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Leadership Potentials and Personality Traits of Associate Degree and Baccalaureate Degree Students in Selected Associate and Baccalaureate Nursing Programs

Beverely J. Cobb

Abstract

LEADERSHIP POTENTIALS AND PERSONALITY TRAITS OF ASSOCIATE

DEGREE AND BACCALAUREATE DEGREE STUDENTS IN SELECTED

ASSOCIATE AND BACCALAUREATE NURSING PROGRAMS

By Beverly J. Cobb

Leadership potentials and personality profiles of 27 associate degree and 20 baccalaureate degree nursing students were compared, using the California Psychological Inventory (CPI) and the Managerial Key for the CPI. The mean values on each of the 18 scales of the CPI and the mean values of the Managerial Score were compared and revealed no significant difference (p=.05) between the two groups of nursing students, and were within normal range, indicating average social and intellectual adjustment. Though the associate degree students had a higher mean value on the Managerial Score than the baccalaureate students the difference was not significant (p=.05). There was a significant difference in the ages of the two groups, with associate degree students being younger. When the nursing students were grouped according to those who scored greater than or equal to 600 and those who scored less than 600 on the Managerial Key for the CPI, highly significant correlations were found for 12 of the 18 scales of the CPI (dominance, capacity for status, sociability, social presence, sense of well-being, self-control, tolerance, good impression, achievement via conformance, achievement via independence, intellectual efficiency, and psychological-mindedness), with those who scored greater than or equal to 600 having higher mean values on the 12 scales.

LOMA LINDA UNIVERSITY

Graduate School

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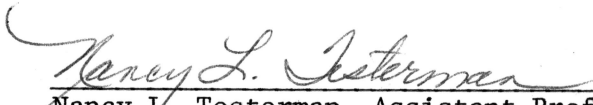
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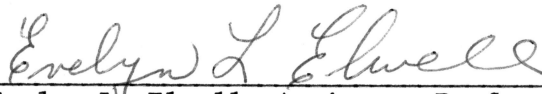
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Each person whose signature appears below certifies that this thesis in her opinion is adequate, in scope and quality, as a thesis for the degree Master of Science.

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APPENDIXES

LIST OF TABLES

LIST OF FIGURES

Chapter 1

INTRODUCTION AND DELINEATION OF THE PROBLEM

NEED FOR THE STUDY

The different types of nursing education have been a subject of intense interest to educators of nursing, especially since the advent of the associate degree programs. Educators and nursing administrators are aware of the need to differentiate more clearly the objectives of the different nursing programs (Cantor, 1974; Rogers, 1961; and Tschudin, 1964). With the movement of nursing education programs into colleges and universities, the differences between associate and baccalaureate degree programs becomes particularly significant.

One of the theoretical differences in the objectives of these two programs focuses on the preparation for leadership. Baccalaureate programs were designed to prepare professional nurses to supervise, teach, and direct all those who give nursing care, to provide leadership for the advancement of the nursing profession within society, to exert leadership within the profession, and to function more independently and autonomously, performing non-routine nursing care (ANA, 1965; DeChow, 1971; Joel, 1972; Ozimek, 1974; Reinkemeyer, 1970; and Yura, 1971). The technical nurse, prepared by the associate degree program, " . . . deals with commonly recurring nursing problems, with standardized nursing actions, with medically delegated technics, and with patterns of intervention that yield predictable results" (DeChow, 1971, p. 70).

STATEMENT OF THE PROBLEM

This descriptive research study was designed to answer the following question: Do students in baccalaureate and associate degree nursing programs differ in leadership potential and personality traits as measured by a personality profile? A careful examination of this problem may provide clues to selection of students for each program, and may give feedback to educators in nursing as they continue to differentiate goals for the different levels of nursing education.

PURPOSE OF THE STUDY

The purpose of this study was to examine and compare the leadership potential associated with personality traits and to examine and compare personality traits of students in associate and baccalaureate degree nursing programs.

RESEARCH HYPOTHESES

1.   There will be no difference (p=.05) between personality profiles of students in selected associate degree and baccalaureate degree nursing programs.

2.   There will be no difference (p=.05) between leadership potential as identified by personality traits of students in selected associate degree and baccalaureate degree nursing programs.

DEFINITION OF TERMS

For the purpose of this study the terms below were defined.

Personality

The totality of distinctive traits of an individual as measured by the California Psychological Inventory (CPI).

Trait

"A distinguishing feature of quality of mind or character" (Gilbert, 1975, p. 126).

Personality Profile

Pertains to the total, overall picture of a person as revealed by his answers on the California Psychological Inventory (Gough, 1975).

Leadership

"Position of control or command, characterized by someone who is familiar with the details of a profession, science, or trade; who has charge of some special group of persons, place, or business; who has the capacity to guide, conduct, escort, or direct" (Gilbert, 1975, p. 126).

Leadership Potential

Synonymous with management potential in this study--assessed from data from the CPI Managerial Key. This potential is intrinsically related to the aspects of personality measured by the CPI. It is defined as the capacity or organize and direct, plan and make decisions effectively, and the ability "to be non-authoritarian, achievement oriented, dominant,

showing high drive, communicative, and self-acceptant" (Goodstein and Schrader, 1963, p. 44).

ASSUMPTIONS OF THE STUDY

1. Leadership potential can be measured.

2. Management potential is the same as leadership potential as defined above.

3. Sample subjects possess normal personality configurations and, therefore, are suitable persons to take the CPI.

4. Subjects will respond honestly to the items on the data questionnaire and personality inventory.

5. Written instructions to test administrators will increase the degree of uniformity of testing.

LIMITATIONS OF THE STUDY

This study was limited to 47 senior associate and baccalaureate degree students from five different schools of nursing. The participants were volunteers and each of the participating schools was a private, church-affiliated school. Therefore, the results of this study cannot be generalized to a larger population.

Other limitations of this study include the investigator's skill in interpreting and scoring the CPI, and varied testing conditions (classroom or private environment) which were not taken into account when test results were interpreted.

SUMMARY

The review of the literature is presented in Chapter 2, including the theoretical basis for the study. The methodology and data collection procedure in Chapter 3 is followed by the analysis of data in Chapter 4. The final chapter, consisting of summary, conclusions, and recommendations, concludes this study.

Chapter 2

REVIEW OF LITERATURE

THEORETICAL DEVELOPMENT

Psychologists have long studied and written about the topic of leadership. Many theories have been studied; for a long time the emphasis was on analyzing individual personality traits and characteristics, thinking this would answer the question why some persons were "leaders" and others were not. When this approach did not meet with outstanding success other approaches emerged, such as the "situationist critique," leadership styles--autocratic and democratic leadership, functional leadership and the leaderless leadership (Bennis, 1959). Despite the efforts to define and substantiate a single leadership theory, the controversy over leadership theories continues.

Several researchers (Mann, 1959; Megargee, and Others, 1966; Newport, 1962; and Palmer, 1974) have supported a combination of two previously separate approaches to studying leadership behavior. This theory, which was the framework for this research, contended that leader behavior by an individual is influenced by his personality and by the characteristics and circumstances of that situation.

Some consistencies have existed about the expected personality correlates of individuals recognized as leaders, though these correlations are modest (Mann, 1959; Rychlak, 1963; and Stogdill, 1948). These characteristics are summarized as follows: Highly significant positive relationships between an individual's personality and his leadership status were

found for intelligence, personal adjustment of the individual to his leadership status, and extroversion-introversion. Dominance, masculinity and interpersonal sensitivity were positively related to leadership, while conservatism was negatively related to leadership. The relationship between personality factors and leadership was found to vary with the technique of measuring leadership (Mann, 1959, pp. 252-253).

The California Psychological Inventory (CPI), a personality inventory, is a testing tool which measures personality characteristics important for social living and social interaction (Gough, 1975). Leadership is one of these significant interpersonal behaviors, so theoretically it is a relevant tool for the study of this phenomenon (Gough, 1969). However, to predict leadership in any particular setting, the demands and circumstances of that situation must be taken into account (Kelly, 1974; Megargee, and Others, 1966; and Newport, 1962).

Personality characteristics important for nursing leaders were described by Leininger (1974, p. 29).

> They must not only be politically and intellectually astute, but they must be good risk-takers, fairly aggressive, active pursuers of issues, and alert to alternative strategies in pursuit of an objective. They must have strong egos, a positive sense of personal identity and a determination to preserve desirable professional values (Leininger, 1974, p. 29).

Furthermore, when "functioning in most large and complex institutions, passive and non-aggressive nurse leaders generally have a low survival rate. In fact, such leaders tend to impede rather than enhance nursing's posture" (Leininger, 1974, p. 29).

Although it is only useful for differentiating persons with leadership characteristics and potential in general terms instead of

predicting leadership ability for a certain, specific setting, a psycho-logical interventory, such as the CPI, is important in identifying effective leaders or potential leaders for the nursing profession.

There is a critical shortage of capable well-prepared nursing leaders and administrators. Nursing leaders are experiencing a confrontation-negotiation era in leadership style, as contrasted with the earlier one, the establishment-maintenance era. In this confrontation-negotiation style of leadership, the effective and successful manager ". . . must move into a situation quickly, assess the problem, confront persons involved and then negotiate diplomatically to resolve the problem" (Leininger, 1974, p. 29). Therefore, it is evident today, that while in the confrontation-negotiation era of leadership, the personality characteristics of intelligence, dominance, aggressiveness, self-acceptance and self-confidence, ambitiousness, and logical and clear thinking are important to be a successful leader.

Identifying students of nursing who possess these personal characteristics may be a beginning step toward fostering the development of the kind of leaders the nursing profession needs today. Students in baccalaureate programs of nursing have often been looked at to provide this leadership. This specific study was directed toward determining whether baccalaureate students of nursing significantly differed from associate degree nursing students in personal qualities which influence leadership behavior.

RELATED RESEARCH

Several research articles that study the differences in

psychological characteristics of students graduating from three basic nursing programs have been cited in the literature.

In Western United States, Richards (1972) found no statistically significant (<.05 level) differences among the three groups of students in intelligence, leadership potential, responsibility, emotional stability, or sociability. Baccalaureate students had a significantly more professional ideal of nursing for themselves and perceived their instructors' ideals as more professional than did other groups of students. The leadership potential was measured as part of the Gordon Personal Profile on the ascendency scale.

Meleis and Farrell (1974) tested senior nursing students' intellectual characteristics, leadership, research orientation, and sociopsychological factors in an attempt to identify differences between the graduates of the various nursing programs in San Francisco. The instrument used to measure leadership was the Leadership Opinion Questionnaire. Students in the three types of programs were found to be essentially alike on the "consideration" aspect of leadership. (The "consideration" aspect refers to the degree to which an individual stresses warmth and consideration in his dealings with others.) The second index of the scale of leadership, structure, indicated the associate degree program had the highest scores, the baccalaureate programs with the next highest scores, and the diploma schools had significantly lower scores. ("Structure" refers to the extent to which an individual is likely to structure his own efforts and those of his subordinates toward goal attainment.) The third index of the scale of leadership, autonomy, showed that senior nursing students in both baccalaureate and associate degree programs shared a

similar degree of autonomy and functioned at a higher level than students in the diploma programs. Therefore, there were differences found in leadership qualities among the three nursing programs, but the differences were less between associate and baccalaureate programs and more between these two programs as compared with diploma programs.

A study done by Gilbert (1975), from which the idea for this study emerged, compared the personality profiles and leadership potential of psychiatric and medical-surgical nursing graduate students, using the California Psychological Inventory (CPI) and the Managerial Key for the CPI. On one of the 18 personality variables, responsibility (Re), a significant difference was found (p>.05), with the medical-surgical students showing a higher degree of this trait. The comparison of the overall personality profile between the two groups revealed differences in Class 1 and Class 2 scales on the CPI. Psychiatric students were somewhat higher on those scales which indicate feelings of inter- and intrapersonal adequacy than the medical-surgical students. Medical-surgical students' scores on the Class 2 scales indicated they seemed more concerned with observing social norms and values than the psychiatric nursing students. Both groups' scores indicated a healthy, higher-than-average social and intellectual adjustment. There were no significant differences in leadership potential between the two groups of graduate students; both groups' scores compared favorably with the management groups of the original sample (Goodstein and Schrader, 1963). In addition, those graduate students who showed high leadership potential also had optimal personality development; those who scored low in leadership ability had personality profiles that signify some social maladjustment.

Other research studies have compared differences, other than psychological, between students of different types of nursing programs. From a survey of 604 freshman nursing students in three types of nursing education programs in Georgia (Wren, 1971), a prototype of the typical nursing student in each of the three types of programs was constructed. In contrast to the associate degree student, the baccalaureate student was more often unmarried and younger; her parents had a higher level of education; she ranked higher in her high school graduating class, having a higher SAT score; and chose her present nursing school because of its reputation and curriculum, rather than by the location of the school, length of program and cost, as did the associate degree student. Bullough and Sparks (1975) found that baccalaureate students chose their present nursing program because they wanted a degree or a public health certificate, while the associate degree students indiciated proximity to home and financial considerations as reasons for choosing their present nursing program.

Bullough and Sparks (1975) also found differences in the orientation of nursing students in associate and baccalaureate programs. The majority of baccalaureate students were care-oriented (focusing more on patients' social and emotional problems), while the associate degree students, although more divided in their leanings, tended more towards the cure-orientation (focusing on physiology and pathology, concerned with getting the patient well).

Differences between technical and professional nurses were observed in clinical settings by directors of nursing and head nurses. These differences were identified in areas of problem-solving and decision-making,

in the scope of practice, and in attitudes towards practice. Consistent

with the goals of technical nursing practice, the actions of these

nurses had predictable outcomes; the nursing problems and interventions

were physiological and physical. Baccalaureate graduates considered

patients' psychological and social needs; they were self-directed, willing

to take risks. Associate degree graduates were found to be more alike in

nursing practice than baccalaureate graduates (Waters, and Others, 1972).

In comparing diploma and degree graduates employed as staff nurses,

Hover (1975) found that nurses do differ according to their educational

preparation. Degree graduates, compared to diploma graduates, were less

restricted in patient preferences, placed higher value on ability and

lower value on personal traits as characteristics typifying good nurses,

showed more satisfaction with their education, and were more likely to

seek promotions outside the hospital system. Diploma graduates working

toward degrees in nursing held opinions and goals approaching those of

degree graduates.

Studies Using the California Psychological
Inventory as Related to Leadership

Several studies have provided encouraging evidence on the utility

of the California Psychological Inventory in research related to leader-

ship. In one of the first studies, using a sample of tenth-grade students,

Liddle (1958) found correlations of .54 (143 females) and .48 (130 males)

between the total elevation of the CPI profile and rating of leadership.

With the socioeconomic status partialed out, the correlations were still

significant (p<.01): .43 for females and .45 for males. Comparing fifty

student leaders in college with a random sample of fifty non-leaders, Johnson and Frandsen (1962) found that the mean score of the leaders exceeded that of the non-leaders on 17 of the 18 scales of the CPI. Sixteen of the means differences were statistically significant ($p<.05$). Largest differences were observed on variables such as dominance, capacity for status, sense of well-being, achievement via conformance, and intellectual efficiency.

CPI profiles were studied of 164 college males, placed in three categories of leadership by means of a 13-item weighted scale. Forty-eight students were classified as leaders, 81 as average leaders, and 35 as non-leaders. On all except the scales for tolerance, communality, and flexibility, the leaders' CPI profiles were equal to or above the other groups. The three scales of dominance, self-acceptance, and achievement via independence distinguished significantly between leaders and non-leaders or average leaders and non-leaders. In a military drill sergeants' program, significant relationships were obtained between the CPI scales for responsibility, self-control, tolerance, achievement via independence, and intellectual efficiency and a proficiency examination on leadership knowledge (Collins, 1967).

Rawls and Rawls (1968) found that personality characteristics and biographical information were useful in discriminating successful and less successful executives. The successful executives made significantly higher scores on the dominance, capacity for status, sociability, social presence, self-acceptance, intellectual efficiency, psychological-mindedness, and flexibility scales of the CPI. Less successful executives scored significantly higher on the self-control and femininity scales of

the CPI. A personality profile of the two executive groups was formulated using the scales from the CPI and Edward Personal Preference Schedule (EPPS).

In studying the personality and biographical characteristics of campus leaders and non-leaders Vanderlind (1970) found significantly different scores on eight of the 18 CPI scales and concluded that these two groups have significantly different (p<.05) personality structures. The eight scales--dominance, capacity for status, sociability, social presence, self-acceptance, sense of well-being, achievement via conformance, and femininity--differed in a direction favoring the leaders.

The Dominance (Do) scale of the CPI was designed to "assess factors of leadership ability, dominance, persistence and social initiative" (Gough, 1975, p. 10). Subsequent research has shown that persons identified as leaders have significantly higher Do scores than do non-leaders (Carson and Parker, 1966; Gough, 1969; Johnson and Frandson, 1962; Liddle, 1958; Rawls and Rawls, 1968; and Vanderlind, 1970). But since little literature on the predictive validity of the Do scale existed, Megargee, and Others (1966) conducted a study to determine whether or not the Do scale of the CPI has predictive validity. Their research concluded that the CPI Do scale has predictive ability when leadership is made salient. ". . . [T]he conditions under which leadership is to be exercised are as important as the personality trait of dominance in determining whether or not dominant behavior will be manifested" (Megargee, and Others, 1966, p. 295).

Dissatisfied with the trait approach, in which leader behavior is seen as a consequence of personal characteristics or traits of leaders,

and the style approach, which attempts to describe a range of leader styles which can be used for an analysis of leader behavior, Rosenfeld and Plax (1975) integrated these two approaches in an attempt to find a more accurate analysis and prediction of leader behavior. A personality profile was constructed, using a battery of psychological examinations, including the CPI, for two styles of leadership--autocratic and democratic. The autocratic leader was "object oriented," lacked insight about self and others, and manipulated others to his own end, without considering their feelings. The democratic leader was described as "people oriented," having insight into the motives and behaviors of himself and others; he "works toward the achievement of some goal with those he considers his equals, treating them as people, and always willing to share in both the rewards and punishments accrued" (Rosenfeld and Plax, 1975, p. 208). In addition, Newport (1962) found differences in attitude patterns between autocratic and democratic types of leaders, using the Leader Behavior Description Questionnaire, concluding that individual characteristics plus the situation are important factors to determining leader behavior.

Several studies utilizing the CPI were done with nurses as subjects. Four psychological inventories, one being the CPI, were used by Kelly (1974) in an attempt to psychologically predict promotion of nurses to leadership positions. One-hundred twenty candidates were selected by the hospital administration, out of a larger population of 545 registered nurses, for evaluation for promotion to leadership positions and 42 were promoted. Specifically, could these tests have such discriminatory power that they could predict those who were actually promoted from those who were evaluated for promotion but were not promoted, either because they

did not quality or because there were not sufficient positions available for all who qualified for promotion? Only 13 of the 61 variables in the four tests significantly differentiated the promoted from the non-promoted subjects as groups. The three decisive traits of the promoted nurses were capacity for status, feminity, and a relaxed demeanor (poise). The CPI was noted for its consistency in the cross-validation. There was speculation as to why certain variables of the CPI which intuitively seem to be the traits that constitute leadership and the presumed basis for promotion did not show in this study.

> . . . [T]he variables employed may well have much to do with leadership, the presumed criterion, but little with the policy of promotion, the actual criterion of this study. Hence, instead of predicting leadership, the variables which entered the predictive function and held up under cross-validation defined a policy of promotion (Kelly, 1974, p. 41).

Another conclusion of this study was that the general purpose inventory in a specific situation, such as the one in this study, requires empirical validation before a responsible use of the test instrument with useful results may be expected, as other researchers have also stated (Megargee, and Others, 1966; and Gough, 1969).

In a systematic evaluation of the relationships among administrative position, age, educational preparation, and CPI scales in a national sample (N=1018) of registered nurses, many relationships were statistically significant. The master's prepared supervisor was more dominant, verbal and ascendant in social situations, more achievement-oriented, tolerant, sensitive to the needs of others, open to her own feelings and needs and expected less self-control than the less well-prepared supervisor. Other studies were consistent with these findings. Dyer (1967) found that more

effective supervisors were better educated and had higher profiles indicating ascendance in social situations, tolerance, and higher achievement needs. Gough's (1969) index of leadership prediction formula found dominance, self-acceptance, well-being, and achievement via independence weighted positively and good impression weighted negatively. Goodstein and Schrader (1963) also found successful managerial personnel to be non-authoritarian, achievement-oriented, dominant, high driving, communicative, self-acceptant, and non-feminine.

Relationships of various aspects of on-the-job performance to personal history, personality, and ward administrative climate were studied in a national sample of registered nurses who received high performance ratings from their supervisors (Dyer, and Others, 1972). The CPI was used to measure personality aspects; the nurses rated highest by three levels of supervision had higher CPI profiles which reached significance for social presence, sense of well-being, responsibility, tolerance, achievement via conformance, and intellectual efficiency ($p<.05$). High performing staff nurses described their head nurses as competent ward administrators, explaining reasons for criticism, allowing discussion of their decisions, complimenting staff, using mistakes as teaching opportunities and trying hard to give quality patient care.

Literature Related to Associate and Baccalaureate Degree Programs

There is a dearth of systematic research of differential curriculum content between the associate and baccalaureate degree programs or of differentiated roles in practice settings based on educational background. However, a number of articles in professional journals have

described differences theoretically or have described characteristics of technical and professional nursing education and practice. The differentiating characteristics cited consistently in the literature were organized according to two areas in which professional and technical nursing practitioners differ: (1) in the nature of problems the practitioner solves and the characteristics of the decision-making process; and (2) in the scope of practice.

Nature of problems and characteristics of decision-making. The technical practitioner focuses on concrete and specific patient problems and nursing actions (Johnson, 1966), with commonly recurring nursing problems, standardized nursing actions and patterns of intervention in patient care that yield predictable results; she uses what is known and readily available (DeChow, 1971, and Hallinan, and Others, 1973). She has knowledge of nursing theory and understands scientific principles related to nursing procedures (Cicatiello, 1974). She assists in the planning of nursing care and in evaluation of care given (Hallinan, and Others, 1973; Miller, 1974; and Montag, 1966). She has the scientific basis needed for knowing how to recognize the existence of a problem and implement a course of action (Johnson, 1966). She can carry out nursing measures and medically-delegated techniques with a high degree of skill (ANA, 1965; Tschudin, 1964). The problems identified and solved by the technical practitioner are more likely to pertain to physical or physiological functioning than to psychological or social functioning (Bullough and Sparks, 1975, and Waters, and Others, 1972).

The professional practitioner is a problem solver in a much

broader context than required for technical nursing (DeChow, 1971, and

Hallinan, and Others, 1973). Patient problems are identified and con-

sidered at a high level of abstraction and generalization. The focus is

on theoretical explanations of the patients' responses to illness, in

illness, or stress which may lead to illness and an attempt to find

theories to help explain or predict patient behavior or modes of nursing

intervention. The baccalaureate graduate has a relatively large fund of

descriptive, explanatory, and predictive knowledge to bring to particular

and unique patient situations. Often the problems are unrecognized, incom-

pletely clarified, or poorly understood; sometimes problems override and

influence the identification and/or solution of concrete and specific

problems (Johnson, 1966). Professional nursing emphasizes helping patients

cope with social and psychological problems (Bullough and Sparks, 1975,

and Waters, and Others, 1972). The baccalaureate graduate needs a high

degree of intellectual skills, such as problem solving, critical thinking,

making self-directed judgments about professional nursing intervention, and

interpersonal and technical skills (DeChow, 1971 and Ozimke, 1974). These

independent, creative, critical thinking skills thereby enable the profes-

sional practitioner to be responsible for decision making. She becomes a

change agent by developing a structure or pattern of care not clearly

evident before (Joel, 1972).

Scope of practice. Technical nursing practice is to be limited in

scope (ANA, 1965). The nurse is prepared to give direct patient care in a

variety of settings (ANA, 1965; DeChow, 1974; Hallinan, and Others, 1973;

Hassenplug, 1965; Montag, 1966; and Tschudin, 1964) under the supervision

of a professional nurse practitioner (Aasterud and Guthrie, 1964; ANA, 1965; and Montag, 1966). It also involves supervising other workers in technical aspects of care (ANA, 1965).

The professional practitioner of nursing functions as a full member on a multidisciplinary health care team (Hallinan, and Others, 1973, and Rogers, 1961). This includes collaboration with physicians in the achievement of their therapeutic goals for the patient (Tschudin, 1964), as well as supplementing and complementing the physicians' role by performing the independent functions of nursing, which need to be better understood (Fritz, 1966). Professional nursing practice is "sharing responsibility for the health and welfare of all those in the community, and participating in programs designed to prevent illness and maintain health. It is coordinating and synchronizing medical and other professional and technical services as these affect patients" (ANA, 1965, p. 6). The professional nurse gives direct care and exercises responsible supervision over other care given (ANA, 1965, and DeChow, 1971); she assumes ultimate responsibility for development of the nursing care plan for each patient (DeChow, 1971 and Rotkovitch, 1976). She provides leadership for the nursing team (DeChow, 1971), and is responsible for guiding the work of technical and vocational practitioners (Rogers, 1961).

Despite these obvious theoretical differences in the scope of practice between the technical and professional nurse practitioner, it is recognized that in practice, associate degree graduates are too often placed in management and leadership roles (Allen, 1974 and Hallinan, and Others, 1973). Although Montag (1966) stated that the majority of technical nurses were employed in general hospitals and most involved in giving

direct patient care, Miller (1974) found that associate degree graduates were being utilized in the same kinds of roles as professional nurses, i.e., supervisory and head nurse positions. In fact, some educators thought that associate degree nursing students must have experience with team leadership since they were hired for positions that require super-vision skills (Cicatiello, 1974 and Francis, 1972). Francis thought this would be needed until agencies differentiate the tasks and responsibilities of nurse technicians and professional nurses; Cicatiello said this need will pertain until the professional component of care becomes available in all situations in which it is required. McClure recommended that the bac-calaureate preparation be required for entry into nursing practice because separating the technical from professional functions was possible theore-tically, but not practically (Fagin, and Others, 1976). She said that bac-calaureate and associate degree graduates were reported to have similar expectations regarding their own roles and perceived no differences in the way they should be functioning.

The problem of differentiating the different levels of nursing was needed long before the associate degree programs emerged. The associate degree programs did, however, provide the stimulus (Davidson, 1974). Some have said the model of nursing practice is not as clearly defined in the baccalaureate programs as it is in the associate degree programs (Hallinan, and Others, 1973; Hassenplug, 1965; and Waters, and Others, 1972). Mere-ness (1971) stated that the problem was in developing a universally accepted definition of professional nursing practice, not with the clini-cal performance of baccalaureate graduates. But Fritz (1966) thought that before baccalaureate education can know what its job is, nursing service

personnel and nursing educators need to examine patient care needs and develop a precise definition of nursing's unique contribution. Joel (1972), however, thought that professional practice could never be as delineated as specifically as technical nursing practice.

Leadership and Nursing

There is little known about leadership requirements in the nursing situation; few studies of leadership have been done in nursing situations and few of those done by nursing researchers (Yura, 1971). But there is no argument that growth and development of good leaders constitutes one of the greatest needs in nursing service today (Blair, 1976; Higgs and Magill, 1974; Lasca, 1972; Nouri and Rainville, 1972; and Yura, 1971). Some think nurses are ambivalent about leadership, that they lack a sense of themselves as leaders, potential or actual, and lack professional self-esteem (McBride, and Others, 1972). Some implicate the curricula for having very little in-depth exposure to courses, such as principles of supervision, human relations, motivation, leadership, or principles of management (Nouri and Rainville, 1972 and Walker and Hawkins, 1965). Perhaps the fact there is little agreement on the definition of leadership contributes to the problem of leadership in nursing (Wiley, 1976).

Even though there exists little systematic research about leadership in nursing, many articles in the literature contributed to a theoretical understanding of leadership in nursing.

Leadership was generally viewed from a situational or interactional point of view--that leadership is a pattern of behavior that involves interaction between follower, leader, and the situation, also that

leadership is functional and cannot be haphazardly transferred from one situation to another (Beyers and Phillips, 1974; Merton, 1970; Schurr, 1969; and Yura, 1971). Some even stated that leadership was a learned process and almost any average person could become an effective leader using sound principles of leadership (Merton, 1970; Nelson, 1975; and White, 1971). Leadership styles were also identified, from autocratic to democratic; the style used could vary with the situation and with the personality of the individual (Merton, 1969; Keaveny, 1973; and Kron, 1976).

Many authors identified characteristics they thought were important for the effective nurse leader to possess. These are summarized below: (1) ability to recognize problems and then make sound, logical and intelligent decisions with self-confidence (Beyers and Phillips, 1974; Denman and Kavina, 1974; Eggers, 1972; Higgs and Magill, 1974; Keaveny, 1973; and Kron, 1976); (2) ability to exercise executive authority (Denman and Kavina, 1974; Higgs and Magill, 1974; and Keaveny, 1973); (3) ability to communicate effectively with those she leads (Denman and Kavina, 1974; Eggers, 1972; Kron, 1976; O'Brien, 1970; and Wiley, 1976); (4) familiarity with organizational environment--policies, procedures, rules, and regulations (Beyers and Phillips, 1974; Denman and Kavina, 1974); (5) competent and knowledgeable about work to be supervised (Denman and Kavina, 1974; Higgs and Magill, 1974; Kron, 1976; Merton, 1970; and O'Brien, 1970); (6) sets tone which promotes group unity (Beyers and Phillips, 1974 and Keaveny, 1973); (7) encourages growth of subordinates (Beyers and Phillips, 1974 and Keaveny, 1973); (8) flexibility (Kron, 1976 and O'Brien, 1970);

and (9) working cooperatively with, acknowledging and respecting staff members (Beyers and Phillips, 1974 and Merton, 1970).

In addition to the research previously mentioned in the section of studies using the CPI, there was other research related to various aspects of leadership and nursing. Aware of the need to identify and develop nurse leaders, Yura (1971) conducted a study to determine how faculty members perceived leadership potential in baccalaureate nursing students and consequently developed an operational definition of nursing leadership behavior. Three hundred nursing faculty members completed a testing tool which contained 70 statements on which they rated the importance of each leader behavioral statement as an indicator of leadership potential of baccalaureate nursing students. Sixty-three per cent of the 70 statements were rated as most important indicators of leader behavior. Fourteen statements which two-thirds or more of the respondents designated as most important indicators of leadership potential were these:

> [D]emonstrates a sensitivity to the ways people communicate with each other; assumes responsibility for action based on her decision; has group members share in decision-making; gives credit when credit is due; listens attentively for meaning and for feelings; encourages group members to express their ideas and opinions; demonstrates a sensitivity to the perception of others; is skillful in getting others to work together effectively; delegates responsibility appropriately; uses discretion, tact, and explanation to get full cooperation from others; grasps essentials of a problem; sees alternative solutions; strives to understand herself and others; demonstrates an awareness of the influence of personal and interpersonal factors on thoughts and actions; and encourages group members to work as a team (Yura, 1971, p. 59).

Perceived behavior and attitudes of hospital employees under effective supervisors, as contrasted to employees of ineffective supervisors, was as follows: They held more favorable attitudes toward other hospital employees, were more trusting of their supervisors, were more cooperative,

sought higher standards, were more effective in their communications, were more open in communication with their supervisor, and were more accurate in reporting performance (White, 1971).

Hughes (1974) studied the preferences of nurses for different styles of leadership used by their supervisors. The types of leadership styles were these: (1) the "autocratic" type makes a decision, tells staff what it is, and expects them to accept it without complaint; (2) the "persuasive" type makes a decision and then tries to sell it to his staff; (3) the "consultative" type consults with his staff, and takes their views into account before reaching a decision; and (4) the "participative" type reaches a decision together with his staff. Although results of studies using other hospital employees had shown the most popular preferred style of leadership to be consultative, fewer nurses said they preferred this type, but instead preferred the participative type (over one-third responding). The style of leadership nurses actually perceived in their leaders was autocratic. Implications of the survey were that morale would increase if the preferred and perceived leadership styles were matched.

In a study which measured relationships between head nurses' activity preference and her leader behavior as seen by her subordinates, Anderson (1964a) found that head nurses who exhibited a strong preference for nursing care activities were rated as better leaders by their subordinates than head nurses who preferred personnel or coordinating activities. But the majority of head nurses preferred personnel activities to other activities. This finding suggested that leaders from the point of view of subordinates might not be the leaders preferred by superiors. A follow-up

study (Anderson, 1964b) was done to determine if superiors and subordinates of head nurses associate different qualities with leader behavior. Findings showed that head nurses who preferred nursing care activities were rated as the best leaders by subordinates; head nurses who preferred coordinating activities were rated as best leaders by superiors, and the majority of head nurses preferred personnel activities. Superiors, subordinates, and head nurses each associated a different aspect of the head nurse's job with leader behavior.

Some of the problems encountered in teaching leadership to students were these: Defining leadership, identifying adequate learning experiences, providing for these learning experiences, and evaluating the results. Sixty-one students at the University of Washington School of Nursing responded to a questionnaire designed to examine their perception of and experience in leadership roles. Analysis of the results indicated that many students lacked understanding of the leadership role and needed improvement of their ability to communicate and establish interpersonal relationships for the clinical practice area (Davidson, 1968). Nurses in actual supervisory positions have also indicated the need for preparation in leadership and management skills to help them perform competently in their roles (Nouri and Rainville, 1972 and Newcomb, 1971).

Chapter 3

METHODOLOGY

METHOD OF RESEARCH

This research study was a prospective, descriptive survey.

Descriptive research studies are designed to obtain information concerning the current status of phenomena. They are directed toward determining the nature of a situation as it exists at the time of the study. . . . Their aim is to describe "what exists" with respect to variables or conditions in a situation (Ary, and Others, 1971, p. 286).

The tools used were the California Psychological Inventory, the Managerial Key for the CPI, and a demographic data questionnaire (see Appendix E).

Variables

Variate variable. Students in selected associate and baccalaureate degree nursing programs.

Criterion variable. Leadership potential and personality profile.

SETTING AND SELECTION OF THE SAMPLE

The population consisted of 47 students enrolled in six different associate and baccalaureate degree nursing programs in five different schools. The students were in varying stages of their final year in the nursing program. Students in the final year of nursing were chosen to allow for development of leadership potential that may occur during the course of study. No attempt was made to achieve a random sample. In an

effort to eliminate as many extraneous variables as possible, the criteria for inclusion in the study sample were these: The students were female, between ages 17 and 30, had agreed to participate, and had completed the CPI and attached demographic data sheet. The data was collected during the spring and summer of 1976.

The schools used were selected Seventh-day Adventist church-affiliated schools. To achieve a geographical representation from across the country, a baccalaureate and associate degree program from the East, Midwest and West were used. The sample breakdown was as follows:

Baccalaureate degree programs	Sample Size
Eastern U.S.	4
Midwestern U.S.	7
Western U.S.	9

Associate degree programs	Sample Size
Eastern U.S.	11
Midwestern U.S.	10
Western U.S.	6
Total	47

PROCEDURE

In four of the six nursing programs utilized in this study, a faculty member from each school agreed to collect the data for the investigator, due to the geographical distance. The investigator collected the data in the Western U.S. associate and baccalaureate degree programs.

Instructions to individuals collecting data were sent to each school (see Appendix F).

It was hoped that at least ten volunteers from each nursing program would participate in the study. This, however, did not prove feasible as shown above. Each participant gave his consent, in writing, to participate before completing the CPI and demographic data sheet. To assure anonymity of student responses, the signed consent forms were not attached to the student's answer sheet, nor were the students asked to put their names on the answer sheet, test booklet, or questionnaire. The students could either complete the CPI and demographic data sheet at their leisure and return them to the designated faculty member or complete the test tools in a classroom. Since the students' participation in the study was voluntary, they were also free to withdraw from the study at any time without prejudice to them.

THE TESTING TOOLS

The California Psychological Inventory (CPI) (Gough, 1975) is a self-administered test designed to measure personality characteristics important for social living and social interaction. It is intended for use with "normal" (non-psychiatrically disturbed) subjects. The inventory consists of 480 true-false items and yields 18 standard scales (see Appendix G). Each scale is intended to assess one important facet of interpersonal psychology; the total set is intended to give a comprehensive picture of an individual from a social interaction point of view. "Leadership is one of these significant interpersonal behaviors, and so on theoretical grounds the CPI is a relevant tool for the study of this phenomenon"

(Gough, 1969, p. 284). Gough developed a leadership index on the CPI;
". . . the resulting index included dominance, self-acceptance, well-
being, and achievement via independence weighted positively and good
impression weighted negatively" (Gough, 1969, p. 283). The correlation
ratio of the index was +.39 on cross-validation. Gough explained this
modest correlation by stating:

> . . . the identification of traits and qualities pertaining to
> leadership in general must, therefore, be distinguished from
> attempts to maximize the prediction of leadership in a specific
> context. In the former instance, modest correlations will be
> the rule and should be deemed acceptable (Gough, 1969, pp. 283-
> 284).

In 1963, Goodstein and Schrader empirically derived the Managerial
Key for the CPI. The CPI was administered to 603 civilian male super-
visors and managers. "Chi square comparisons were then made of the res-
ponse of the 603 managers and supervisors with those of 1748 men-in-general.
Of the 480 items on the CPI, 206 reliably ($p<.01$) differentiated the two
groups" (Goodstein and Schrader, 1963, p. 42).

The management sample was also subdivided into three subsamples:
Top management (N=106), middle management (N=245), and line supervision
(N=252). Each individual in the management sample was rated by his
immediate supervisor on the adequacy of his on-the-job performance to
validate the final CPI Managerial Key.

> Within the management sample, the Managerial scale scores
> are highest at the top management level, next highest at the
> middle management level, and lowest at the line supervision
> level. An overall F test and subsequent t tests indicated that
> all of the differences among these managerial subgroups were
> highly statistically reliable (all $ps<.01$). . . (Goodstein and
> Schrader, 1963, p. 43).

Furthermore, Pearson product-moment correlations between the CPI Managerial

scale scores and the independently-obtained criterion rating of on-the-job performance for the total managerial sample and each of the sub-samples revealed the CPI Managerial scale to also be a statistically reliable index of rated success in management at all but the first-line supervisory level.

The Managerial Key contains 206 items. Each item answered in the keyed direction was scored plus one; each item answered opposite to the Key was scored minus one; 500 was added to the total score to avoid negative answers.

A face sheet was attached to the CPI answer sheet which provided demographic data that might give interesting additional information. Students were asked to briefly answer questions such as these: Age, type of program (associate or baccalaureate), educational level completed, previous occupational experience, future education plans, reason for choosing present nursing program (see Appendix E). The CPI and attached demographic data sheet took approximately 45 minutes to one hour to complete.

Chapter 4

ANALYSIS OF DATA

Analysis of the mean raw scores for each of the 18 personality variables measured by the California Psychological Inventory (CPI) for both groups of nursing students revealed no significant difference (p=.05) on any of the variables (Table 1). These mean raw scores were plotted on a CPI Profile Sheet, which automatically transforms these raw scores into standard scores (Figure 1). Nearly all of the scores were very close to the baseline and were within the normal range, indicating average social and intellectual adjustment. The first hypothesis, that there will be no difference between personality profiles of students in selected associate and baccalaureate degree nursing programs, was supported.

No significant difference (p=.05) in leadership potential was found between the two groups of nursing students. The mean raw score for the associate degree students was 599.15; for the baccalaureate students 589.35 (Table 2). Therefore, the second research hypothesis, that there will be no difference between leadership potential as identified by personality traits of students in selected associate and baccalaureate degree nursing programs, was also accepted.

The scores of the associate and baccalaureate degree nursing students were then compared with the scores of the original group studied by Goodstein and Schrader (1963), upon which the Managerial Key for the CPI was based (Table 3). The scores of the associate and baccalaureate degree students compared closely with the line supervision group of the original

Table 1

Mean Values, Standard Deviations, t Values, and Levels of
Significance for CPI Scales of Associate and
Baccalaureate Degree Nursing Students

CPI Scale	Type of Program				t	Significance
	Associate Degree Students (N=27)		Baccalaureate Degree Students (N=20)			
	Mean	S.D.	Mean	S.D.		
Do	28.33	5.82	29.75	5.84	.82	.41
Cs	19.56	4.05	20.15	3.51	.53	.60
Sy	24.96	4.29	25.64	3.18	.60	.55
Sp	36.48	6.17	35.50	5.51	.56	.58
Sa	21.96	3.98	22.55	3.10	.55	.59
Wb	37.04	3.93	36.10	4.71	.74	.46
Re	29.63	4.20	31.10	3.65	1.25	.22
So	38.11	4.59	39.65	3.90	1.20	.23
Sc	32.59	6.04	30.70	7.17	.98	.33
To	24.41	3.38	23.65	3.66	.73	.47
Gi	18.78	5.56	17.10	5.10	1.06	.30
Cm	25.78	1.48	26.60	1.54	1.86	.07
Ac	28.74	3.45	29.25	4.01	.47	.64
Ai	22.48	3.49	21.20	3.71	1.21	.23
Ie	40.89	4.88	39.25	4.10	1.22	.23
Py	12.85	2.60	11.35	2.78	1.90	.06
Fx	11.89	4.87	9.70	3.33	1.73	.09
Fe	22.07	3.71	23.10	4.28	.88	.38

Figure 1

Personality Profiles of Associate and Baccalaureate Degree Nursing Students

PROFILE SHEET FOR THE CALIFORNIA PSYCHOLOGICAL INVENTORY: FEMALE

Baccalaureate Degree ———   Associate Degree - - - - -
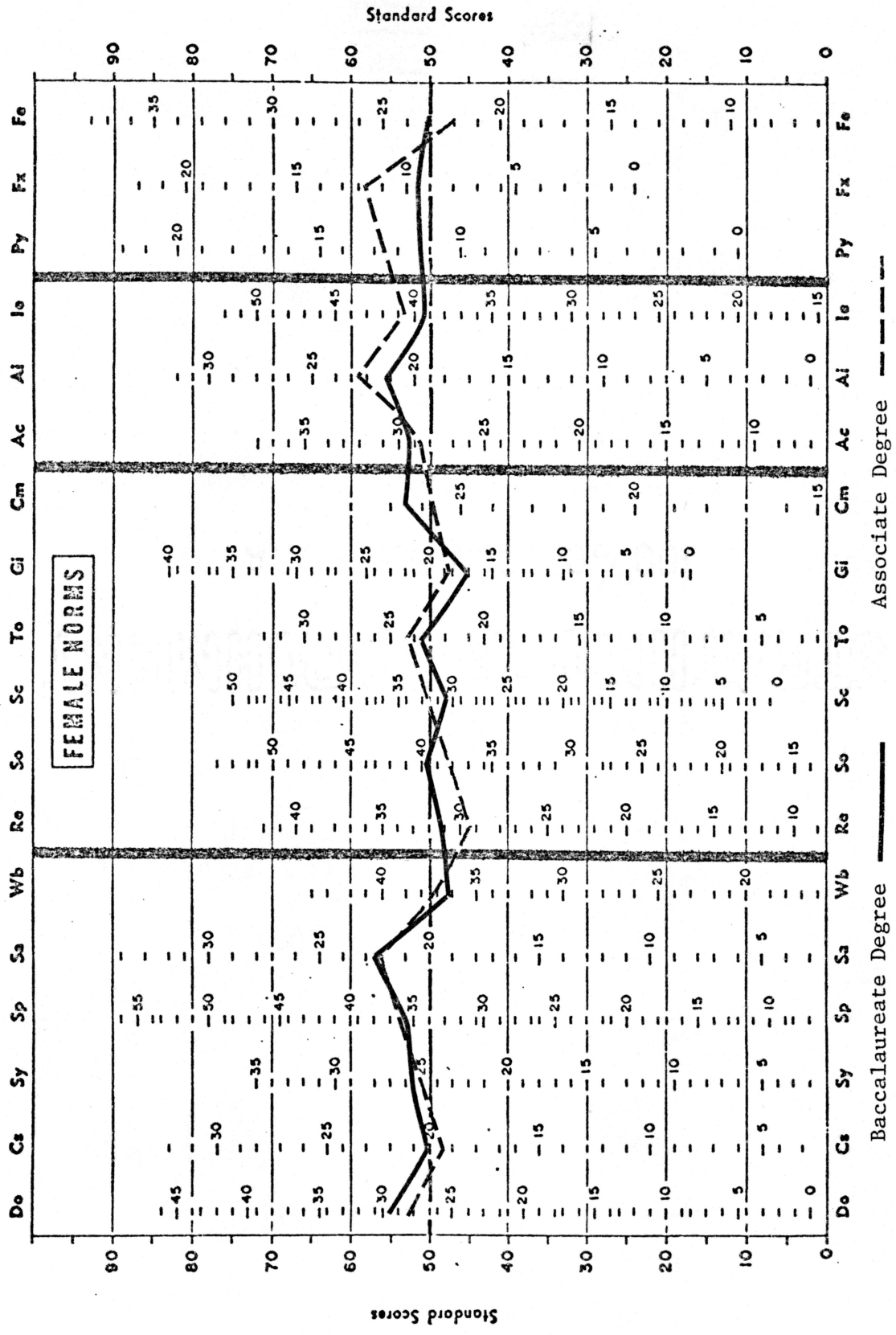
Table 2

Comparison of Scores on the California Psychological
Inventory Managerial Key for Associate and
Baccalaureate Degree Nursing Students

Group	N	Mean	Median	S.D.	Range	t
Associate Degree	27	599.15	606	36.16	499-656	.93
Baccalaureate Degree	20	589.35	581	35.54	532-642	

sample and were considerably higher than the scores for men-in-general,

indicating a higher management potential than the average person.

Table 3

Comparison of Means, Standard Deviations, and Range of the
California Psychological Inventory Managerial Key Scores
of the Three Original Groups (N=1,748) (1963) and
Associate and Baccalaureate Degree Nursing
Students' Groups (N=47) (1976)

Group	N	Mean	S.D.	Range
Top Management	106	626.6	27.3	526-678
Middle Management	245	605.4	36.1	496-680
Line Supervision	252	594.2	36.2	486-664
Total Management	602	604.5	36.7	486-680
Men-in-General	1,748	550.9	47.6	394-662
Associate Degree Nursing Students	27	599.2	36.2	499-656
Baccalaureate Degree Nursing Students	20	589.4	35.5	532-642

In an attempt to correlate the findings on leadership with the personality profiles, the data from the nursing students was divided into two groups--those students with Managerial Scores greater than or equal to 600 and those students with Managerial Scores less than 600 (Table 4). The mean raw scores of these two groups were plotted on a CPI Profile Sheet (Figure 2). The profiles of nursing students whose Managerial Score was greater than or equal to 600 showed optimum personality development and could be described as confident, ambitious, competitive, enthusiastic and expressive, tolerant, intellectually able, mature, independent and self-reliant, capable and resourceful. The profiles of those nursing students who scored low in leadership potential (Managerial Score less than 600) suggested the individual experiences significant difficulties in his interpersonal adjustment (Gough, 1975, p. 12).

Highly significant correlation between the Managerial Scores and the 18 CPI scales showed that 12 of these scales distinguished leaders from non-leaders (Table 4). These scales were the following: Dominance, capacity for status, sociability, social presence, sense of well-being, self-control, tolerance, good impression, achievement via conformance, achievement via independence, intellectual efficiency, and psychological-mindedness.

Analysis of demographic factors showed that a high percentage of both associate and baccalaureate degree students were single (Table 5). High school was the educational level completed by most associate and baccalaureate degree students. Also, there was no significant difference in the type of previous work experience of both groups. Differences in ages between the two groups was highly significant ($t=3.62$). Most

Table 4

Mean Values, Standard Deviations, t Values, and Levels of
Significance for CPI Scales of Nursing Students With
Managerial Scores ≥ 600 and Nursing Students
With Managerial Scores < 600

| CPI Scale | Type of Program | | | | | |
| | Nursing Students With Managerial Scores ≥ 600 (N=23) | | Nursing Students With Managerial Scores < 600 (N=22) | | t | Significance |
	Mean	S.D.	Mean	S.D.		
Do	31.30	4.27	26.67	6.25	2.96	.0050
Cs	21.65	3.16	18.04	3.57	3.67	.0007
Sy	26.65	3.63	23.92	3.61	2.59	.0129
Sp	38.70	4.08	33.54	6.25	3.33	.0018
Sa	22.87	2.90	21.58	4.14	1.22	.2253
Wb	39.30	2.69	34.08	3.92	5.30	.0000
Re	31.13	3.47	29.41	4.36	1.48	.1442
So	39.74	3.31	37.83	5.03	1.52	.1335
Sc	34.65	4.47	29.04	7.09	3.23	.0024
To	26.21	2.24	22.04	3.25	5.11	.0000
Gi	20.30	4.92	15.92	4.98	3.04	.0040
Cm	26.26	1.57	26.00	1.53	.58	.5676
Ac	30.87	2.74	27.13	3.54	4.04	.0002
Ai	24.22	2.52	19.75	3.11	5.39	.0000
Ie	43.39	2.73	37.13	3.87	6.39	.0000
Py	13.43	2.48	11.04	2.51	3.28	.0020
Fx	12.09	4.08	9.88	4.47	1.77	.0834
Fe	21.48	3.93	23.50	3.79	1.79	.0793

Personality Profiles of Nursing Students With Managerial Scores ≥ 600 and
Nursing Students With Managerial Scores < 600

PROFILE SHEET FOR THE CALIFORNIA PSYCHOLOGICAL INVENTORY: FEMALE

FEMALE NORMS

Managerial Scores ≥ 600 ————
Managerial Scores < 600 — — —
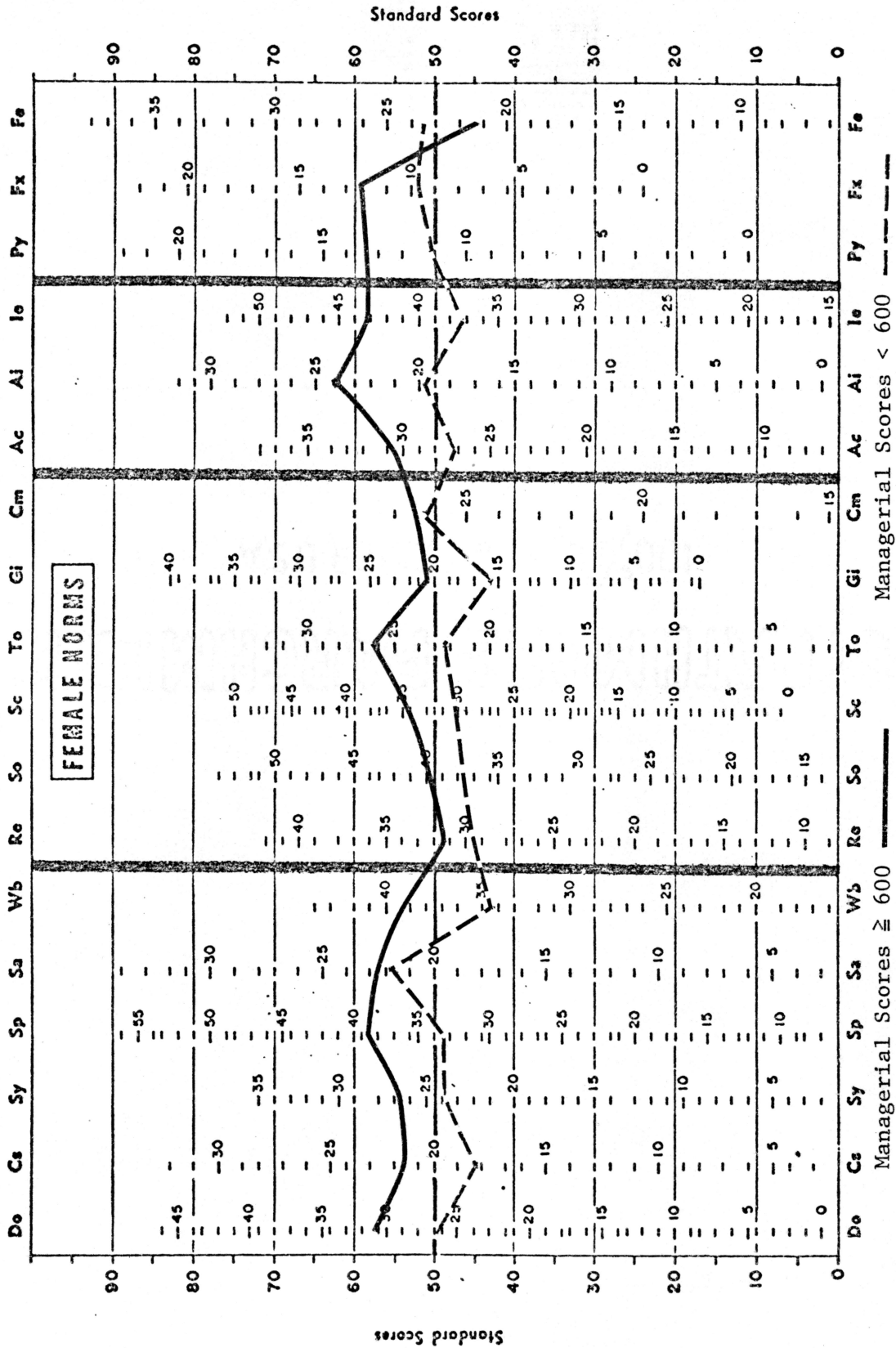
Table 5

Demographic Factors of Associate and Baccalaureate Degree
Nursing Students Compared, Including t Values
and Levels of Significance

| Demographic Factor | Type of Program | | t Value | Signi-ficance |
	Associate Degree Students (N=27)	Baccalaureate Degree Students (N=20)		
Marital Status				
Married	25.9% (N=7)	25.0% (N=5)		
Single	74.1% (N=20)	75.0% (N=15)		
Age			3.62	.0008
17-21 Years	66.7% (N=18)	15.0% (N=3)		
22-25 Years	29.6% (N=8)	75.0% (N=15)		
26-30 Years	3.7% (N=1)	10.0% (N=2)		
Educational Level Completed			.10	.9240
High School	81.5% (N=22)	75.0% (N=15)		
Associate Degree	11.1% (N=3)	20.0% (N=4)		
R.N. Diploma	0.0%	5.0% (N=1)		
Baccalaureate	7.4% (N=2)	0.0%		
Previous Work Experience			1.09	.2810
None	14.8% (N=4)	0.0%		
Health Related	11.1% (N=3)	35.0% (N=7)		
Non-health Related	40.7% (N=11)	5.0% (N=1)		
Both Health and Non-health Related	33.3% (N=9)	60.0% (N=12)		

associate degree students (66.7%) were between the ages of 17-21 years, while 75.0 per cent of the baccalaureate students were between the ages of 22-25 years. No mean ages were obtained.

The results of the item analysis of the fathers and husbands' occupations, to give a general idea of socio-economic status, were incomplete because many students did not respond to these questions completely, probably because the information requested was inapplicable in many cases. A less confusing and more productive method of achieving the desired information would have been to ask the occupation of the principal wage earner.

Other demographic data revealed possible reasons why each group of nursing students chose their present nursing program (Table 6). The students could respond to more than one item on this portion of the questionnaire, so the percentages signified those in that particular program who responded affirmatively to each item. The most frequent reasons given by associate degree students were (1) length of program, (2) location of school, and (3) reputation of school; the baccalaureate students responded (1) reputation of school, (2) location of school, and (3) length of program.

An attempt was made to evaluate the future career plans of both groups of nursing students. Again, the students could respond to more than one item on this portion of the questionnaire, so the percentages signify those in that particular program who responded affirmatively to each item. Associate degree students most often indicated the hospital as their desired area of practice after graduation; the hospital, followed closely by public health, and then by school nursing, were indicated by

Table 6

Number and Percentage of Associate and Baccalaureate
Degree Students Indicating Main Reasons for
Choosing Their Present Nursing Program

Reason	Type of Program	
	Associate Degree Students (N=27)	Baccalaureate Degree Students N=20)
Location of School	51.8% (N=18)	50.0% (N=10)
Reputation of School	48.1% (N=13)	65.0% (N=13)
Financial Considerations	7.4% (N=2)	10.0% (N=2)
Length of Program	63.0% (N=17)	30.0% (N=6)
Was Accepted at This School	33.3% (N=9)	25.0% (N=5)
Curriculum and Philosophy of School	40.7% (N=11)	10.0% (N=2)
Already Attending This School	11.1% (N=3)	10.0% (N=2)
Wanted a Degree or Public Health Certificate	3.7% (N=1)	25.0% (N=5)
Other	11.1% (N=3)	0.0%

baccalaureate students to be the area of practice they desired after graduation (Table 7).

A very surprising percentage (74.0%) of associate degree students gave baccalaureate nursing as their future education plan, particularly since technical education is viewed by many educators of nursing to be a terminal degree. Fifty per cent of the baccalaureate students indicated their future educational plan was a master of science degree in nursing (Table 8).

DISCUSSION

A marked similarity was found between the two groups of nursing students studied. Both hypotheses were accepted. Since this was a descriptive research study the data only indicated what existed and could not imply any causation for the findings.

The significant differences between the personality profiles of those who scored greater than or equal to 600 and less than 600 on the Managerial Key for the CPI was consistent with other findings. Twelve of the 18 CPI scales--dominance, capacity for status, sociability, social presence, well-being, self-control, tolerance, good impression, achievement via conformance, achievement via independence, intellectual efficiency and psychological mindedness--showed significantly higher mean values for the leaders than the non-leaders. The leaders showed a total elevation of the CPI profile compared with non-leaders, similar to Liddle's (1958) findings. The elevation of the dominance scale in those showing leadership potential was consistent with other findings (Carson and Parker, 1966; Gough, 1967; Johnson and Frandsen, 1962; Rawls and Rawls, 1968; and

Table 7

Desired Practice Area, After Graduation, of Associate
and Baccalaureate Degree Nursing Students

Area	Type of Program	
	Associate Degree Students (N=27)	Baccalaureate Degree Students (N=20)
Hospital	74.1% (N=20)	35.0% (N=7)
Public Health	11.0% (N=3)	30.0% (N=6)
School Nurse	0.0%	20.0% (N=4)
Office	14.8% (N=4)	0.0%
Nursing Education	0.0%	15.0% (N=3)
Private Duty	0.0%	5.0% (N=1)
Nursing Home	3.7% (N=1)	0.0%
Specialize	14.8% (N=4)	10.0% (N=2)
Undecided	14.8% (N=4)	10.0% (N=2)
Other	0.0%	5.0% (N=1)

Table 8

Future Educational Plans of Associate and
Baccalaureate Degree Nursing Students

Future Educational Plans	Type of Program	
	Associate Degree Students (N=27)	Baccalaureate Degree Students (N=20)
B.S. Nursing	74.0% (N=20)	0.0%
M.S. Nursing	25.9% (N=7)	50.0% (N=10)
B.S. Other Field	22.2% (N=6)	10.0% (N=2)
M.S. Other Field	0.0%	5.0% (N=1)

Vanderlind, 1970); also the elevation of other scales, i.e., capacity for status (Johnson and Frandsen, 1962; Rawls and Rawls, 1968; and Vanderlind, 1970); well-being (Gough, 1969; Johnson and Frandsen, 1962; and Vanderlind, 1970); and achievement via independence (Carson and Parker, 1966; Collins, 1967; and Gough, 1969). All of the other variables which correlated significantly with leadership potential have been reported in one of two other studies, but not repeatedly like the scale of dominance has correlated in other studies. The self-acceptance scale was not significantly different between leaders and non-leaders in this study as has been found in several other research studies (Carson and Parker, 1966; Gough, 1969; Rawls and Rawls, 1968; and Vanderlind, 1970).

The higher mean managerial score, though not significant, for associate degree students, compared with baccalaureate students, might have been attributed to the older age and subsequently greater maturity of the associate degree students, a characteristic found in previous

research (Wren, 1971). However, in this study the age between the associate degree and baccalaureate students was significantly different with the associate degree students being younger, instead of older. Perhaps if mean values in ages had been obtained instead of grouping the ages in the questionnaire, the difference in age between the two groups would not have been significant.

Chapter 5

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

SUMMARY

The purpose of this study was to examine and compare the leadership potential associated with personality traits and to examine and compare personality traits of students in associate and baccalaureate degree nursing programs. The hypotheses were stated in the null. The generalizability of the study is very limited due to the small sample size (N=47) and sample selection method.

The theoretical framework concluded with the idea that a psychological inventory, i.e., the CPI, is important in identifying effective leaders or potential leaders for the nursing profession, with the limitation that it is only useful for differentiating persons with leadership characteristics and potential in general terms instead of predicting leadership ability for a certain specific setting.

Several closely related research studies were discussed, as well as other studies comparing differences between students of various types of nursing programs. Several research articles which provided encouraging evidence on the utility of the CPI in research related to leadership were summarized. Theoretical differences and characteristics of associate and baccalaureate degree programs helped form a basis for understanding the different types of programs available for nursing education. Research and theoretical constructs in nursing leadership provided an understanding of nursing's background in studying the question of leadership.

The sample for this study was obtained from six different nursing programs in five Seventh-day Adventist colleges or universities in various geographical parts of the United States. Senior-year female nursing students between the ages of 17 and 30 years volunteered to participate and completed a demographic data questionnaire and California Psychological Inventory, a 480-item, true-false answer, self-administered test. Twenty-seven associate degree students and 20 baccalaureate students participated in the study.

Mean values of the scores on the 18 scales of the CPI and the Managerial Scores were obtained for the two different groups of nursing students, associate and baccalaureate degree. These revealed no significant difference (p=.05); therefore, both hypotheses were accepted. A significant difference in the ages of associate and baccalaureate degree nursing students existed, with 66.7 per cent of the associate degree students between the ages of 17 and 21 years, while 75.0 per cent of the baccalaureate students were between the ages of 22 and 25 years.

When mean values of the scores on the 18 scales of the CPI were compared for those nursing students who scored greater than or equal to 600 on the Managerial Key for the CPI with those who scored less than 600, significant differences on 12 of the 18 scales were found. Those nursing students who scored high on the Managerial Key had higher elevated CPI profiles and higher mean values on those 12 scales of the CPI.

Other demographic factors, not specifically related to the personality profiles or leadership potential scores, i.e., future educational plans, reasons for choosing present nursing program, and desired practice

area after graduation, were compared between the two groups, associate and baccalaureate degree students, using an item analysis.

CONCLUSIONS

No significant difference was found between associate and baccalaureate degree nursing students in leadership potential or personality traits as measured by the California Psychological Inventory. Therefore, both hypotheses were accepted.

The reasons for these results can only be speculative: Perhaps the sample size was too small to indicate any significant results; the CPI and Managerial Key for the CPI were not sensitive enough to detect any differences; the type of student recruited into each program does not differ in leadership potential; or the different programs do not differ in producing students with varying leadership abilities. The primary significance of this research has been to point to a need for further research.

RECOMMENDATIONS FOR FURTHER RESEARCH

1. Conduct a research study which would test the predictive validity of the CPI for determining if nurses who score high on the Managerial Key for the CPI become effective leaders. If such predictiveness were possible then such a testing tool could be used as a guide for job placement and advancement and a portion of determining students' appropriateness for the associate or baccalaureate degree program.

2. Conduct a descriptive research study to evaluate what freshman year and senior year students of different nursing programs understand

to be the theoretical and practical differences in technical and professional nursing practice. The results of such a study may indicate an immense need for pre-admission counseling regarding career goals and plans of students entering nursing.

3. Research which would define more succinctly nursing leaders' behavior and give insight into effective ways of developing leader behavior in nurses would be of value.

4. Develop a Managerial Key for the CPI using nurses as subjects. Compare and contrast the results with the Managerial Key for the CPI which was derived from an industrial setting.

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BIBLIOGRAPHY

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APPENDIX A

LETTERS REQUESTING PERMISSION TO CONDUCT RESEARCH STUDY

24280 Barton Road #6
Loma Linda, CA 92354
March 16, 1976

Sample of letters sent to Chairman, Department of Nursing at the following schools: Andrews University, Atlantic Union College, Columbia Union College, and Kettering College of Medical Arts.

Dear

I am a graduate student in nursing at Loma Linda University. My research project for thesis requirements focuses on an educational aspect of nursing. I would appreciate written permission to use your school as a part of the study. Enclosed is the presentation of my research proposal to provide more detail about the direction of my study. Please refer to this.

To gather the needed data (demographic data and the completed California Psychological Inventory--CPI) I would need a member of your faculty who is willing to do the following: 1) randomly select ten of your senior students in your baccalaureate degree program; 2) then, if these students are willing to participate in the study, obtain the students' voluntary informed consent to participate (consent form will be provided by me); 3) administer the CPI, also having each student complete attached demographic data sheet, which I will also provide; 4) return at least ten completed CPI's and demographic data sheets to me, along with signed consent forms. The administration of the CPI and attached demographic data sheet will take approximately one hour to complete. The present plan is to collect the data in May, 1976; unfortunately, it is not possible to do it any earlier than this. Are there senior students available at your school in May to supply the data needed, as this will affect the possibility of conducting the study? If not, when is the earliest time senior students would be available?

In any possible future publication of thesis results, I can assure you of privacy for the institution and anonymity of the students' responses to the questionnaire and CPI. The ten student responses will not even be identifiable to me; the needed consent forms from the student participants will be all the identification I will have and these will not be attached to the respective answer sheets.

I would be very grateful if your school was able to participate in this study, especially as I realize this will require special effort on the part of your faculty, as well as the students.

Enclosed is a stamped addressed envelope to expedite your answer to my request. Thank you very much for considering this matter.

Sincerely,

Beverly J. Cobb, R.N.

24280 Barton Road #6
Loma Linda, CA 92354
March 16, 1976

Sample of letters sent to Associate Deans of the Baccalaureate and
Associate Degree Programs, Loma Linda University.

Dear

I am a graduate student in nursing at Loma Linda University. My research
project for thesis requirements focuses on an educational aspect of nur-
sing. I would appreciate written permission to use your school as a part
of the study. Enclosed is the presentation of my research proposal to pro-
vide more detail about the direction of my study. Please refer to this.

To gather the needed data (demographic data and the completed California
Psychological Inventory--CPI) I will need to do the following: 1) randomly
select ten of your senior students in your baccalaureate degree program;
2) then, if these students are willing to participate in the study, obtain
the students' voluntary informed consent to participate; 3) administer the
CPI, also having each student complete attached demographic data sheet. I
will need at least ten completed CPI's and demographic data sheets, each
with a signed consent form. The needed data will take approximately one
hour for the students to complete. The present plan is to collect the data
in May, 1976; unfortunately, it is not possible to do it any earlier than
this. Are there senior students available at your school in May to supply
the data needed, as this will affect the possibility of conducting the
study? If not, when is the earliest time senior students would be avail-
able?

In any possible future publication of thesis results, I can assure you of
privacy for the institution and anonymity of the students' responses to the
questionnaire and CPI. The ten student responses will not even be identi-
fiable to me; the needed consent forms from the student participants will
be all the identification I will have and these will not be attached to the
respective answer sheets.

I would be very grateful if your school was able to participate in this
study, especially as I realize this will require special effort on the
part of your students.

Enclosed is a stamped addressed envelope to expedite your answer to my
request. Thank you very much for considering this matter.

Sincerely,

Beverly J. Cobb, R.N.

APPENDIX B

LETTERS OF APPROVAL FROM FACILITIES

Andrews University ~~120~~ North Oak Street,   Hinsdale, Illinois 60521
119

Department of Nursing
Hinsdale Campus   April 15, 1976

Ms. Beverly Cobb
24280 Barton Road #6
Loma Linda, California
92354

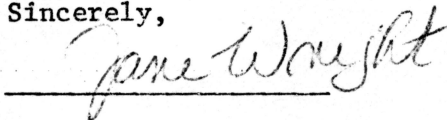Subject: <u>Research Project</u>

Dear Beverly,

    Your letter stamped March 22 was forwarded from
the Andrews Campus in Berrien Springs, Michigan. I'm
sorry this reply was so long in coming! We will be
glad to help you. There are seniors on both the
Berrien Springs and the Hinsdale Campus we can'use'.
Please send the information, consent forms, etc. to
me:

                    Jane Wright
                    Andrews University
                    Hinsdale Campus
                    119 North Oak Street
                    Hinsdale, Illinois 60521

    Please give my regards to Lucille Lewis.

    May God bless you as you are working on your
thesis.

                            Sincerely,

                            Jane Wright

                            Jane Wright, Instructor

JW:af

Department of Nursing   April 13, 1976

Beverly J. Cobb, R.N.
24280 Barton Road #6
Loma Linda, CA 92354
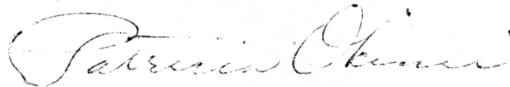
Dear Ms. Cobb:

Thank you for your letter of March 16. We are
very much interested in participating in your
study.

Mrs. Phyllis K. Winkler will be in charge of this
project on our campus, so you may send all the
materials to her.

We will look forward to getting the results of
your study.

                    Yours sincerely,

                    Patricia H. Okimi, R.N.
                    Chairman
                    Department of Nursing

PHO:s

Columbia Union College

EDYTH T. JAMES DEPARTMENT OF NURSING

March 30, 1976

Ms. Beverly J. Cobb
24280 Barton Road, #6
Loma Linda, CA 92354

Dear Ms. Cobb:

This is to tell you we are willing to assist you in the data
collection for your master's thesis.

You should know our summer term starts on May 10. I see no
reason why we could not complete your questionnaires prior to
May 31.

May I wish you every success in the completion of this project.

With best wishes,

Frances L. Fickess, D.N.Sc.
Acting Chairman

sv

KCMA - Mar 31, 1976

Dear Ben,

Just an informal note to let you know
that KCMA will participate in your research project.
Miss Vaughn turned it over to me since I will be
with the Koreans this summer. Mrs. Kierstead has
given me a list of 15 who volunteered to take the
test.

As I reread your letter, I wonder if this is
how it was to be handled, or if we were to select
those we felt had leadership potential. (There are
some of each on the list I have, but if I were to
choose potential leaders, I would have to change this list)

Our senior summer quarter will start May 10, so
we can do this in May.

Your mother & I go to U.C. today to start our
class in Measurement & Evaluation. But may have to
rescue me if it involves any much higher than
algebra!

Best wishes on your project!

Gary Hill

MA LINDA UNIVERSITY

LOMA LINDA, CALIFORNIA 92354

SCHOOL OF NURSING

OFFICE OF THE DEAN

March 24, 1976

Mrs. Beverly J. Cobb
24280 Barton Road #6
Loma Linda, California   92354

Dear Beverly:

Your research project sounds like an interesting one and I would be
pleased to have the senior nursing students participate in this
research.

I expect there will be approximately 57 or 58 seniors enrolled in the
School of Nursing during the spring quarter. There should be no
problem in finding ten who would be willing to particpate in the
project. However, this will be your responsibility, of course, to get
their consent.

I would suggest that early May would be better than toward the end when
they would be preparing for finals early in June. Best wishes for
success in this project and in your graduate study.

Yours sincerely,

Valrie I. Rudge, Associate Dean
Bachelor of Science Program

VIR/gs

Campuses at Loma Linda and La Sierra

MEMO

From the office of . . .
SHERRILL BAUGHER

5/4/76

To Whom It May Concern:

Beverly Cobb, a student in the graduate program

of Loma Linda University School of Nursing, has my

permission to collect data from our Associate Degree

students, also of Loma Linda University.

Signed   *Sherill Baugher*   –
                 Sherrill Baugher, Associate Dean
                 Associate Degree Nursing Program

APPENDIX C

LETTER OF APPROVAL FROM ETHICS COMMITTEE

Approval Date: April 20, 1976

Beverly Cobb
24280 Barton Road, #6
Loma Linda, California 92354

Dear Bev:

The Ethics in Nursing Research Committee has reviewed the proposal you
submitted for a research study to partially fulfill the School of Nursing
requirements for a Master of Science degree from Loma Linda University.

The committee has voted that your study is:

✓   Approved as submitted.

_____   Approved after the attached recommended changes have been made
         and a memo from your committee chairman to this effect has been
         received by the committee chairman.

_____   Not approved as submitted to the committee. See the attached
         comments for recommended changes. Must be resubmitted prior
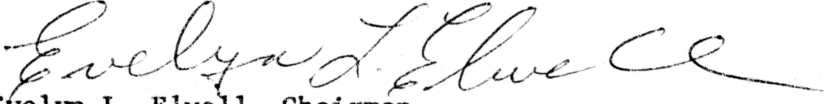   to any data collection.

_____   Deferred to: ___ URACHE ___ Major Advisor ___ Research Chairman

                       ___ Other ___ Advisor

     Please see attached comments regarding this action.

Please contact the Chairman of the Ethics in Nursing Research Committee if
you have questions related to the decision of the Committee. If any changes
are made in the hypothesis, tool, consent form, or the procedure for data
collection, this proposal must be resubmitted to this Committee.

We pray that the Lord will continue to bless your endeavors.

Sincerely,

Evelyn L. Elwell, Chairman
Ethics in Nursing Research Committee

ELE:lw

cc: Research Committee Chairman - N. Testerman

APPENDIX D

INDIVIDUAL CONSENT FORM

INDIVIDUAL CONSENT FORM

You have been asked to voluntarily participate in a research project for thesis requirements conducted by Beverly Cobb, a graduate student in nursing at Loma Linda University, Loma Linda, California. The purpose of this study is to compare the personality traits and the potential for leadership in students from associate and baccalaureate degree programs. You, as a participant, would complete a personality inventory, the California Psychological Inventory (CPI) and complete a short questionnaire of demographic data, which includes such items as age, marital status, reason for choice of present nursing education program, desired practice area after graduation. The CPI consists of 480 true-false items. It will take approximately 45 minutes to one hour of your time to complete the CPI and demographic data questionnaire.

This consent form will not be attached to the completed CPI answer sheet and the demographic data questionnaire. You will not be asked to place your name on the answer sheet or questionnaire. Your responses will, therefore, be anonymous to the investigator. You are also free to withdraw from participation in the study at any time without resulting in any prejudice toward you. These stipulations are to help assure you of confidentiality and to reduce any possible risk of emotional trauma to you in participating.

It is hoped that the results of this study will aid nursing educators in differentiating more clearly the objectives of the different nursing education programs. This study may also point to a possible need for recruiting and directing students into the appropriate educational program.

If you are willing to participate in this study it is necessary to have your signed consent.

> "I have considered the above statements and hereby give
> my free and voluntary consent to participate in the re-
> search study under the supervision of Beverly Cobb,
> graduate student at Loma Linda University, and in witness
> thereof I have signed this consent. I understand that I
> am free to withdraw from participation in the study at
> any time without resulting in any prejudice toward me."

_____

Signed

_____

Date

_____

Witness (any consenting person over 21)

APPENDIX E

DEMOGRAPHIC DATA QUESTIONNAIRE

DEMOGRAPHIC DATA QUESTIONNAIRE

Age: 17-21_____   22-25_____   26-30_____

Type of Program: Associate Degree_____   Baccalaureate Degree_____

Educational Level   High School_____   LVN or LPN_____
   Completed: Associate Degree_____   specify which field
                                                    _____

                       Baccalaureate Degree in field other than nursing
                                        _____

Marital Status: Married_____   Single_____   Widowed_____
                Divorced_____   Separated_____

Father's Occupation:
   (if applicable)

Husband's Occupation:
   (if applicable)

Briefly State Types of Previous Occupational Experiences:

Desired Practice Area After Graduation:

   Hospital_____   Public Health_____   Nursing Home_____

   Private Duty_____   Office_____   Nursing Education_____

   School Nurse_____   Occupational Health_____   Specialize_____

   Undecided_____   Other (please specify what)_____

Future Educational Plans: B.S. Nursing_____   B.S. Other Field_____

                             M.S. Nursing_____   M.S. Other Field_____

Reason for Choice of Present Nursing Program:

   Location of School_____   Length of Program_____

   Reputation of School_____   Was accepted at this school_____

   Financial considerations_____   Curriculum or philosophy of
                                      school_____
   Already attending this school_____

   Wanted a degree or a public health certificate_____

   Misinformation_____   Wanted more authority or status__

   Other (please specify)_____

APPENDIX F

INSTRUCTIONS TO INDIVIDUALS COLLECTING DATA

INSTRUCTIONS TO INDIVIDUALS COLLECTING DATA

for research study by Beverly Cobb

Due to the extreme difficulty of achieving a truly random sample of students to participate in the study, the investigator has chosen to have the research subjects volunteer to participate in the study. The procedure, then, for data collection would be the following:

1. Among the class of senior nursing students--female, age 17-30--ask for ten volunteers to participate in the study. To inform the students of what their participation would entail, please read to them the consent form which must be signed by any subject who participates.

2. If more than ten students volunteer, <u>arbitrarily</u> limit the sample to ten students. (This is due to the limited number of test booklets and answer sheets.) If less than ten students volunteer, use those number of students who agree to participate. It is desirable for the investigator to have ten subjects from each participating school, but this may not always be possible since individual participation is voluntary and individuals must give informed consent to participate.

3. Obtain consent, in writing, from those students who agree to participate. The consent form is enclosed. The signed consent forms are not to be attached to their respective answer sheets. This is to assure anonymity of student responses. Collect signed consent forms.

4. Then give each student who has signed a consent form a California Psychological Inventory (CPI) test booklet and answer sheet and a demographic data questionnaire. The students are not to put their name on the answer sheet, test booklet, or questionnaires.

5. Administer the CPI and accompanying questionnaire by one of two methods to the students who have signed a consent form.

    Method A: In a classroom setting each participating student completes the test inventory and questionnaire at that specified time, then turns the materials in to the faculty member administering the inventory.

    Method B: If the above is not feasible in your school setting, the CPI, answer sheet, and questionnaire may be given to each individual participant to complete during his own time, and then returned to the designated faculty member. This method may make it more difficult to retrieve the data from each student participant.

    The CPI test booklet gives directions for completing that test. The questionnaire involves multiple choice selection and short-answer completion.

6. See that each student's completed answer sheet for the CPI is attached to the demographic data sheet that the student completes.

7. Return the signed consent forms, completed answer sheets and questionnaires to the investigator, along with the test booklets.

8. Remember that student participation in this study is voluntary and that any student may withdraw from the study at any time without prejudice towards her. Should a student withdraw from the study, another student may volunteer to be a participant in place of the student who withdraws.

APPENDIX G

DESCRIPTION OF THE CALIFORNIA PSYCHOLOGICAL INVENTORY

SCALES AND THEIR PURPOSES

DESCRIPTION OF THE CALIFORNIA PSYCHOLOGICAL INVENTORY

SCALES AND THEIR PURPOSES

1. Do (dominance). To assess factors of leadership ability, dominance, persistence, and social initiative.

2. Cs (capacity for status). To serve as an index of an individual's capacity for status (not his actual or achieved status). The scale attempts to measure the personal qualities and attributes which underlie and lead to status.

3. Sy (sociability). To identify persons of outgoing, sociable, participative temperament.

4. Sp (social presence). To assess factors such as poise, spontaneity, and self-confidence in personal and social interaction.

5. Sa (self-acceptance). To assess factors such as sense of personal worth, self-acceptance, and capacity for independent thinking and action.

6. Wb (sense of well-being). To identify persons who minimize their worries and complaints, and who are relatively free from self-doubt and disillusionment.

7. Re (responsibility). To identify persons of conscientious, responsible, and dependable disposition and temperament.

8. So (socialization) To indicate the degree of social maturity, integrity, and rectitude which the individual has attained.

9. Sc (self-control). To assess the degree and adequacy of self-regulation and self-control and freedom from impulsivity and self-centeredness.

10. To (tolerance). To identify persons with permissive, accepting, and non-judgmental social beliefs and attitude.

11. Gi (good impression). To identify persons capable of creating a favorable impression, and who are concerned about how others react to them.

12. Cm (communality). To indicate the degree to which an individual's reactions and responses correspond to the modal ("common") patterns established for the inventory.

13. Ac (achievement via conformance). To identify those factors of interest and motivation which facilitate achievement in any setting where conformance is a positive behavior.

14. Ai (achievement via independence). To identify those factors of interest and motivation which facilitate achievement in any setting where autonomy and independence are positive behaviors.

15. Ie (intellectual efficiency). To indicate the degree of personal and intellectual efficiency which the individual has attained.

16. Py (psychological-mindedness). To measure the degree to which the individual is interested in, and responsive to, the inner needs, motives, and experiences of others.

17. Fx (flexibility). To indicate the degree of flexibility and adaptability of a person's thinking and social behavior.

18. Fe (femininity). To assess the masculinity or femininity of interests. (High scores indicate more feminine interests, low scores more masculine.) (Gough, 1975, pp. 10, 11).