.106	2.802	T = 1.6251	62	.1092
	Var.	.439	.393	F = 1.1173	14, 48	.3679
	Size	15	49	PROB(1ST MEAN > 2ND SAMPLE) =		.9325
Family income	Mean	3.846	4.642	T = -1.6773	39	.1015
	Var.	1.807	2.089	F = 1.1561	27, 12	.4108
	Size	13	28	PROB(1ST MEAN > 2ND SAMPLE) =		.9465

*p<.05
**p<.01

TABLE 18

Non-parametric Comparisons of ACT Composite Scores of Financial Aid Recipients and Non-recipients

Test of American College Test (ACT) Composite Scores					Significance
Mann-Whitney U = 114.00					.0031**
Median Test					.0007**
Stratum	N	Average	Median = 19.00		
Total	52	Rank	N<	N>	N =
Financial Aid Recipients	13	37.23	1	11	1
Non-recipients of Aid	39	22.92	24	13	2

**p<.01

Discussion

The comparison of financial aid recipients with non-recipients was made because of possible relevance to Maslow's hierarchy of needs theory. According to the theory, people whose basic and higher order needs are met should experience more self actualization, i.e. be more time competent, and inner-directed. Such a simple and direct generalization of the theory was not supported. There were no significant differences between recipients, and non-recipients on the personality variables assessed by the Personality Orientation Inventory, Rotter's Internal-External Scale, and Interpersonal Rankings Form.

The finding of no significant differences between recipients and non-recipients of financial aid on the personal orientation assessments may be due to the inappropriateness of using financial status as an indicator of need. This was discussed earlier in the paper. Briefly in review, this appears to be a poor indicator because of: (1) difficulty on the part of the Director of Financial Aid to identify on the basis of need, cases justifying financial assistance, (2) resistance by some needy students to accept assistance, (3) preferential treatment of early applicants and students in special situations, which probably prevented some needy students from receiving financial aid.

Academic achievement.--Differences between the members of recipient and non-recipient groups was found on three variables which relate to academic achievement. Table 17 shows students on financial aid averaged significantly higher composite scores on the American College Test (further examined in a comparison in table 18) ($p<.01$), and higher percentile ranks in their high school graduating classes ($p<.02$) than did their non-aid peers. The students on financial aid tended ($p<.10$) to receive higher grades in non-nursing courses, than the non-aid group. Both groups

averaged similar grades in nursing courses. These findings demonstrated the ability of academically able nursing students, from lower income families, to do well scholastically when provided with financial assistance.

Freshmen and Sophomores

Table 19 shows the statistically significant differences between freshmen and sophomore nursing students. Sophomores averaged more ($p<.05$) internal expectancy of reinforcement choices on the Rotter scale than did freshmen. Sophomores also averaged higher ($p<.01$) grades in non-nursing courses.

Considerable within group variance ($p<.05$) is shown on the Rotter comparison in table 19. Two non-parametric tests, the Mann-Whitney and Median test, shown in table 20, confirm the finding that the sophomores scored more ($p<.01$) internal control of reinforcement responses than did the freshmen.

TABLE 19

Comparison of Freshmen and Sophomores
On 31 Background Performance and Personal Variables

Variable		Freshmen	Sophomores	Test Statistic	Degrees of Freedom	Significance
Rotter Scores	Mean	13.244	6.5556	T = 7.4002	61	.0000**
	Var.	12.371	5.6732	F = 2.1806	44, 17	.0414
	Size	45	18	PROB(1ST MEAN > 2ND SAMPLE) =		1.0000
Grade Point Average	Mean	2.723	3.2158	T = -2.9871	63	.0040**
	Var.	.390	.2991	F = 1.3061	45, 18	.2738
	Size	46	19	PROB(1ST MEAN < 2ND SAMPLE) =		.9981

**p<.01

TABLE 20

Non-parametric Comparisons of Rotter Scores

of Freshmen and Sophomores

Test of Rotter Scores

					Significance
Mann-Whitney U = 51.000					.0001**
Median Test					.0001**
Stratum	N	Average	Median = 12.00		
Total	63	Rank	N<	N>	N=
Freshmen	45	39.86	11	31	3
Sophomores	18	12.33	18	0	

**p<.01

Discussion

When a comparison between freshmen and upper-classmen is reported, it is commonly assumed that the study investigated the impact of college experiences on students. The reader is cautioned that such a comparison was not built into the design of this study. The comparison of freshmen and sophomore nursing students was not a test-retest design, and the matching or equivication of research variables was not made or assumed. The following remarks are not intended as conclusions about personal orientation changes of students as a result of experiences at Northampton Community College. The comparisons were made to

help determine if differences between freshmen and sophomores had a bearing on other interpretations of the data.

Rotter Scores.--The findings show the sophomores made more internal control expectancy selections than did freshmen. Table 19 shows that the overall variance between the two groups was considerable, therefore two non-parametric tests were performed. The results of the Mann-Whitney, and Median tests clearly support the conclusion freshmen were more "external" in their expectation of reinforcement controls.

The design of this study, and limited size of the sample population, do not warrant conclusive statements as to why the sophomore group responded to the Rotter Scale with significantly more "internal" control of reinforcement choices, than did the freshmen. Three explanations are plausible. First, it is possible that the sophomore group was more "internal" control oriented before entering college. Second, it is possible that college related experiences facilitated the development of "internal" control beliefs, and the additional experience of sophomores effected their scores on the Rotter Scale. Third, it is likely that a difference is due to sample bias.

The total sample included a little over half of the thirty-six sophomores, while freshmen sample included nearly all the freshmen. The optional review session, at which the data on the sophomores was gathered, may have been attended by students who have stronger beliefs in personal effort and persistence as the vehicles to success than their non-attending peers. The session was the last formal meeting to help students prepare for the Pennsylvania State Registered Nursing Examination. It is possible that the more "external" sophomores may not have attended because of a notion that luck, fate, or some force beyond their control would decide if they were to successfully pass the examination. The possibility of sampling bias had to remain unexamined as data on the sophomores not in attendance at the testing session was not available.

Non-nursing grades.--Sophomores averaged much higher ($p<.01$) grades in non-nursing courses than did freshmen. This finding could be expected for several reasons. The attrition of six of the original forty-two students who started in the group which became the sophomore class, eliminated some students with low academic averages from the sample (one student repeated the first year of the nursing program and

was included in the freshmen sample). It is also likely that sophomores by virtue of their familiarity with the college selected classes and instructors better suited to their needs, e.g. courses which are interesting, instructors who tend to assign high grades.

Male and Female Students

Self Actualization.--Previous studies which compared male and female responses to the Personal Orientation Inventory have produced varying results with regard to self actualization. Studies by Gibb (1966), and LaBack (1969) found females were higher than males on Time Competency, and the subscales, nature of man, Synergy, and self-acceptance. Mulford (1967), found no significant differences in the self actualization of male and female college students. Fox (Shostrom, 1966) found neither male, or the female group significantly higher on POI scales in a study of hospitalized psychiatric patients.

The present study corresponds with previous research that found no significant differences in the POI assessments of self actualization of males, and females. It should be noted that the males in the sample totaled only nine, while females numbered fifty-six. The small number of male nursing students

TABLE 21

Comparison of Male and Female Nursing Students
On 31 Background Performance and Personal Variables

Variable		Male	Female	Test Statistic	Degrees of Freedom	Significance
Nursing Grade Average	Mean	2.277	2.991	T =-3.0172	63	.0037**
	Var.	.256	.459	F = 1.7864	55, 8	.1941
	Size	9	56	PROB(1ST MEAN < 2ND SAMPLE) =		.9979
Rotter Score	Mean	8.888	11.741	T =-1.8217	61	.0734
	Var.	27.861	17.554	F = 1.5872	8, 53	.1509
	Size	9	54	PROB(1ST MEAN < 2ND SAMPLE) =		.9202
High School Rank	Mean	42.444	59.617	T =-1.8514	54	.0696
	Var.	749.530	632.550	F = 1.1849	8, 46	.3287
	Size	9	47	PROB(1ST MEAN < 2ND SAMPLE) =		.9421

**p<.01

may have masked self actualization differences which may exist between males and females.

Nursing grades.--The only statistically significant finding in the comparison of male and female students on thirty-one variables is that females attained higher grades in nursing courses ($p<.01$). This echoes performances in high school where females tended ($p<.07$) to receive higher percentile ranks in their graduation classes. This may indicate differences in ability, and motivation between male and female nursing students, but the limited data, and the design of the study is not sufficient to warrant more specific and conclusive statements.

Rotter Scores.--Males, and females in the sample did not differ significantly on Rotter's Internal/External Control Scale. Males tended ($p<.07$) in the direction of internal control expectancy of reinforcement. This trend is not surprising in view of the child rearing patterns in American society. Boys are generally groomed to be assertive, physically competitive, individuals. Girls are frequently taught to be polite, studious, passive persons who will, hopefully, attract a man who will take care of her and protect her. To the extent that this generalization is valid, one can expect males to profess more internal, rather than external, control responses.

Summary

Chapter five presented the findings and discussions of comparisons of five categorical stratifications of the sample population. T-tests were used to investigate differences between students in an associate degree registered nursing program who were:

1. Married and non-married (single, divorced, widowed),
2. Previously trained as a Licensed Practical Nurse (LPN) and not LPN trained,
3. Financial aid recipients and non-recipients,
4. Freshmen and sophomores,
5. Males and females.

The data comparison at each stratification investigated differences on 31 variables. These variables are listed in Table 14. Only the T-test results which were statistically significant ($p<.05$), or near a trend ($p<.10$) level were reported. A Mann-Whitney U, and a Median test was calculated when appropriate. A brief summary of the more important findings follows.

Married students (all women) achieved higher ($p<.05$) grades in nursing courses than did non-married students. No significant differences were

found between the groups with regard to past high school grades, composite scores on the American College Test, or grades attained in non-nursing courses.

The higher academic achievement of marrieds in nursing courses was interpreted as stronger motivation to excel because of responsibility felt toward the mate, and family. The findings also indicated a clear focusing of effort toward nursing studies, for marrieds did no better in non-nursing courses than non-marrieds. It was also noted that married students' average age, 29 years, was significantly ($p<.01$) higher than the 22 year average of non-marrieds. This age/experience difference may have helped them arrive at a more mature approach to studies.

Data was not gathered as to the time and effort students spent with their studies, but it was tentatively offered that marrieds spend more constructive energy in their nursing studies. This notion is based on the assumption that marrieds have many basic concerns routinely met with the help of a mate and family. Non-marrieds tend to spend considerable effort trying to meet personal needs. For instance marrieds usually have a

consistent source of emotional support, a social life routine (often with other marrieds).

Personal Orientation Inventory assessments showed marrieds to be no more time competent in general orientation than non-marrieds. However, marrieds tended to be ranked higher in time competency by self ($p<.04$), peers ($p<.001$), and instructors ($p<.05$). From these findings it was posited that marrieds were no more time competent as a general orientation than non-marrieds, but were more time competent in particular college and hospital situations. Marrieds probably expressed fewer time incompetent messages, e.g., regrets and disappointments about the past, worries about the future, to persons in the nursing program. Many of these emotional needs were probably met at home. Non-marrieds probably appeared less time competent because emotional support from significant others was less available on a consistent basis from persons outside the college.

Personal Orientation Inventory assessments showed marrieds to be less inner directed ($p<.02$) than non-marrieds. Instructors ranked marrieds significantly ($p<.05$) higher on inner-directedness than non-married students. As in the discussion of time competency, it

is likely that inner-directedness is determined largely by a particular situation. It was felt that marrieds received higher ranking by instructors on inner-directedness (and time competency) because of their studiousness, and appearance of maturity as indicated by their higher grades in nursing and older age.

The comparison of students with previous Licensed Practical Nurse (LPN) training, and non-LPN trained students showed the former group averaged significantly ($p<.02$) higher grades in nursing courses. This finding was remarkable in view of the fact that the LPN group also averaged lower ranks in their high school graduating class ($p<.10$), and lower composite grades on the American College Test ($p<.01$). It was concluded that prior licensed practical nurse training was a better predictator of success in the registered nursing program than grades in high school, and high composite scores on the American College (aptitude) Test.

Students with prior LPN training tended to be ranked higher on inner-directedness by self ($p<.07$), peers ($p<.01$) and instructors ($p<.06$), than their non-LPN trained peers. This was attributed to the specific situation in which students based their

rankings. The LPN trained students were probably more inner-directed and confident in hospital, and classroom situations because of their familiarity with nursing procedures and patient care.

The comparison of male and female nursing students showed females received significantly ($p<.01$) higher grades in nursing courses than male students. This finding may be related to the better academic preparation of females. A t-test showed females tended ($p<.07$) to receive higher percentile ranks in their graduating high school classes than did males.

Males tended ($p<.07$) to receive more "internal" scores on Rotter's I-E scale than females. This may reflect different societal expectations for males. The early training of most males in this society emphasizes a need for them to be in control of their destiny. They are taught to be self-reliant and independent rather than to depend on fate, luck or circumstances to shape their destiny. This interpretation was offered with reservation, for the data were too scant to generalize beyond the sample population.

The comparison of financial aid recipients with students not receiving financial aid showed the recipients tended ($p<.10$) to come from families with lower income. The t-test difference significant, at

only the .10 level, suggest that financial aid recipient status may not have been a good indicator of economic need.

Students receiving financial aid averaged significantly ($p<.05$) higher grades in non-nursing courses, than did the non-recipient group. Both groups received similar averages in nursing courses. This finding is not surprising in view of the fact that recipients had higher academic aptitude as indicated by higher composite scores on the American College Test ($p<.001$), and higher ranks in graduating high school classes ($p<.05$).

T-test comparisons between freshmen, and sophomores revealed significant differences on only two variables, grade point average in non-nursing courses, and Rotter Internal-External scores. Sophomores attained the higher grades ($p<.01$), and more "internal" control ($p<.01$). These findings were interpreted judiciously, because the sophomore sample may have been biased. Nearly all the freshmen were included in the study, but only about half the sophomore class was included in the data collection. Attrition of deficient students from the sophomore class and the development of academic and personal, during the second year in the nursing program, skills by the remaining students were offered as contributing factors in the differences between freshmen and sophomores.

CHAPTER VI

SUMMARY, CONCLUSIONS

The study conducted was an empirical investigation of self actualization. The goal was to provide information about the relationship of self actualization to selected background, performance and personal characteristics of nursing students. This student population was studied because of the relevance of self actualization and development of positive mental health in persons who will be charged with the heavy personal responsibilities of registered nursing; and in consideration of the lack of research in this area.

Self actualization was assessed in 47 freshmen and 18 sophomores in a two-year registered nursing program. Shostrom's Personal Orientation Inventory (POI) was used. Inferences about the students level of self actualization were based on the two major POI scales, time competency and inner-directedness. Time competency and inner-directedness scores were used both separately and jointly to assess self actualization.

Essentially three approaches were used in analyzing the data. First, self actualization was examined in relationship to numerous analytical research variables which included: age, scholastic

aptitude, academic performance in nursing and non-nursing courses, satisfaction with the nursing program, employment experience, and family income. POI assessments of self actualization were examined in relationship to internal control, as it was measured by Rotter's Internal-External Control Scale. Self actualization was also examined in relationship to estimates of time competency and inner-directedness of students as reported by the students, their peers, and the clinical area nursing instructors.

Second, the data were analyzed according to five separate categorical comparisons. The subgroup comparisons were between: Married and non-married, students with prior licensed practical nurse (LPN) training and non-LPN's, financial aid recipients and students not receiving financial aid, males and females, freshmen and sophomores.

Third, the intercorrelations of analytical research variables were examined.

Chapters four and five provide analyses and interpretations of the data, with summaries of the findings at the end of each chapter. The intent in this chapter is to discuss some of the conclusions of the study and briefly consider implications for future research of self actualization.

Self actualization is a vast and complex concept. Its main value is to serve as a general guide to a fulfilling life. It is not possible to define self actualization very thoroughly by considering a limited number of variables on a small sample population, even though such approaches yield statistics which can be manipulated in impressive computerized ways.

Keeping limitations in mind, the Personal Orientation Inventory is as good an instrument for the assessment of self actualization as exists at this time. It provides a sketch of self actualization much the way a map outlines a journey or a menu indicates choices for a meal. Confusion arises when the limitations are not acknowledged, when one mistakes the map for the journey, the menu for the meal, or test scores for self actualization.

The Personal Orientation Inventory (POI) major scales time competency and inner-directedness are broad enough to be good independent indicators of self actualization. The POI subscales are too specific to be useful as independent indicators of self actualization. These bipolar subscales: self-actualizing values, existentiality, feeling reactivity, spontaneity, self-regard, self-acceptance, nature of man, synergy, acceptance of aggression, and capacity for intimate contact are helpful mainly in the interpretation of an individual's POI profile.

Self actualization and internal-external control of reinforcement expectancy are not closely related constructs. The Personal Orientation Inventory major scales, time competency (Tc) and inner-directedness (I), and Rotter's I-E Scale do not measure the same dimensions of an individual's thinking.

The assessment of self actualization based on self, peers, and instructor rankings of students on the dimensions of time competency and inner-directedness is unreliable. Individuals, when faced with a subjective task and limited information, rank themselves and others on familiar characteristics according to notions which seem true and important to them. In the study maturity, as suggested by older age and married status, was clearly the basis for rankings by the students. Grade achievement in college was significant in the self actualization rankings of students by nursing instructors.

Time Competency and Inner-directedness

Time competency and inner-directedness are two excellent indicators as to how self actualizing a person is. Time competency is evidenced in a person who lives primarily in the present and secondarily in his past or future. He is involved, has a positive outlook on life and sees his past, present and future

in meaningful continuity. He is not overly pained with past guilt or regret, or overly burdened with idealized plans and fears about the future.

Inner-directedness is evidenced in responsible, self-supportive behavior without over reliance on another person's views. An inner-directed person is aware of feelings and needs in others, as well as himself, and makes his life decisions based primarily on his inner feelings and beliefs. He is proactive in adjusting, and adjusting to, his environment.

High time competency, inner-directedness, and academic achievement were associated in this study with older age, prior licensed practical nurse (LPN) training and to some extent married (rather than non-married) status. These findings strengthen arguments for career ladders in higher education, and continuing education for adults beyond the traditional college age.

Career ladder programs are designed to encourage persons to advance in education and vocational responsibilities. The ladder programs are based on an assumption that some non-professional training and employment experiences have relevance and are creditable to the requirements for graduation from a program training professionals. Career ladders are opposed by

those who contend that non-professional experiences are quite separate from professional experiences and are therefore not creditable.

The outstanding personal and academic performance of previously LPN trained students, in comparison wth their non-LPN peers, suggests there is considerable overlap between LPN experiences and registered nursing education in a two-year associate degree program. This conclusion is supportive of preferential admissions status for LPN's applying to a registered nursing education program. It also propposes that advanced placement and credit by examination should be granted whenever appropriate.

The performances of older nursing students in this study support the rationale for continuing education programs. The concept of continuing education is based on a humanistic ideal that adults of all ages should become more self actualized by exposure to new ideas. The older students were more time competent, inner-directed, and successful academically than their younger peers. This implies that older students not only profit from education taken beyond the usual college age of 18 to 22 years, but they enrich programs in which they participate.

Historically, members of the psychologically oriented helping profession have given insufficient

attention to the concept of time competency. Many methods used by psychiatrists, personal counselors, social workers, etc. were modeled after the psychoanalytic method of therapy. And it is likely that in many instances psychoanalysis encourages time incompetency, not time competency.

Orthodox psychoanalytic techniques permit and encourage an analysand to become deeply involved in recalling, examining and re-experiencing his past. The immersion into one's past can dull his appreciation for the present. His recall of memories becomes more significant than present and future oriented behavior. He becomes accustomed to living in his past. When his past is sufficiently clear, even boring, he decides to live for present and future. The effects of such a past oriented therapy is a moot question, but this writer believes that some contemporary helping approaches have far more direct and positive influence on a client's time orientation, and general state of mind.

The contemporary personal change methods which appear to be growing most rapidly in popularity emphasize a person's present and future. Examples of primarily present oriented approaches are gestalt therapy, encounter groups and bio-feedback training. Approaches which span past, present and future but

focus mainly on the latter two time dimensions are behavioral counseling and therapy and transactional analysis. As new therapies and approaches to personal change emerge, apart from psychoanalysis and the traditions it fostered, one can expect more effective utilization of past, present and future time dimensions in helping clients lead more effective lives.

Another trend in the helping professions concerns the increased inner-directedness and responsibility exercised by clients.[1] Traditionally heavy emphasis was placed on that part of an individual which seems deficient, absent, or generally negative. The helper occupied an omnipotent, (sometime subtle) directing position. The client was implicitly relieved of much self-supportive behavior. An old quip suggests that if a client arrives early for an appointment he is labled anxious. If late he is resisting. And if on time he is compulsive.

An unbalanced therapist-patient relationship, with preoccupation on the negative part of an individual is undesirable for at least three reasons. First, preoccupation with what is negative in a person's

[1] Examples of this trend are briefer psychiatric hospitalization, the increase in the use of self-help groups and paraprofessionals, and the volumn sales of self development books.

functioning, unwittingly reinforces a client's unhealthy beliefs about himself. Second, a full understanding of an individual, his motivational system and frame of reference is gained only when one considers what is right with him as well as what seems to be wrong. Third, the extent to which a client progresses may often be determined by a fuller acknowledgement and actualization of existing strengths, rather than a deep understanding of personal weaknesses.

A valuable aspect of self actualization research and literature, in its application to helping professions, is its unwavering message that all individuals possess considerable strengths and potentials which should not be overlooked. The utilization of self actualization concepts like time competency and inner-directedness, suggest clients make their own growth choices rather than be overly dependent on others for support. Self actualization suggests that the helper's function is not only to deal with intermediate crises and concerns, but to assist the client in development of a broad workable value orientation.

Future Research

The time when self actualization will be thoroughly measured is probably far off. Such measurements would involve tremendous expense and include genetic history,

medical background, psychological testing and behavioral reports. At this time it is important that research be conducted on self actualization to pave the way for future developments as well as provide immediate answers.

The concept of time competency should be studied to see how it can best be taught. Recent developments in meditation, bio-feedback and sensitivity groups, focus mainly on the here-and-now feelings. These activities have tremendous potential for change in a person's time orientation. However, research is lacking on how these activities might effect time competency.

The concept of inner-other directedness is a cornerstone in the therapies which are closest to the transference-countertransference psychoanalytic model. Alternative methods of behavioral counseling and therapy open new possibilities for helping people become more self-supportive, and responsible. Research should provide answers as to what counselor-counselee interactions facilitate inner-directedness.

Some research topics stimulated by findings of this study and related literature follow:

1. The relationship between self actualization in registered nurses and patient satisfaction,

2. A self actualization comparison of adult groups, before and after participation in a continuing education program,
3. The relationship of inner-directedness changes to directive and non-directive counseling,
4. A comparison of self actualization rankings by trained and untrained reporters,
5. A comparison of high and low self actualizing families,
6. Characteristics of extremely self actualizing women,
7. The relationship between self actualization and the amount and utilization of leisure time,
8. The effect of counselor-counselee interactions on time orientation.

The study which has been reported was undertaken with the idea that self actualization is especially important in individuals preparing to enter demanding person-oriented fields such as registered nursing. This idea has been confirmed.

Self actualization is worthy of inquiry because of the questions it raises as well as the empirical answers provided. The research of self actualization

provides an alternate to the admission that we have gone as far as possible in understanding potential. Imaginative, creative studies of self actualization provide avenues from stagnation and sterility to evolution and growth. These investigations symbolize the ultimate human challenge which is to facilitate the fullest dimensions of ourself and others.

APPENDIX A

TESTING PROCEDURE INSTRUCTIONS

(Read)

I am doing a study on personal values--to gain a deeper perspective of students. I would like you to complete the Personality Orientation Inventory (P.O.I.).

The P.O.I. provides a systematic look at the value choices we make.

It is not a test for there are NO definite right or wrong answers, simply the things you believe.

Your cooperation is appreciated.

(distribute answer sheets)

Please enter only your social security number in the appropriate blank.

All information will be treated confidentially and objectively. Following the research, I will be happy to describe the findings to you.

(distribute booklets)

Please read the directions then complete the inventory. You may use pen or pencil. Please try to make a response to each item.

(30-40 minutes later distribute Rotter I-E Scale)

The second inventory, like the one you are now completing, has no definite right or wrong answers. But it will help me complete a study on the beliefs and values of nursing students.

(10 minutes later distribute the Program Satisfaction Questionnaire and the Interpersonal Ranking Form)

The last two forms, which I am now distributing are very short. Thank you very much for your cooperation and assistance with this study.

APPENDIX B

PROGRAM SATISFACTION FORM

Please complete the data requested in the box at the right. Indicate your general satisfaction with classroom experiences and supervised work in the field by placing a check(s) on the scale below (from very high to very low)

_____
Social Security Number

___Age ___Semester in College

Married Single Divorced

Widowed

LPN Yes No

___ Number of years experience as an LPN

___Current employment, number of hours per week

1. General satisfaction with lectures, classroom presentations this semester: (Check one)

Very High ___ High ___ Low ___ Very Low

Optional Comments:

2. General satisfaction with clinical experience, especially supervision this semester:

(Please make three marks, one for each of the hospital placements; if you had fewer placements, enter the appropriate number of check marks.)

Very High ___ High ___ Low ___ Very Low

Optional Comments:

APPENDIX C

GROUP A

INTERPERSONAL RANKING FORM

Please rank in order the persons named below according to the characteristic described. Enter a number one for the person who you think is most inner-directed, and a number two for the second most inner-directed person, and increasing numbers until all persons are ranked. Repeat this procedure on the second item, which deals with time competency.

CIRCLE YOUR OWN NAME AND INCLUDE IT IN THE RANKING.

In some cases you may have difficulty making a choice. When this happens, enter your best estimate.

All rankings are strictly confidential. Coded scores will be used in a statistical comparison. The identity of individuals and their ratings will not be divulged in the research document or other communication.

1. INNER-DIRECTEDNESS:

Tends to be: independent, not overly sensitive, freely expresses

_____Susan A.
_____Doreen B.
_____Jane F.
_____Maryann F.
_____Mary Frances J.
_____Holly L.
_____Cindy L.
_____Patricia O.
_____Francis P.
_____Sharon P.
_____Mae S.
_____Kathy S.

2. TIME COMPETENCY:

Uses available time well, does not seem to think and talk of past regrets, sees a hopeful future, lives effectively in the present.

_____Susan A.
_____Doreen B.
_____Jane F.
_____Maryann F.
_____Mary Frances J.
_____Holly L.
_____Cindy L.
_____Patricia O.
_____Francis P.
_____Sharon P.
_____Mae S.
_____Kathy S.

APPENDIX D

INTERNAL-EXTERNAL CONTROL SCALE

(Correlations are those of each item with total score, excluding that item.

1.a. Children get into trouble because their parents punish them too much.
   b. The trouble with most children nowadays is that their parents are too easy with them.
2.a. Many of the unhappy things in people's lives are partly due to bad luck.
   b. People's misfortunes result from the mistakes they make.
3.a. One of the major reasons why we have wars is because people don't take enough interest in politics.
   b. There will always be wars, no matter how hard people try to prevent them.
4.a. In the long run people get the respect they deserve in this world.
   b. Unfortunately, an individual's worth often passes unrecognized no matter how hard he tries.
5.a. The idea that teachers are unfair to students is nonsense.
   b. Most students don't realize the extent to which their grades are influenced by accidental happenings.
6.a. Without the right breaks one cannot be an effective leader.
   b. Capable people who fail to become leaders have not taken advantage of their opportunities.
7.a. No matter how hard you try some people don't like you.
   b. People who can't get others to like them don't understand how to get along with others.
8.a. Heredity plays the major role in determining one's personality.
   b. It is one's experiences in life which determine what they're like.
9.a. I have often found that what is going to happen will happen.
   b. Trusting to fate has never turned out as well for me as making a decision to take a definite course of action.
10.a. In the case of the well prepared student there is rarely if ever such a thing as an unfair test.

10.b. Many times exam questions tend to be so unrelated to course work that studying is really useless.
11.a. Becoming a success is a matter of hard work, luck has little or nothing to do with it.
b. Getting a good job depends mainly on being in the right place at the right time.
12.a. The average citizen can have an influence in government decisions.
b. This world is run by the few people in power, and there is not much the little guy can do about it.
13.a. When I make plans, I am almost certain that I can make them work.
b. It is not always wise to plan too far ahead because many things turn out to be a matter of good or bad fortune anyhow.
14.a. There are certain people who are just no good.
b. There is some good in everybody.
15.a. In my case getting what I want has little or nothing to do with luck.
b. Many times we might just as well decide what to do by flipping a coin.
16.a. Who gets to be the boss often depends on who was lucky enough to be in the right place first.
b. Getting people to do the right thing depends upon ability, luck has little or nothing to do with it.
17.a. As far as world affairs are concerned, most of us are the victims of forces we can neither understand, nor control.
b. By taking an active part in political and social affairs the people can control world events.
18.a. Most people don't realize the extent to which their lives are controlled by accidental happenings.
b. There really is no such thing as "luck".
19.a. One should always be willing to admit mistakes.
b. It is usually best to cover up one's mistakes.
20.a. It is hard to know whether or not a person really likes you.
b. How many friends you have depends on how nice a person you are.
21.a. In the long run the bad things that happen to us are balanced by the good ones.
b. Most misfortunes are the result of lack of ability, ignorance, laziness, or all three.
22.a. With enough effort we can wipe out political corruption.
b. It is difficult for people to have much control over the things politicians do in office.

23.a. Sometimes I can't understand how teachers arrive at the grades they give.
b. There is a direct connection between how hard I study and the grades I get.
24.a. A good leader expects people to decide for themselves what they should do.
b. A good leader makes it clear to everybody what their jobs are.
25.a. Many times I feel that I have little influence over the things that happen to me.
b. It is impossible for me to believe that chance or luck plays an important role in my life.
26.a. People are lonely because they don't try to be friendly.
b. There's not much use in trying too hard to please people, if they like you, they like you.
27.a. There is too much emphasis on athletics in high school.
b. Team sports are an excellent way to build character.
28.a. What happens to me is my own doing.
b. Sometimes I feel that I don't have enough control over the direction my life is taking.
29.a. Most of the time I can't understand why politicians behave the way they do.
b. In the long run the people are responsible for bad government on a national as well as on a local level.

Note: Score is the total number of underlines choices (i.e., external items endorsed).

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