

To the Graduate Council:

I am submitting herewith a dissertation written by Wynella Bramblett Badgett entitled "Identification and Comparison of Characteristics of the Male and Female in Professional Nursing Programs in Tennessee." I recommend that it be accepted in partial fulfillment of the requirements for the degree of Doctor of Education, with a major in Health Education.

Bill C. Wallace

Bill C. Wallace, Major Professor

We have read this dissertation
and recommend its acceptance:

Warren J. Huffman

Charles Hamilton

Sylvia E. Hart

K. Owen McCulloch

Accepted for the Council:

L. Evans Rath

Vice Chancellor
Graduate Studies and Research

IDENTIFICATION AND COMPARISON OF CHARACTERISTICS
OF THE MALE AND FEMALE IN PROFESSIONAL
NURSING PROGRAMS IN TENNESSEE

A Dissertation
Presented for the
Doctor of Education
Degree
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Wynella Bramblett Badgett

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DEDICATION

To my husband, Charles and
to each of my family and
friends for their loving
support and prayers

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ABSTRACT

The primary purpose of the study was to identify the characteristics of the male student enrolled in professional nursing programs in Tennessee. A secondary purpose was to identify the characteristics of the female enrolled in professional nursing programs in Tennessee and to compare the male and the female student. The null hypothesis that there was no difference in the two groups was explored.

Data were obtained from 24 males and 26 females enrolled in six Baccalaureate Degree Nursing Programs and one Generic Masters Nursing Program in Tennessee. Two personality instruments and a demographic questionnaire were used to provide the data. The two personality instruments were the Cattell Sixteen Personality Factor Questionnaire and the Myers-Briggs Type Indicator. The t test for difference between two sample means was used at the 0.05 level of significance. The Omega-squared (W^2) was used to compute the significant t value. No significant difference was found in 14 of the 16 P.F. primary source traits. The null hypothesis that there was no difference was rejected for Factors F and I and also for two second-stratum factors and for two derived criteria scores. The female student was more impulsive, lively, and happy-go-lucky than the male, and

was more extraverted, employed a more rational, objective approach and showed higher leadership potential. Male students were more tender minded and showed higher creativity potential.

Additional findings were that the personality characteristics of both the male and female were more masculine than feminine. Both were more dominant, more self-sufficient, more self-disciplined, more venturesome, more abstract thinking, more calm and stable, more conscientious, and more relaxed and composed. Both demonstrated executive characteristics.

The male nursing student was older, more likely to be married, and likely to have previous undergraduate degrees. They liked working with concrete facts, were intellectually ingenious and adept at problem solving, were resourceful, preferred their own decisions, were introspective and stuck to their inner values, and conservative with respect for established ideas.

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CHAPTER I

INTRODUCTION

An important phenomenon of the American health care system is change. The amount and degree of change affects not only the health care system but each member of society. As is true of most change, it is difficult to say whether in fact the changes are due to societal pressures or to pressures within the system. A current societal value is health care as a right (Fox, 1977; Torrens, 1978). If in fact this is true, how will the health care system meet this demand? Health care providers must be available in sufficient numbers and mixes to meet the demands for health care.

Greater awareness has increased recent societal recognition of the crisis in the health care system. The mystique of doctors and medicine is falling away. The mass media has contributed to the increasing knowledge about the practice of medicine, the new technologies, new discoveries, as well as the failures of medicine. Contributing to these facts and the subsequent uncertainty on the part of the recipients of medical and health care is the perceived depersonalization of medical care. People are paying more and feel that they are getting less (Wildavsky, 1977). Medical specialization has become so prevalent that there is little time allotted to preventive health care.

Ginsberg (1977) said the American health care system can be regarded as a major service industry comprised of 4.5 million employees. The phenomenon of change is occurring within this group of health manpower workers. Tasks and responsibilities are much more diversified and disseminated than they were in past decades. Within the past 10 years the primary nurse practitioner has emerged as a significant member of the primary health care providers (Longitudinal Study, 1980). The cost effectiveness and the increase in quality of health care in clinics where nurse practitioners provide care have been documented in several studies (Sullivan and Warner, 1979; Heagerty, et al., 1977; Schwartz, 1979).

An awareness of a need for change in the health manpower group of nurses was demonstrated when a National Commission for the Study of Nursing and Nursing Education was established in 1967. Several societal changes which might have an impact on nursing were identified in the study. Among these were the fact of career changes and the older, more mature persons motivated to enter formal educational programs. An additional societal change described was that of the encouragement of more men into the predominately female occupations. The increasing number of males in the previously predominant female occupation of elementary and secondary teaching has added to improvements in salaries and educational conditions. The addition of

males and mature females as well as those seeking career changes was seen as a means of not only increasing numbers of nurses but also the socioeconomic composition of the profession. The present shortage of nurses negatively affects the desired goal of available, quality health care, which is seen as a societal right. A recommendation of the study was that

Recruitment of men into nursing be fostered through efforts to modify sex-linked occupational image of the profession by the national and state organizations, and the adoption of specific policies and goals to increase the percentage of males entering nursing preparatory programs by those institutions that offer them (Lysaught, 1970).

Present societal trends away from sex-linked occupations with the additional changes in the practice and science of nursing utilizing scientific and theoretical basis for practice provides opportunities for attracting a broader population into the profession. The expanding role and function of professional nursing is appropriate for those who are able to master it.

Several factors currently operating in the American society and specifically in nursing support a need to recruit and retain more males into nursing. There is national concern about the much publicized shortage of nurses in practice. Patient care is in jeopardy. Contributing to the concern are the facts that there is a decline in the number of nursing school graduates, a decline in the number of admissions and a decline in the

birth rate which means there will be fewer young people to fill the jobs in the future. There was a loss in admissions to accredited programs in nursing of nearly 6,000 from 1977 to 1979 (Beckes, 1980). This loss is particularly critical in light of the expanding roles of nursing; the movement of many nurses into primary health care and private practice. In addition, many more nurses will be needed in geriatric nursing care as the trend in the number of older citizens continues to increase. It is estimated that in the 1980s there will be in excess of 100,000 unfilled nursing positions. The traditionally female stereotyped nursing manpower group is being affected by the societal factor of equal opportunity rights for employment in other fields. Opportunities for employment in many fields are opening up and are more attractive with better working hours, better working conditions and better pay than employment opportunities for the typical hospital employee.

An additional factor affecting the nursing shortage is the fact that many nurses leave the employment world to be housewives and mothers. Of the 1,375,000 registered nurses in this country, approximately 25 percent are not employed in nursing (American Journal of Nursing News, 1980). The addition of males to the nursing work force would increase the stability of nursing health care manpower.

The traditional female stereotype of the handmaiden nurse found to have the "more feminine need pattern of nurturance, succorance, deference, and affiliation" (Bailey and Clous, 1969) is not congruent with today's health manpower needs. The aggressiveness, autonomy, and toughness needs of nurses in the present demands a new look at the candidate entering the profession. The potential benefits of attracting men into nursing are numerous not only for the profession, but for the health care system and society. It is felt by some that men could bring to the profession increased professional recognition, reciprocal peer relationships with other men in the health care team, and better working conditions with higher salaries, enhanced status and greater stability (Cleland, 1971; Beckes, 1980; Silver and McAtee, 1972). Men are also described as being able to contribute administrative and leadership abilities. Lysaught (1972) said men in the field of nursing could reduce chronic problems such as turnover and retention. Men are more likely to make nursing a life-time professional career with less turnover and will not drop out to have children and maintain the home.

The experience of the investigator in observing a high attrition rate among males entering a baccalaureate program in nursing and the high state board failure rate among male graduates provided the impetus to investigate

possible basis for the loss of this needed member of the profession. Beckes (1980) expressed concern about the loss of males and minorities through attrition from nursing programs. A beginning point to solve the problem of attracting and retaining the male is a descriptive analysis of the male student in nursing. A literature search has revealed that though many studies have been done to investigate the personality characteristics of the female student in nursing, there is practically no information about the male nursing student. There is also an indication that the personality characteristics previously attributed to the female in nursing are changing.

There are three educational routes for preparing nursing students for entrance into nursing at the professional level of baccalaureate and higher degrees. They are at the baccalaureate degree level, at the generic masters degree level, and at the doctoral level. Two of these educational routes exist in the state of Tennessee, the baccalaureate degree and the generic masters degree. Both groups of students have their first nursing education experience in the respective programs. Male nursing students are enrolled in the six generic baccalaureate degree nursing programs in the state and in the one generic masters degree program.

I. PURPOSE

The primary purpose of the study was to develop the profile of the male enrolled in professional nursing programs in Tennessee. A secondary purpose was to identify the current profile of the female enrolled in professional nursing programs in Tennessee in order to compare the male and female student nurse.

II. STATEMENT OF THE PROBLEM

The study sought to answer the following research questions:

1. What were the identifying personality and demographic characteristics of the male who enrolled in professional nursing programs in Tennessee?
2. What were the identifying personality and demographic characteristics of the female who enrolled in professional nursing programs in Tennessee?
3. Did the characteristics differ in the male nursing student and the female nursing student? (Dealt with in the null form in Chapter IV).

III. NEED FOR THE STUDY

The need for the study developed from the realization that the much needed health care provider, the male nurse, was not being produced in sufficient

quantity. Only a small percent of students entering nursing programs are males. The 1979 National League for Nursing data reported males enrolled in baccalaureate degree nursing have experienced difficulties resulting in a high attrition rate and those who completed programs had a high state board test pool examination failure rate. Beckes (1980) reported that there has been a recent loss of males in associate degree programs and all minorities in baccalaureate programs. Kennedy (1981) said there are male adults as well as many male college students who would be good nurses. Bergman (1974) reported the finding that of students enrolled in health programs at the University of Alabama there were significantly fewer males in the nursing class. The American Nurses Association survey completed in 1979 reported the percent of male registered nurses to be 2.1 percent in 1977-78.

The role and function of the professional nurse has changed from that of a passive service role to an assertive, scientifically based patient or client advocate. It is, therefore, necessary to compete with the heretofore predominately male occupations to attract intelligent, scientifically curious females and males into the profession. Recent societal changes not only in the role of the nurse but in the roles and characteristics of women, and the blurring of sex role typing provides an excellent career choice for men in nursing.

Stromborg (1976) found a positive relationship ($p < .001$) between a high sex role identity, masculine sex role identity, and a high image of professional nursing. Christman (1980) referred to societal phenomenon affecting the profession which he described as a brain drain in which the bright young women are attracted to employment in the traditional male professions and employment areas. He suggested that recruiting bright males will "keep the intellectual base of the profession at competitive levels with other professions."

Not only are male nurses needed in the primary care areas of health care but in the areas of inpatient hospitals that require a great deal of highly intellectual and scientific patient contact such as the coronary care units and intensive care units and the emergency medical care area. Williams (1973) found that male students in nursing indicated a preference for these employment areas.

In order to attract and retain more males into the predominately stereotyped female profession, it is necessary to identify the characteristics of the male student nurse. Identifying factors which influence the students entry into nursing will facilitate the recruitment of the male. Previous studies have focused on the personality of the female student in nursing and have excluded the small number of males. It is believed that the male can bring to the profession of nursing increased

professional recognition, better working conditions with higher salaries, enhanced status, and greater stability (Cleland, 1971; Beckes, 1980).

The problem of concern was the need for the male in nursing and the need to identify the personality and demographic characteristics of those currently enrolled in professional nursing programs. The need for the male, the highly publicized nursing shortage and the sociological trend of admission of older students indicated a need to look at the student enrolled in professional nursing programs. There was indication from several studies that the personality characteristics of the female nursing student is changing (Adams and Klein, 1970; Richards, 1972; Dugo, 1973; Baker, 1975; Gardner, 1976). For purposes of comparison of the male and female enrolled in professional programs the need to identify the current profile of the female was recognized. An additional need for the study was the formulation of the basics for longitudinal study.

IV. BASIC ASSUMPTIONS

The following basic assumptions were considered essential for the study:

1. The responses to the instrument used were honest and accurate.

2. The limited number of male nursing students, though not sufficient for conclusive results, provided a basis for further study.

V. DELIMITATIONS

The population for this study was delimited to male junior and senior students enrolled in the six generic baccalaureate nursing programs and to the male students in the one generic masters nursing program in the state of Tennessee. Females were delimited to those randomly selected equal to the males in each nursing program in the study.

VI. LIMITATION

A limitation of the study was the admission criteria of the different programs which may bias the population by eliminating some males and some females with certain characteristics.

VII. DEFINITIONS

The following terms are defined as they relate to the study:

Personality Characteristics. Those distinguishing personality traits which were included in the instruments used in the study.

Demographic Characteristics. The following vital and social statistics were included as demographic characteristics: age, marital status, work experience, educational experience, kinship to nurse(s), and parents' job or position. Two related questions were included: 1) What are your future employment goal(s)? and 2) Why did you choose the profession of nursing?

Professional Nursing Programs. Nursing educational programs preparing nurses to function on the professional as opposed to technical level of nursing: Baccalaureate Degree Nursing Programs and the (Generic) Masters Degree Nursing Program. "Given the need for a broad background of knowledge . . . professional nursing practice requires the minimum of a baccalaureate degree with a major in nursing" (AJN News, 1982).

Generic Masters Program. A Masters Degree Nursing Education Program for persons who hold a baccalaureate degree in a discipline other than nursing.

Profile. A set of descriptive characteristics determined by the findings from the personality instruments and demographic questionnaire used in the study.

VIII. SUMMARY

An introduction to the study has been presented in Chapter I. The purpose and statement of the problem have been provided. The need for the study was described. The basic assumptions, the delimitations, and a limitation were delineated. In addition, terms used in the study were defined.

CHAPTER II

SURVEY OF RELATED LITERATURE

I. INTRODUCTION

The following survey of related literature was composed of four sections: nurses as health care providers, nursing students' personality characteristics, males in nursing, and related methodological approaches.

The first section, nurses as health care providers, delineated the relationship of the proposed study to the area of public health education. The section on nursing students' personality characteristics provided background information of studies relating the nursing students and their personality characteristics. The findings of the studies demonstrated the female stereotype of the student in nursing. The third section, males in nursing, provided a brief historical background and explored the role of the male in the nursing profession. The fourth section described methodological instruments used in studies pertaining to the personality factors of nursing students, college students, and medical students.

II. NURSES AS HEALTH CARE PROVIDERS

The American health care system can be regarded as a major service industry comprised of 4.5 million

employees (Ginsberg, 1977). Of this number, more than 1.5 million are registered nurses. The health manpower team member who has traditionally been expected to provide primary health care is the physician. Rogers (1977) said that there is available evidence that individuals other than physicians can be prepared to deliver a major portion of primary and general health care. The primary nurse practitioner has evolved within the past 10 years as a significant health manpower member. By 1976 there were 10,604 graduates of primary nurse practitioner programs who had joined the health manpower force. Approximately 9,070 of those graduates were employed and the majority were in primary health care settings (Longitudinal Study, 1980). Ford (1979) described the nurse practitioner preparation as reflecting nursing's concepts and goals and including the following components:

care that is person and family centered, clinically directed practice and study, collaboration and team care, collegial relationships, especially with physicians, and an orientation toward health and self-care.

The findings of Phase III of the USPHS Longitudinal Study of Nurse Practitioners (1980) concluded that the nurse practitioner education programs are appropriately preparing nurse health manpower for the primary health care marketplace. Several studies (Sullivan and Warner, 1979;

Heagerty, et al., 1977; Schwartz, 1979) have demonstrated the cost effectiveness and the increase in quality of health care in clinics where nurse practitioners were providing care. Sullivan and Warner (1979) proposed that the function of teaching and counseling provided by the nurse practitioner will significantly affect the preventive aspects of primary care and contribute to the current movement of self-care.

All professional nurses provide valuable health care services and thus affect the public health of the people of the nation. Whether nurses are employed in the hospital acute care setting, nursing homes, or in ambulatory care settings, their functions include nursing diagnosis and treatment; assessment of and administration of comfort, therapeutic, and restorative measures; carrying out physicians' treatment and medication orders; patient education; and wellness promotion (Brill and Kilts, 1980).

Nursing as an integral part of society provides a major community health service through its vital force in all programs directed toward the care of the sick and the disabled, the prevention of disease, and the promotion of health (Notter and Spalding, 1976; Schlotfeldt, 1981). The findings described by Schwartz (1979) in three rural health care practice settings support the conclusion that society could benefit from the use of more nurse

practitioners, both from the vantage point of manpower shortage in the rural areas and the escalating costs of medical care.

The current societal value of health as a right (Fox, 1977; Callahan, 1977; Knowles, 1977; Torrens, 1978) demands new approaches to and better health care services. The nurse in an expanded role has been shown to be capable of providing a means of fulfilling this demand (Longitudinal Study, 1980; Sullivan and Warner, 1979). Will nursing be able to meet these challenges? In this country there has been a nationally recognized shortage of nurses, which has been partially attributed to the fact that many females who have been prepared as nurses are not working. Attracting more males into nursing will enable the nursing profession to meet the challenges of providing more accessible and better health care services. Men will help to contribute a more stable working force for nursing. In order to attract and retain more males in nursing, it is necessary to identify the personality characteristics of the male in the stereotyped female profession.

III. NURSING STUDENTS' PERSONALITY CHARACTERISTICS

The nursing student is viewed by society as a female, unmarried angel of mercy who is subservient to the physician and serving to the patient. This attitude

is reflected in the applications to nursing programs when applicants respond to the question, Why do you want to be a nurse? with, "I want to be able to help people" and "It is a profession where one is needed" (Edwards, 1969; Hampton, 1972; MacDonald, 1977; Williams, 1973).

Many studies which examine the personality characteristics of the nursing student have been reported. The majority of these studies, even those which have looked at sex-role identity have focused on the stereotyped female nursing student and have intentionally excluded the occasional male student nurse (Edwards, 1969; Redden and Scales, 1961; Richards, 1972; Stromborg, 1976).

Several changes occurring in the profession of nursing indicate a need for a current reexamination of the personality characteristics of the student in nursing education programs. The number of males entering nursing service in 1962 had increased from 0.9 percent to 1.4 percent in 1972 (1970 Census Report; The Nurses Almanac, 1978). Another survey revealed that men graduating from schools of nursing rose from 2.6 percent in 1970 to 4.5 percent in 1973 (MacDonald, 1977). The investigator's experience has been that there is not only a high incidence of attrition for males entering nursing education programs but there has also been a high percentage of state board failures of graduate males. The addition of more males into the nursing profession coupled with the currently

expanding role of the professional nurse, the highly publicized nursing shortage and the additional sociological trend of older mature students who frequently have degree(s) from other fields point to a need to look at the currently enrolled student in professional nursing. Review of the following studies demonstrated the personality characteristics of the female student in nursing.

Redden and Scales (1961), studied 104 Negro nursing students in comparison to 749 college women. On 12 of 15 scales of the Edwards Personality Preference Schedules, the nursing students had a greater perceived need than the normative group on intraception, nurturance, endurance, and aggression. The interpretation was that the nursing students had strong needs to defer, to accept, to analyze one's feelings and motives, to analyze the whims and feelings of others, to judge others by why they do things rather than by what they do, to help, to assist, support others and to be aggressive.

Reece (1960), looked at personality characteristics and success in the nursing program at Wayne State University. The Edwards Personal Preference Schedule was administered to 87 female students who were beginning the program. At the completion of the program, the Edward's standardized group scores were compared for those who completed the program and for those who withdrew. "The completed group had higher scores for deference, abasement, nurturance, and

endurance." The rank order of needs for the completed group was: nurturance, intraception, change, affiliation, abasement, exhibition, endurance, heterosexuality, and deference. The interpretation concerning the successful student nurse is she appears to be more submissive, deferent, persistent, and nurturant.

Smith (1968), examined 546 freshmen students enrolled in 10 hospital schools of nursing in Baltimore in order to identify the variety of personality factors in beginning nursing students using factor analysis. Several predominant themes appeared to run through the seven factors.

A concern for the general welfare of mankind, and the desire to help others, was included in five of the factors. A dependency need, the wish to be taken care of, was present in four. The need to achieve, and to be self-effacing, and the preference for religious values were present in two factors.

Edwards (1969), looked at the student nurse in terms of a study in sex role transition. He implied that the school of nursing and the hospital setting are contributing factors to the progressive development of female students in nursing. He drew on findings from several studies to support his perception and analysis of the transition the student in nursing progresses through from entry to graduation. He concluded that the diploma, hospital based programs provide a "structural situation that has proven instrumental in the negotiation of adolescence" for the female student nurse.

DeLora and Moses (1969), conducted a study to ascertain the preferences for different specialties in nursing. The personality traits of the students were included as a factor in the study. Motivational aspects of career choice were examined and revealed that interest, altruism, sociability, and fulfillment comprised the major bases for seeking the nursing profession.

Bailey and Claus (1969), conducted a study in which the hypothesis that a certain personality type would enter the profession of nursing was tested. Four nursing groups were included in the longitudinal study. The Edwards Personality Preference Schedule was utilized. The nursing students exceeded the norm group significantly in the variables of deference, intraception, nurturance, and endurance. The authors summarized by saying the nursing students differ and

the more feminine need patterns of nurturance, succorance, deference, and affiliation predominate. Lower scores on autonomy, dominance, exhibition, and aggression indicate lower masculine needs and give further support to a feminine social need pattern

which characterized these students.

Gunter (1969), examined 109 sophomore students in nursing in relation to their self-actualization using the personal orientation inventory. The data indicated that the students had not yet reached emotional maturity or a high level of self-actualization. They were characterized

as less inner-directed and more other-directed, which according to the author indicated a tendency toward external conformity and more dependent on the views of others than independent and self-supportive. They were significantly different from female freshmen college students and scored significantly higher than freshmen nursing students indicating that they are more mature in self-actualization.

Adams and Klein (1970), examined the personality characteristics of 50 nursing students using both the Edwards Personality Preference Schedule and the Cattell Institute for Personality and Ability Testing 16 Personality Factor Questionnaire. The students scored higher on need abasement, need nurturance, and need heterosexuality scale than the norm and also higher on need introception and need nurturance. On the IPAT the students were found to be more outgoing than reserved, more affected by feelings than emotionally stable, more serious than happy-go-lucky, more shy than venturesome, more sensitive than tough minded, more suspicious than trusting, more unconventional than practical, more radical than conservative, and more tense than stable. The authors indicated that the above findings are not typically reflective of the student in nursing and that since the scores all fell within one standard deviation of the normative group they could not be predictive without further study.

May and Llandi (1970), conducted a longitudinal study in which they looked at personality variables, personal attitude variables and values of three groups of nursing students. Only the value's findings were discussed in the presentation. A significant decrease in means scores on the religious value scale and an increase in mean score on the aesthetic value scale were found.

Kalish (1971), described an experiment in the development of empathy in nursing students in which she conducted empathy training and control classes with two experimental and two control groups of 12 or 13 students. The findings were that those students who underwent the experimental treatment improved significantly. According to the author, the fact that empathy can be measured is an important finding.

Richards (1972), conducted a study in which she looked at the differences in psychological characteristics of students from three types of nursing education programs. No significant differences were found among the three groups in leadership potential (ascendency), responsibility, emotional stability, or sociability. All of the groups appear more responsible and emotionally stable than the average female college student in the normative group, but less sociable. A difference ($p < .05$ level) of professional orientation was found in the baccalaureate student. The baccalaureate students saw their ideal

practice of nursing as much more professional than real while the diploma and associate degree students saw their ideal practice as being more traditional than real.

Frerichs (1973), conducted a study in which she looked at the relationship of self-esteem and internal-external control to selected characteristics of 1,435 nursing students. The 58 male students in the population were excluded from the study. Those students who were married were found to have significantly higher self-esteem levels ($p < .01$) and to have more internal control ($p < .01$) than those who were unmarried. Students who were older were also found to be more internally controlled ($p < .05$). Since these findings demonstrate characteristics of the changing population of nursing it would have been interesting to see if the finding of the male population would also have been significant.

Rosendahl (1973), using three instruments tested 31 sophomore nursing students to determine the effectiveness of empathy, nonpossessive warmth, and genuineness of self-actualization through a teacher-adult learner relationship. A moderate but reasonably positive relationship ($p < .05$) was found between innerdirected support and empathy, nonpossessive warmth, and genuineness. It is believed that human potential is released when the three helping conditions exist in

interpersonal relationships. These findings have implications for teacher-student relationships and for student-patient relationships.

Dugo (1973), conducted a study in which a cluster analysis approach was used. One-hundred and forty female nursing students from four diploma nursing programs were given the Image of Nursing Scale, The Identity Scale, and The Sixteen Personality Factor Test (16 P.F.). A finding of the study was that the major personality cluster supported the hypothesis that student nurses are like college women in general. An additional finding was that the number of unreplicated clusters in the image and personality dimension indicated that much of the variance in profile of groups of student nurses is random.

Bergman (1974), conducted a study in which she compared certain personality characteristics of students enrolled in selected health programs at the University of Alabama, Birmingham. The study population were students beginning the professional phase of the baccalaureate programs in medical technology, nursing, occupational therapy, and physical therapy. The nursing students demonstrated a closed belief system and scored high on the social, religious, nurturing, introception, and exhibition scales. There were significantly fewer males in the nursing class than the other classes.

Baker (1975), described a study in which 112 students entering five associate degree nursing programs were given a battery of tests which were designed to measure nonintellectual characteristics. The graduates of the programs were compared to the nongraduates. The findings were that those students who were older and married and more mature, more achievement oriented, responsible and self-controlled succeeded in the program. The successful students were also found to manifest more accepting and nonjudgmental attitudes toward others. These findings would seem to be congruent with the changing population of the nursing student which would contribute to a successful professional career.

Jones (1975), described a study in which 120 associate degree nursing students were administered the Edwards Personal Preference Schedule to determine if there was a difference in the persisters versus the dropouts. The dominant need for both the persisters and the dropouts was introception. The persisters had significantly greater score means in the variables of achievement, deference, and heterosexuality.

Pearson and Sheffield (1976), attempted to replicate previous work relating Eysneck's personality dimensions to social attitudes using 26 female student nurses, female psychiatric patients, and school children.

No significant correlations were found with any of the six social attitude scales for the nursing students. These findings would seem to support the fact that there is no measurable relationship between personality and social attitudes as measured by the Eysneck Personality Inventory and the Conservatism Scale.

Gardner (1976), reported a study of patterns of impulse, ego, and superego functioning using the IES Test. The findings were that the female nursing students showed controlled behavior, good contact with reality, and few, if any, signs of pathology.

Gardner (1976), described a study in which he administered the Edwards Personal Preference Schedule to 167 female nursing students in a baccalaureate program. He concluded that while nursing students reflected changes similar to those of college women in general between 1959 and 1973, their profile of need continues to be consistent with the traditional view of those in their profession. Nursing students in 1976 were found to be significantly higher ($p < .001$) on aggression and autonomy than the nursing students in 1959, and therefore appear to be more independent and self-thinking, critical when the situation demands, less timid, and ready to take leadership. They continue to score high on the traits of introception, succorance, and nurturance.

Gardner's findings support the progression of contemporary nursing programs toward more professionalism.

Stromborg (1976), conducted a study to determine if a relationship existed between sex role identity and image of nursing using the MF scale of the MMPI and Franks' (INQ). Four-hundred and thirty (430) female nursing students in 12 programs were given the tests. A positive relationship was demonstrated between a high sex role identity (masculine sex role identity) and a high image of nursing. The correlation was ($p < .001$). Female senior nursing students with masculine and feminine sex role identities had a significantly higher total image of nursing than female nursing students with a highly feminine sex role identity. The author concluded that as the students' sex role identity becomes more masculine the students' image of nursing was more in harmony with the image advanced by the profession. The findings of this study are relevant to the contemporary movement of nursing toward a greater level of professionalism and toward the needs of nurses in the expanded role. They would further support the advisability of attracting and retaining more males in nursing.

Koehne-Kaplan and Tilden (1976), conducted an exploratory study of the relationship of personality in the process of clinical judgment in nursing practice.

No significant correlation was found between the scores of the students and the Jungian survey scores. The subjects were divided into eight possible personality subfunction categories. The greatest number of subjects were found to be extrovert-sensating-feelers. According to the author these personality functions are congruent with the stereotypical nursing personality.

Kjervik (1979), responded to the concern that the female nursing student with female sex role identity holds an image of nursing which conflicts with the professional role. She reported a study in which she administered pre- and post-tests to six groups of students who were enrolled in a "required elective" course designed to address the question. The findings revealed that the students' sex role opinions were changed significantly by the course.

This section has presented several examples of studies which have focused on personality characteristics of female nursing students. There is some evidence from the studies that the characteristics and needs of the female in nursing is changing toward professionalism (Baker, 1975; Gardner, 1976; Stromborg, 1976). The female students were described as aggressive and assertive, traits which are more characteristic of contemporary females than the "stereotype" female nurse. The findings of these

studies are an indication that the personality of the nurse should be reconsidered. Recent years have marked not only changes in the role of the nurse, changes in the role and characteristics of women but also changes in the population of nursing students. These changes need to be identified for purposes of recruitment and retention of members of the health manpower team.

IV. MALES IN NURSING

Previous to the Crimean War and the Florence Nightingale era in nursing, males were almost the exclusive providers of the services delivered by nurses. The exceptions were a few orders of nuns (Silver and McAtee, 1972; Editorial, Nursing Outlook, 1967; Notter and Spalding, 1976). During the crusades, three orders who brought prestige and recognition to nursing were the Knights of St. Lazarus, the Teutonic Knights Hospitallers, and the Knights Hospitallers of St. John of Jerusalem. Two religious figures who influenced the establishment of female nursing orders were St. Francis of Assisi and St. Vincent DePaul.

The change from primarily male nurses to female nurses can be attributed to Florence Nightingale who had a deep religious conviction and who became aware of the terrible death rates due to improper food, improperly

trained workers and bad sanitary conditions of soldiers during the Crimean War. She introduced females into military nursing and worked tirelessly as their leader to improve conditions and save lives. Death rates for British soldiers in India dropped from 69 per 1,000 to 5 per 1,000 during the first year of her reforms (Notter and Spalding, 1976). In all of her activities Miss Nightingale, to whom statistics were sacred, used facts and figures to show statistical results. With England's gift bestowed upon her for her efforts in the Crimean War, Miss Nightingale, as a means of expressing her frustrations of not being allowed to be a nurse because of her sex and the status of women of her heritage in England, established a school of nursing for women. Her revolutionary high educational ideals included the principle that "the school should be associated with a medical school in a teaching hospital" (Notter and Spalding, 1976), and the introduction of physical and biological sciences, health sciences, and theoretical aspects of nursing. Two early schools of nursing established in the United States in the late 1800s patterned from the ideals of the Nightingale school in England found that their high education ideals soon decreased as hospital control increased. There was evidence of serious deterioration in educational ideals

and standards by the beginning of the twentieth century (Notter and Spalding, 1976).

It wasn't until after World War II that nursing education again was established within the framework of collegiate education, and a movement began toward the establishment of nursing as a profession equal to that of medicine, law, and dentistry. During the period of prevalence of hospital schools of nursing very few men entered nursing. Males accounted for only 0.8 percent of registered nurses in 1949. According to the 1970 U. S. Census, men were recorded as 2.7 percent of the total population of registered nurses (The Nurse's Almanac, 1978).

One of the recommendations from the National Commission for the Study of Nursing and Nursing Education published in 1970 was the expressed need to foster the recruitment of men into nursing. It was recognized that to accomplish this goal the sex-linked image of the profession would need to be changed and that specific recruitment activities would need to be carried out. A Nursing Outlook (May, 1967), editorial addressed the question, "Are men nurses really accepted?" The editorial concluded: "By all accounts, men nurses are good nurses." Society's need for more and better nurses makes it necessary and appropriate to accept more men

in nursing. Men provide a more stable work force, have appropriate leadership and administrative potential, and could contribute a great deal to the expanded role of the nurse (Silver and McAtee, 1972; Williams, 1973).

Studies relating to the male in nursing are limited. Aldag and Christensen (1967), conducted a study in which they investigated the personality characteristics of male students in nursing using the short form of the Minnesota Multiphasic Personality Inventory. Their population consisted of 29 male students, 29 female nursing students, and 29 each of male and female junior college students. They found that there was a significant correlation ($p < .01$) between the male and female nursing students and that fewer nursing students of both sexes were characterized as aggressive and rebellious, that nursing students of both sexes had significantly greater "femininity" scores ($p < .02$), were more responsible-generous and more passive-dependent.

Williams (1973), conducted a study of 273 male students from 32 college and university programs in which he looked at the demographic characteristics of male baccalaureate nursing students. The majority came from middle class environments, were reared in urban areas, were likely to be older and married when

entering nursing programs, and had been previously employed in the health field. When asked what had influenced them to enter nursing, 81 percent responded: "The opportunity to help people." Over one-half had above average grades in high school and 50 percent had wives who were nurses. These male students indicated a preference for career employment in areas that require a great deal of patient contact and preferred areas of generally higher status in nursing, including intensive and coronary care and nursing education. These are also higher salaried areas of nursing.

Schoenmaker and Radosevich (1976), conducted a study in which they looked at male students in nursing. A demographic characteristic questionnaire was completed by 33 male and 58 female nursing students. The findings were that the men were older, more likely to be married, had been in college longer, and had more work experience in the health care field. The male students' reasons for choosing nursing according to the four top priorities were job availability, 56.3 percent; interest in people, 43.8 percent; pay, 28.1 percent; job security and mobility, 18.8 percent, and working conditions, 18.8 percent. In responding to the question, preference for work area in nursing, the male students identified the critical care and acute care settings. When asked,

what factors might influence the student to consider dropping out of the program, the males gave top priority to the following reasons: curriculum deficiencies, 31.3 percent; difficulty with faculty, 18.8 percent; professional weakness of nursing, 15.6 percent; and academic problems, 12.5 percent.

MacDonald (1977), explored the differences in empathy between male and female students in nursing using Hagan's Empathy Scale with 15 males and 15 females in nursing and 15 each non-nursing males and females. In this small study the finding was that males in nursing scored higher than any of the other groups on the empathy scale. This study indicated a need for replication and further study with a larger population.

Ellis (1978), a journalist and trained nurse in England, conducted an on-the-street survey in which he asked the questions, would you prefer to be nursed in the hospital by a male or female nurse and do you think men make better nurses than females? Most people said they would like to be nursed by both male and female nurses. The author stated that in Britain "nursing still appears to have a semi-charitable status attached to it."

Auster (1979), conducted a study in which he explored the sex differences in attitudes toward education

of men and women engaged in nursing education. Through the use of a questionnaire, he collected data from 335 male and 508 female nursing students and supplemented the data with personal interviews with 80 male students. The results of the analysis of the data supported the hypothesis that significant sex differences would occur. Differences were found with regard to attitude toward the regimen of nurses training, teachers and the nursing curriculum. The author associates the differences with male "role strain" because nursing is a status contradictory occupation.

Feldbaum and Levitt (1980), reported a study in which they looked at nurses and the education process focussing on nursing and the black nurse. In citing characteristics of students using a population of 3,942, 92 percent of the white students and 96.7 percent of the black students were female. One can conclude from these 1980 statistics that the members and percentages of male students in nursing are increasing. Kalish, et al., (1981), stated, "males were reported to be enrolled in increasing numbers in schools of nursing."

The lack of data relating to male students in nursing, the changing career patterns of the professional nurse, the nurse practitioner expanded role movement in nursing, the number of persons who are older and looking

for second careers, and the current critical shortage of nurses all indicate a need to further explore the characteristics of the male student in nursing. Knowledge of the personality characteristics of the male student in nursing will provide information useful in recruitment as well as in retention of this potentially stable member of the nursing profession.

V. METHODOLOGICAL INSTRUMENTS

Several methodological instruments have been used by researchers in studies pertaining to personality and other characteristics of nurses and nursing students. A large number of the studies reviewed by the present investigator have used the Edwards Personal Preference Schedule (EPPS) (Reece, 1961; Redden and Scales, 1961; Bailey and Claus, 1969; Adams and Klein, 1970; Jones, 1975; and Gardner, 1976). The EPPS consists of 225 forced-choice paired comparison items based on 15 perceived need areas derived from Murray's manifest need system. The 225 forced-choice items were rated by college student judges as having similar social desirability values. The personality characteristics are:

Achievement - the desire to succeed, to do one's best or to master a difficult task.

Deference - the need to defer to authority, to conform to custom.

Order - the need to have things planned and organized, to be a perfectionist.

Exhibition - the desire to have an audience, to be the center of attention.

Autonomy - the need to feel free to do what one wishes, to criticize authority, to defy convention.

Affiliation - the need to please, to be loyal, and to form strong personal attachments.

Intropection - the need to analyze the motives and behavior of oneself and others.

Succorance - the desire for sympathy, for others' interests in one's problems.

Dominance - the need to dominate others, to lead, to influence others' decisions.

Abasement - the need to feel inferior, timid or guilty, and to withdraw from unpleasant situations.

Nurturance - the desire to encourage others, to sympathize with others and to be generous.

Change - the desire to try new things, to experience novelty and to travel.

Endurance - the need to persist on a task until it is accomplished, to put in long hours of work.

Heterosexuality - the desire to please the opposite sex, to enjoy heterosexual activities.

Aggressive - the need to openly display anger and hostility and to bluntly criticize others publicly (Bailey and Claus, 1969).

The higher the scores of a particular variable, the more often the subject has identified the statement for the variable as being descriptive of himself (Redden and Scales, 1961).

The Minnesota Multiphasic Personality Inventory (MMPI) and/or parts of the inventory were used in three studies reviewed (Crow and Hammond, 1956; Stromborg, 1976; Galtheil, et al., 1979). The MF scale of the MMPI used by Stromborg was designed to identify personality features related to the disorder of male sexual inversion. The inventory measures a tendency toward the attitudes and interests of the opposite sex. Lunneborg and Lunneborg (1970) reported following factor analysis that the MF scale could provide discrimination among members of the same sex as well as between the sexes.

The Brown Self-Report Inventory (SRI) was used by two researchers, who concluded that the SRI is seen as being "suitable as a quick screening personality inventory" (Richek and Nichols, 1973). The SRI consists of 48 items representing eight logically different areas of world orientation. The eight aspects of the phenomenal world are: self, others, children, authority,

work, reality, parents, and hope. The total of the subscores may be seen as the positiveness of the respondents' perceptions of the phenomenal world.

The California Personality Inventory (CPI) was used by Baker (1975) in conjunction with several other test to measure nonintellective differences between students. The CPI assesses normal personality characteristics by means of 480 empirically desired self-descriptive true-false items. In general, higher scores indicate more effective social and intellectual functioning. Two additional tests used by Baker were the Scale of Values (SV) and the Fundamental Interpersonal Relations Orientation-Behavior (FIRO-B). The SV yields six scores that indicate the relative prominence of basic interests, motives, or values of individuals. The FIRO-B identifies the person's need to establish and maintain satisfactory relationships with people. These tests are seen as being useful in assessing characteristics of student groups.

The Cattell 16 Personality Factor Questionnaire, also referred to as the IPAT, Institute for Personality and Ability Testing, was used by Adams and Klein (1970), in addition to the Edwards Personal Reference Schedule. The purpose of the study was to evaluate the 16 P.F. as a personality instrument for nursing studies. The

authors' concern was that studies using the EPPS, the most frequently used instrument, revealed "striking" inconsistencies. The authors concluded that their study "might fruitfully become a new direction" for research relating to nursing and nursing students.

The Cattell 16 Personality Factor Test was also used by Dugo (1973), in conjunction with the Image of Nursing Scale and the Identity Scale. The 16 P.F. is a questionnaire consisting of scales carefully oriented to basic human personality structure research (Handbook, 1970). The instrument contains 187 items that provide scores indicating the primary source traits for each of the 16 factors or behaviors. A low sten score or a high sten score for each factor provides an either or behavior. For example, a low sten score for Factor C describes a low ego strength while a high sten score describes a high ego strength. For Factor E, a low sten score describes submissiveness while a high sten score describes dominance. For Factor Q₂, a low sten score describes group dependency and a high sten score describes self-sufficiency. In addition to the primary source traits, the instrument also provides an individual's secondary-source-trait scores. The 16 P.F. has been designed as an all-purpose instrument providing the concepts central to general personality theory and also includes a measure of intelligence.

Burstein, et al. (1979), in testing the psychological characteristics of medical students and residents, reported using the Jackson Personality Research Form (PRF) which utilizing Murray's theory of personality yields scores on 20 scales measuring traits of personality through the process of a true/false self-report inventory. A question related to the study was, would the medical student group have a "similar factorial structure"? The PRF could be an appropriate tool to assess and compare personality characteristics of student groups.

Richards (1972) described using the Gordon Personal Profile in her study relating to differences in groups of students in three types of educational programs for the preparation of nurses. The four aspects of personality measured by the factor analysis approach were: ascendancy (leadership potential), responsibility, emotional stability, and sociability.

Instruments specific to distinct personality factors and personal characteristics have been reviewed. The Personal Orientation Inventory (POI) was used by Rosendahl (1973); Gunter (1969); and Mealey and Peterson (1974). The POI provides a measure of values and behavior which can be described as being important in the development of self-actualization. The POI consists of 150 two-choice, paired-opposite statements

of values with two basic scales which assess particular personality characteristics associated with self-actualization. The two basic scales are innerdirected and time competence. A measure of self-actualization would indicate the level of maturity of a group of students.

Dye (1974) used the Tennessee Self-Concept Scale (TSCA), the Manifest Anxiety Scale and the State-Trait Anxiety Inventory in examining the effects of human relations training for a group of nursing students. The four major subscales of total positive, total conflict, net conflict, and self-criticism from the TSCA were used to assess each subject's expressed self-concept.

Two instruments used to measure empathy described by Kalisch (1971) and Stetler (1977) were the Accurate Empathy Scale (AES) and the Barrett-Lennard Relationship Inventory. The AES is a nine point, stage one to stage nine range of feelings of helper, "helpee" (Stetler, 1977) range of intensity of feelings. The BLRI assesses the "helpee's" personal experience at the "helpee's" level of understanding. The BLRI is said to have predictive validity. Empathy is recognized as a desirable personality trait of persons in the nursing profession.

The methodological instruments cited in this section of the literature review were examined for the

purpose of looking at approaches used by investigators who studied subjects and areas similar to the problems which were considered for investigation. The most frequently used instrument relating to general personality characteristics of nursing students was found to be the Edwards Personal Preference Schedule which was standardized in the 1960s. Instruments which measure specific personality characteristics such as empathy, self-actualization, anxiety, and self-concept were reviewed. The instruments reviewed in no way exhausts the possibility of methodological instruments. The review did however provide insight concerning the possible approaches used in similar studies.

VI. SUMMARY

A review of literature relating to the investigated problem has been reported in Chapter II of the study. Section II presented information concerning nurses as health care providers and described the relationship of the study to the area of public health education.

Section III of the survey of literature presented studies pertaining to nursing students' personality characteristics of female nursing students. Most investigators were found to have limited their study population to the female student. The findings of the

studies demonstrated the female stereotype of the student in nursing education programs.

Section IV reported the review of literature relating to males in nursing. Few studies were found in which males were investigated either as a separate entity or were included. The section provided a brief historical background of males in nursing.

Section V described some methodological instruments used by investigators in their studies pertaining to personality characteristics of students in nursing education programs. The purpose of this section was to review approaches used by others investigating areas similar to the study.

CHAPTER III

DESIGN AND METHODOLOGY

I. INTRODUCTION

There is a current societal and professional awareness of the increasing need to attract the male into the profession of nursing (Kennedy, 1981; Beckes, 1980; Christman, 1980; Silver and McAtee, 1972; Williams, 1973; Lysaught, 1970). The potential benefits of attracting men into nursing are numerous not only for the profession but for the health care system and society. It is felt that males can bring to the nursing profession increased professional recognition, better working conditions with higher salaries, enhanced status and greater stability (Cleland, 1971; Beckes, 1980). Male nurses are needed in the primary health care areas and in the highly intellectual and scientific nursing care areas of coronary care, intensive care, and emergency medical care.

In order to develop strategies to attract and retain more males into the predominately stereotypical female profession of nursing, it is necessary to develop the profile of the male student enrolled in nursing programs. According to the National League for Nursing Data Book, 1979, 4.54 percent of students enrolled in baccalaureate nursing programs were males. A few studies

relating to the characteristics of the male in nursing have identified primarily demographic information. A beginning point for the development of strategies for solving the problem of attracting and retaining the male in nursing was a descriptive analysis of the male student enrolled in the professional nursing programs in Tennessee. The enrollment of males in baccalaureate nursing programs in Tennessee was 5.37 percent (N.L.N. Data Book, 1979). The similarity of the percent of enrollment of males in Tennessee with that of the enrollment nationally supported the rationale for identifying the profile of the male student in professional nursing programs in Tennessee.

Several studies (Adams and Klein, 1970; Richardson, 1972; Baker, 1975; Gardner, 1976) have indicated that there are current changes in the personality characteristics of the female student in nursing. Therefore, a descriptive analysis of the female currently enrolled in professional nursing programs was included in the study also. A comparison of the male and female student in professional nursing programs in Tennessee was conducted. The similarities and differences in the male and female were described.

II. THE TEST INSTRUMENTS

Demographic characteristics including the vital and social statistics of age, marital status, work

experience, educational experience, kinship to nurse(s), and parents' job or position were elicited. Two related questions were included: 1) "What are your future employment goal(s)?" and 2) "Why did you choose the profession of nursing?" (See Appendix A.)

Two instruments were administered in order to identify personality characteristics. They were the Cattell Sixteen Personality Factor Questionnaire (16 P.F.) and the Myers-Briggs Type Indicator.

Cattell Sixteen Personality Factor Questionnaire

The 16 P.F. is a questionnaire designed to measure normal dimensions of personality and was developed in five forms each of which provide the same basic P.F. scores. Form A, which contains 187 items, was used in this study. The question responses in the instrument are treated as behaviors, thus the 16 factors were established as behaviors. Three alternative answers to each item were provided for the subject rather than the "forced choice which was seen as frustrating and producing poor test morale" (Cattell, 1970).

The 16 P.F. was developed by R. B. Cattell whose aim was to develop an instrument to measure the most fundamental dimensions of normal personality which would comprehensively open the entire range of personality characteristics of adults. Cattell, utilizing the

factor analysis method, grouped the 4,000 adjectives which had been previously identified by Allport and Odbert into 180 categories. These were reduced by correlational methods to 45 categories. The 45 categories were then factor analyzed. Of the original 15 factors, 12 were found to be replicable and usable. An additional four factors, Q_1 , Q_2 , Q_3 , and Q_4 were added to the paper and pencil inventories as Cattell felt they were important in everyday life.

Reliability of the instrument has been established (Cattell, 1970). Split-Half Coefficients for Factor Measurements ranged from .71 to .93. Validity was established based on factor loadings, ranging from .73 to .96 with 11 coefficients exceeding .80. The items were arranged so that responses for one factor did not bunch together and so that a pattern was achieved on the answer sheet. This was seen as part of the reliability of the test instrument.

The Instrument is widely used in the United States, Canada, and many European countries. Available profiles for 28 occupation groups and several behavior disorders are available.

The Myers-Briggs Type Indicator

The Myers-Briggs Type Indicator is an instrument developed to implement Jung's theory of type (1923).

Jung's theory in essence was that apparently random variation in human behavior is orderly and consistent in actuality and can be attributed to basic differences in the way people prefer to use perception and judgment.

The processes of becoming aware of people, of things, of occurrences and/or ideas are included as "perception." The processes of coming-to-conclusions about what has been perceived is understood to be "judgment." Differences in reactions, in interests, in values, needs and motivations, in what one does best and in what one likes best may be related to or due to differences in what one perceives and one's conclusions.

The instrument was developed from the adaptation of the above described working definition. The Indicator aims to ascertain from self-report of easily reported reactions, people's basic preferences in regard to perception and judgment, in order that the preferences and their combinations may be put to use.

The main purpose of the Indicator was to describe a person's basic preferences. EI, SN, TF, and JP were therefore indices designed to point one way or the other. The items of each index offered "forced" choices involving the preference at issue. Responses pointing in opposite directions bore separate weights enabling the evidence in each direction to be separately summarized. Persons

with more points for E were classed as extraverts* and those with more I scores as introverts. One was an either or, not both. The Indicator contained separate indices for determining each of the four basic preferences which, under this theory, structured the individual's personality. The indexes were: EI, Extraversion or Introversion; SN, Sensing or Intuition; TF, Thinking or Feeling, and JP, Judgment or Perception.

Realibility of the Instrument was established through the use of a split-half procedure by applying the Spearman-Brown Prophecy formula, including samples from several groups. Median reliability for categories was .83, while for continuous scores in the same samples was .82.

The Myers-Briggs Indicator provided information on personality differences seen to be basic and affecting many spheres of human activity. It was therefore seen by this investigator as appropriate as a second instrument for the study.

III. SUBJECTS

The Deans of each nursing program were contacted by letter during the winter quarter, 1981, concerning the study. Each responded with approximate numbers of

*Extravert (spelling form used in the Myers-Briggs Instrument, 1962).

students and indicated a willingness to provide further assistance as needed.

The subjects for the study included all of the male junior and senior students enrolled in the six generic baccalaureate nursing programs in Tennessee and the total population of males enrolled in the masters generic nursing program at The University of Tennessee, Knoxville, Tennessee. Females from each of the specified programs were randomly selected to provide equal numbers to the males in the study. The six programs are: The College of Nursing, The University of Tennessee, Memphis; School of Nursing, Vanderbilt University, Nashville; School of Nursing, The University of Tennessee at Chattanooga; College of Nursing, The University of Tennessee at Knoxville; The School of Nursing, Tennessee Technological University, Cookeville; and School of Nursing, East Tennessee State University, Johnson City.

Twenty-nine (29) male baccalaureate nursing students were identified as potential study subjects. The number of males from the generic masters population was five. Equal numbers of females were randomly selected from each program. The females were randomized for each participating program using the table of random numbers (Leedy, 1980).

IV. DATA COLLECTION

The two instruments, the Cattell 16 P. F., Form A and Myers-Briggs Type Indicator, Form F were administered during February and March, 1982 by the investigator. Appointments were made at each school where the effort was made to administer the test instruments to all study subjects. Packets of material were provided for each study subject present. The packets contained the demographic information sheets, test booklets, test answer sheets, and pencils. The students were informed as to the purpose of the study and the importance of participation. They were given specific instructions relating to the individual instruments. No time limit was set. The students were assured of the confidentiality of their individual responses and were told that if they wanted copies of their individual profile from the results of the 16 P.F., they would be sent to them by the investigator. This was seen as a means of ensuring their participation in the study. They were further told that their completion of the instrument answer sheet would be recognized as their informed consent to participate in the study. Packets were left to be distributed to those students who did not come to the appointment site. Individual letters were written to

each potential study subject, again asking them to participate. A total of 50 (74%) of the potential study subjects participated in the study.

V. STATISTICAL DESIGN

Following the collection of data by the investigator from each of the seven programs previously identified, the answer sheets were sent to the appropriate machine scoring service. The 16 P.F. answer sheets were sent to the IPAT's Test Services Division. The Myers-Briggs Inventory answer sheets were scored by the Center for Applications of Psychological Type, Inc.

The Myers-Briggs Inventory scoring produced four preference scores, one for each of the four indices: EI, SN, TF, and JP. Each index reflected one of the four preferences which determine type. The score for each index consisted of a letter showing the direction of the preference the testee reported, followed by a number showing its reported strength. The Myers-Briggs Inventory data were examined and described.

The Standard Scoring and Interpretation Report providing a description of each individual tested was obtained from IPAT. The personality profile of each student, utilizing the 16 factors established as behaviors was provided. Primary personality

characteristics, broad influence patterns, and vocational observations were included. The 16 P.F, IPAT information was examined and described. Demographic information for each study subject was examined and tabulated by the investigator.

The profile of the male student and the female student in professional nursing in Tennessee was described from the obtained data. The mean preference scores from the Myers-Briggs Inventory were used to determine Type preference. The profile, central tendency, and variance from the Cattell 16 P.F. were utilized, and the findings from the demographic data were incorporated to describe the typical profile for the male and the female nursing student.

The t test for differences between two sample means was used to look at the differences in the two populations: the male nursing student and the female nursing student. A two tail test at the 0.05 level of significance was used to determine if there were differences in the two populations. The Omega-squared test (W^2) was used to compute the relationship of the significant differences in the variables.

VI. SUMMARY

The design and methodology of the study have been described in Chapter III. In the introduction the need for the study was re-stated. The test instruments were described. The Cattell Sixteen Personality Factor Questionnaire designed to measure normal dimensions of personality was identified. In addition, the Myers-Briggs Type Indicator, an instrument developed from Jung's theory of personality types which was seen by the investigator as an appropriate second personality instrument, was briefly described. The study subjects were identified and method of data collection was described. Also included in the chapter was a description of the statistical design of the study.

CHAPTER IV

ANALYSIS OF DATA

Previous chapters presented the introduction to the area of study, a survey of related literature, and the design and methodology of the study. This chapter is concerned with the presentations of data collected from 24 male and 26 female nursing students enrolled in six Baccalaureate Degree Nursing Programs and the one Generic Masters Nursing Program in Tennessee. The findings are presented under the following categories: 1) Purpose of the Study, 2) Statement of the Problem, 3) Characteristics of the Male, 4) Characteristics of the Female, and 5) Differences in Characteristics of the Male and Female Nursing Student.

I. PURPOSE OF THE STUDY

The primary purpose of the study was to develop the profile of the male in professional nursing programs in Tennessee. A secondary purpose was to identify the current profile of the female enrolled in professional nursing programs in Tennessee in order to compare the male and female student nurse.

II. STATEMENT OF THE PROBLEM

The study sought to answer the following research questions:

1. What were the identifying personality and demographic characteristics of the male who enrolled in professional nursing programs in Tennessee?
2. What were the identifying personality and demographic characteristics of the female who enrolled in professional nursing programs in Tennessee?
3. Did the characteristics differ in the male nursing student and the female nursing student?

III. CHARACTERISTICS OF THE MALE

The following characteristics of the male enrolled in professional nursing programs in Tennessee were identified.

Cattell Sixteen Personality Factor Questionnaire

The Sixteen Personality Factor Questionnaire (16 P.F.) was administered to 24 male students in six Baccalaureate Degree Nursing Programs and one Generic Masters Program in Tennessee. The questionnaire type instrument measures 16 factors established as behaviors. The answer sheets were computer scored by the IPAT, Institute for Personality and Ability Testing, Inc.

The findings of the 16 behaviors were:

Factor A. Fourteen (14) were more cool and reserved and 10 were more warm and easy going.

Factor B. Thirteen (13) were more abstract thinking and 11 were more concrete thinking.

Factor C. Fifteen (15) were more calm and stable and 9 were more easily upset.

Factor E. Sixteen (16) were more dominant and 8 were more non-assertive.

Factor F. Twenty (20) were more sober and serious and 4 were more happy-go-lucky.

Factor G. Fifteen (15) were more conscientious and 9 were more expedient.

Factor H. Sixteen (16) were more venturesome and 8 were more shy and timid.

Factor I. Eighteen (18) were more tender minded and 6 were more tough minded.

Factor L. Twelve (12) were more suspicious and 12 were more trusting.

Factor M. Fourteen (14) were more imaginative and 10 were more practical.

Factor N. Seventeen (17) were more forthright and 7 were more shrewd.

Factor O. Thirteen (13) were more self-assured and 11 were more apprehensive.

Factor Q_1 . Fifteen (15) were conservative and 9 were experimenting.

Factor Q_2 . Twenty-one (21) were more self-sufficient and 3 were more group oriented.

Factor Q_3 . Eighteen (18) were more self-disciplined and 6 were more undisciplined.

Factor Q_4 . Thirteen (13) were more relaxed and 11 were more tense and driven.

The factors with the greatest difference were Factor Q_2 - 21 vs. 3, Factor F - 20 vs. 4, Factor Q_3 - 18 vs. 6, Factor I - 18 vs. 6, and Factor N - 17 vs. 7. Those higher factors were more self-sufficient, more sober and serious, more self-disciplined, more tender minded and more forthright.

Myers-Briggs Type Indicator

The Myers-Briggs Type Indicator Instrument was administered to 24 male students in six Baccalaureate Degree Nursing Programs and one Generic Masters Nursing Program in Tennessee. The answer sheets were computer scored by CAPT, Center for Applications of Psychological Type, Inc. The aim of the instrument was to ascertain from self-report the four basic preferences which structured the individual's personality.

As shown in Table 1, two of the males or 8.3% were ISTJ type or Introverted Sensing with Thinking.

TABLE 1

PERSONALITY TYPE PREFERENCES AS IDENTIFIED BY
 TWENTY-FOUR MALE NURSING STUDENTS USING THE
 MYERS-BRIGGS TYPE INDICATOR

		SENSING TYPES		INTUITIVE TYPES	
		with THINKING	with FEELING	with FEELING	with THINKING
INTROVERTS	Judging	ISTJ	ISFJ	INFJ	INTJ
		N = 2	N = 0	N = 0	N = 0
		% = 8.3	% = --	% = --	% = --
	Perceptive	ISTP	ISFP	INFP	INTP
		N = 1	N = 1	N = 3	N = 3
		% = 4.2	% = 4.2	% = 12.5	% = 12.5
EXTRAVERTS	Perceptive	ESTP	ESFP	ENFP	ENTP
		N = 1	N = 1	N = 1	N = 2
		% = 4.2	% = 4.2	% = 4.2	% = 8.3
	Judging	ESTJ	ESFJ	ENFJ	ENTJ
		N = 6	N = 0	N = 0	N = 3
		% = 25	% = --	% = --	% = 12.5

One or 4.2% was ISTP that is Introverted Thinking with Sensing. One or 4.2% was ISFP or Introverted Feeling with Sensing. Three or 12.5% were INFP or Introverted Feeling with Intuition. Three or 12.5% were INTP or Introverted Thinking with Intuition. One or 4.2% was ESTP or Extraverted Sensing with Thinking. One or 4.2% was ESFP or Extraverted Sensing with Feeling. One or 4.2% was ENFP or Extraverted Intuition with Feeling. Two or 8.3% were ENTP or Extraverted Intuition with Thinking. Six or 25% were ESTJ or Extraverted Thinking with Sensing. Three or 12.5% were ENTJ or Extraverted Thinking with Intuition.

In further analysis as shown in Table 12, 14 males preferred Extraversion and 10 preferred Introversion; 12 preferred Sensing and 12 preferred Intuition. Eighteen preferred Thinking and 6 preferred Feeling; 11 preferred Judgment and 13 preferred Perception. In combination of preference, beginning with IJ in the table, 10 preferred ST indicating practical and matter of fact; preferred giving patient care by applying technical skills to daily tasks; by the use of tools and equipment. Two preferred SF indicating sympathetic and friendly; preferred giving patient care through daily tasks aimed at nurturance and comfort. Four indicated NF indicating enthusiastic and insightful; good communication skills and preferred giving patient care through psychological understanding. Eight

TABLE 2

NUMBER AND PERCENT OF MALE NURSING STUDENTS
 ACCORDING TO SPECIFIC TYPE GROUPINGS AS
 IDENTIFIED BY THE MYERS-BRIGGS TYPE
 INDICATOR

MBTI Preference	N	%
E	14	58.33
I	10	41.67
S	12	50.00
N	12	50.00
T	18	75.00
F	6	25.00
J	11	45.83
P	13	54.16
IJ	2	8.33
IP	8	33.33
EP	5	20.83
EJ	9	37.50
ST	10	41.66
SF	2	8.33
NF	4	16.66
NT	8	33.33
SJ	8	33.33
SP	4	16.66
NP	9	37.50
NJ	3	12.50
TJ	11	45.83
TP	7	29.17
FP	6	25.00
FJ	0	--
IN	6	25.00
EN	6	25.00
IS	4	16.66
ES	8	33.33

preferred NT indicating logical and ingenious; most scientific and preferred giving patient care through application of science and pragmatic planning. (Descriptions of each of the types taken from McCaulley, 1981.)

Demographic Data

The participants were junior males 7, senior males 13, generic males 4. The age of the males ranged from 21 to 43 years of age. The mode, median and mean age was 27 years.

The question concerning marital status elicited the following: married 10, single 15, divorced 1.

All participants reported having had work experience. In response to the question concerning prior health field experience, 4 males reported having had no prior health field experience. (See Appendix B for work experiences and prior health field experiences.)

Seven male students indicated their initial declared major as nursing and 16 indicated an initial major other than nursing.

The question concerning previous degrees, elicited the following responses: none, 13; B.S., 6; B.A., 3; A.S.D., 2; M.A., 2; and Ph.D., 1.

Sixteen males either did not respond to the question concerning kinship to nurse(s) or specified none. (See Appendix B.)

See Appendix B for response to question concerning parents' job or position. Response to the question concerning estimated income of parents was as follows:

\$ 3,000 to 9,999 = 3; 10,000 to 19,999 = 9;

\$20,000 to 39,999 = 4; 40,000+ = 6

See Appendix C for response to the question, What are your employment goals?

Table 3 shows the male students' responses, according to priorities, to the question, Why did you choose the profession of nursing?

TABLE 3
MALE STUDENTS' REASONS FOR CHOOSING
THE PROFESSION OF NURSING

Reasons	By Priority					Total
	N	N	N	N	N	
Job Availability	1= 2	2= 4	3= 3	4= 4	5= 2	15
Interest in Research	1= 1	2= 2			5= 1	4
Interest in Helping People	1= 4	2= 4	3= 2	4= 4	5= 2	16
Job Security	1= 1	2= 2	3= 10	4= 2	5= 3	18
Job Mobility	1= 1	2= 1		4= 5	5= 4	11
Interest in Health Care	1= 2	2= 7	3= 3	4= 2	5= 5	19
Interest in Medicine	1= 9	2= 2	3= 1	4= 4	5= 3	19
Interest in Nursing	1= 2	2= 2	3= 4	4= 1	5= 4	13
Other:						
Military Career					5= 1	1
Law	1= 1					1
Total	1= 23	2= 24	3= 23	4= 22	5= 24	

IV. CHARACTERISTICS OF THE FEMALE

The following characteristics of the female enrolled in professional nursing programs in Tennessee were identified.

Cattell Sixteen Personality Factor Questionnaire

The Sixteen Personality Factor Questionnaire (16 P.F.) was administered to 26 female students randomly selected to equal the number of males in each of the six Baccalaureate Degree Nursing Programs and the one Generic Masters Nursing Program in Tennessee. The questionnaire type instrument measures 16 factors established as behaviors. The answer sheets were computer scored by the IPAT, Institute for Personality and Ability Testing, Inc.

The findings of the 16 behaviors were:

Factor A. Fourteen (14) were more warm and easy going and 12 were more cool and reserve.

Factor B. Seventeen (17) were more abstract thinking and 9 were more concrete thinking.

Factor C. Fifteen (15) were more calm and stable and 11 were more easily upset.

Factor E. Twenty (20) were more dominant and 6 were more nonassertive.

Factor F. Fifteen (15) were more happy-go-lucky and 11 were more sober and serious.

Factor G. Twenty (20) were more conscientious and 6 were more expedient.

Factor H. Eighteen (18) were more venturesome and 8 were more shy and timid.

Factor I. Thirteen (13) were more tender minded and 13 were more tough minded.

Factor L. Fourteen (14) were more trusting and 12 were more suspicious.

Factor M. Sixteen (16) were more practical and 10 were more imaginative.

Factor N. Thirteen (13) were more shrewd and 13 were more forthright.

Factor O. Sixteen (16) were more self-assured and 10 were more apprehensive.

Factor Q_1 . Fifteen (15) were more experimenting and 11 were more conservative.

Factor Q_2 . Seventeen (17) were more self-sufficient and 9 were more group oriented.

Factor Q_3 . Sixteen (16) were more self-disciplined and 10 were more undisciplined.

Factor Q_4 . Fifteen (15) were more relaxed and 11 were more tense and driven.

The factors with the greatest differences were Factor B - 17 vs. 9, Factor E - 20 vs. 6, Factor G - 20 vs. 6, Factor H - 18 vs. 8, Factor Q₂ - 17 vs. 9.

Those higher factors were: more abstract thinking, more dominant, more conscientious, more venturesome, and more experimenting.

Myers-Briggs Type Indicator

The Myers-Briggs Type Indicator Instrument was administered to 26 female students randomly selected in each of the six Baccalaureate Degree Nursing Programs and the one Generic Masters Nursing Program in Tennessee. The answer sheets were computer scored by CAPT, Center for Applications of Psychological Type, Inc. The aim of the instrument was to ascertain from self-report the four basic preferences which structured the individual's personality.

As shown in Table 4, two or 7.6% preferred ISFJ or Introverted Sensing with Feeling. One or 3.8% preferred INFJ or Introverted Intuition with Feeling. One or 3.8% preferred INTJ or Introverted Intuition with Thinking. One or 3.8% preferred ISTP or Introverted Thinking with Sensing. One or 3.8% preferred ISFP or Introverted Feeling with Sensing. One or 3.8% preferred INTP or Introverted Thinking with Intuition. Two or 7.6% preferred ESFP or Extraverted Sensing with Feeling.

TABLE 4

PERSONALITY TYPE PREFERENCES AS IDENTIFIED BY
 TWENTY-SIX FEMALE NURSING STUDENTS USING THE
 MYERS-BRIGGS TYPE INDICATOR

		SENSING TYPES		INTUITIVE TYPES	
		with THINKING	with FEELING	with FEELING	with THINKING
INTROVERTS	Judging	ISTJ	ISFJ	INFJ	INTJ
		N = 0	N = 2	N = 1	N = 1
		% = --	% = 7.6	% = 3.8	% = 3.8
	Perceptive	ISTP	ISFP	INFP	INTP
		N = 1	N = 1	N = 0	N = 1
		% = 3.8	% = 3.8	% = --	% = 3.8
EXTRAVERTS	Perceptive	ESTP	ESFP	ENFP	ENTP
		N = 0	N = 2	N = 4	N = 0
		% = --	% = 7.6	% = 15.3	% = --
	Judging	ESTJ	ESFJ	ENFJ	ENTJ
		N = 2	N = 6	N = 4	N = 1
		% = 7.6	% = 23.0	% = 15.3	% = 3.8

Four or 15.3% preferred ENFP or Extraverted Intuition with Feeling. Two or 7.6% preferred ESTJ or Extraverted Thinking with Sensing. Six or 23% preferred ESFJ or Extraverted Feeling with Sensing. Four or 15.3% preferred ENFJ or Extraverted Feeling with Intuition. One or 3.8% preferred ENTJ or Extraverted Thinking with Intuition.

In further analysis as shown in Table 5, 19 females preferred Extraversion and 7 preferred Introversion. Fourteen preferred Sensing and 12 preferred Intuition. Five preferred Thinking and 21 preferred Feeling. Seventeen preferred Judging and 9 preferred Perception. In combination of preferences, 3 were ST, practical and matter of fact and preferred giving patient care by applying technical skills, by expert use of tools and equipment. Eleven were SF, sympathetic and friendly and preferred giving patient care through daily tasks amid nurturance and comfort. Ten were NF, enthusiastic and insightful with good communication skills and preferred giving patient care through psychological understanding. Two were NT, logical and ingenious, most scientific and preferred giving patient care through application of science, pragmatic planning. (Descriptions of each of the types were taken from McCaulley, 1981.)

TABLE 5

NUMBER AND PERCENT OF FEMALE NURSING STUDENTS
 ACCORDING TO SPECIFIC TYPE GROUPINGS AS
 IDENTIFIED BY THE MYERS-BRIGGS TYPE
 INDICATOR

MBTI Preference	N	%
E	19	73.07
I	7	26.92
S	14	53.84
N	12	46.15
T	5	19.23
F	21	80.76
J	17	65.38
P	9	34.61
IJ	4	15.38
IP	3	11.53
EP	6	23.07
EJ	13	50.00
ST	3	11.53
SF	11	42.50
NF	10	38.46
NT	2	7.69
SJ	10	38.46
SP	4	15.38
NP	5	19.23
NJ	7	26.92
TJ	4	15.38
TP	2	7.69
FP	7	26.92
FJ	13	50.00
IN	3	11.53
EN	9	34.61
IS	4	15.38
ES	10	38.46

Demographic Data

The participants were junior females 9, senior females 14, and generic females 3. The age range for the females was 20 to 38 years of age. The mode was 21 years, the median was 22 years, and the mean age was 20.38 years.

The question concerning marital status elicited the following: married 3, single 19, and divorced 4.

All participants reported having had work experiences. In response to the question concerning prior health field experience, 9 females reported not having had prior health field experience. (See Appendix B for work experiences and prior health field experiences.)

Sixteen female students indicated their initial declared major as nursing and 10 indicated initial majors other than nursing.

The question concerning previous degrees elicited the following responses: none, 22; B.S., 3; B.A., 1; A.S.D., 1; and M.A., 1.

Thirteen females either did not respond to the question concerning kinship to nurses or specified none. See Appendix B for responses to the question concerning parents' job or position. Responses to the question concerning estimated income of parents were as follows:

\$ 3,000 to 9,999 = 3; 10,000 to 19,999 = 5;

\$20,000 to 39,999 = 6; 40,000+ = 12

See Appendix C for response to the question,
What are your employment goals?

Table 6 shows the female students' responses,
according to priorities, to the question, Why did you
choose the profession of nursing?

TABLE 6

FEMALE STUDENTS' REASONS FOR CHOOSING
THE PROFESSION OF NURSING

Reasons	By Priority					Total
	N	N	N	N	N	N
Job Availability	1= 1	2= 2	3= 6	4= 5	5= 3	17
Interest in Research	1= 1		3= 1	4= 2	5= 1	5
Interest in Helping People	1=14	2= 5	3= 2	4= 1		22
Job Security	1= 5		3= 2	4= 2	5= 7	16
Job Mobility		2= 2		4= 4	5= 4	10
Interest in Health Care	1= 2	2= 3	3= 6	4= 3	5= 2	16
Interest in Medicine		2= 2	3= 4	4= 5	5= 1	12
Interest in Nursing	1= 2	2=10	3= 4	4= 2	5= 5	23
Other:						
Military Career		2= 1				1
Self-satisfaction					5= 1	1
Total	1=25	2=25	3=25	4=24	5=24	

V. COMPARISONS OF CHARACTERISTICS OF THE MALE AND FEMALE NURSING STUDENT

Cattell Sixteen Personality Factor Questionnaire

The t test for difference between two sample means was used to determine the differences in the two populations: the male nursing student and the female nursing student. The two tail test at the 0.05 level of significance was used to determine if there were differences in the two populations.

The null hypothesis was that there was no difference in the two groups.

The mean scores and the variance for each of the 16 P.F. traits were computed as shown in Table 7. The t value column contains the t-test value (t). The PRB(T) column indicates the level of probability of the obtained t-value.

The null hypothesis that there was no difference in the two groups was rejected for Factor F and Factor I. For each of the other factors of the 16 P.F. the null hypothesis that there was no difference in the two groups was accepted.

$$F \quad (t = 3.412) \quad p < .002 \quad w^2 = .18$$

$$I \quad (t = 2.387) \quad p < .020 \quad w^2 = .09$$

The Omega-squared test (w^2) was used to compute the significant t value (Guilford, 1978). The Omega-squared value indicates the proportion of variance in

TABLE 7

t VALUES COMPUTED FROM THE DIFFERENCES OF TWO MEANS WITH DEGREES
OF FREEDOM = 48 FOR SIXTEEN P.F. FACTORS

Variable	Males N=24		Females N=26		t Value	PRB(T)	w^2 (Omega-squared)
	Mean-X	Var-X	Mean-Y	Var-Y			
16 P.F. Factors							
A	4.583	3.732	4.923	6.094	-0.539	0.599	
B	5.583	3.036	6.077	1.840	-1.122	0.266	
C	6.083	3.558	5.846	1.741	0.518	0.613	
E	6.250	3.935	6.269	3.255	-0.036	0.970	
F	4.333	2.145	6.192	5.139	-3.412	0.002*	.18
G	6.542	4.085	6.923	3.365	-0.700	0.505	
H	5.917	3.471	6.731	4.219	-1.464	0.146	
I	6.292	2.650	5.077	3.766	2.387	0.020*	.09
L	5.292	4.563	5.500	3.231	-0.374	0.711	
M	5.667	2.580	4.654	4.009	1.962	0.053	
N	4.875	3.592	5.192	2.891	-0.624	0.543	
O	5.333	3.362	5.077	4.087	0.468	0.647	
Q ₁	5.125	5.505	5.731	4.941	-0.937	0.644	
Q ₂	6.875	1.940	6.154	3.507	1.535	0.128	
Q ₃	6.375	4.418	6.192	3.132	0.333	0.740	
Q ₄	5.500	3.304	5.615	3.859	-0.215	0.825	

the trait accounted for by its relationship with the sexes as shown in Table 7.

For Factor F (impulsive) 18% of the variance is attributed to sex difference. Female nursing students were more impulsive, lively, and happy-go-lucky with 18% of the variance attributed to the female.

The Omega-squared value for Factor I was .09 indicating that male nursing students were more tender minded with 9% of the variance attributed to the male, as shown in Table 7.

In addition to the 16 factors computed, four second-stratum source traits: extraversion, anxiety, tough poised, and independence as well as three criteria scores: neuroticism, leadership, and creativity were computed. The mean, variance, t value, PRB(T), and Omega-squared test of significance were computed as shown in Table 8.

Two of the second-stratum factors, extraversion and tough poised have t values sufficiently high so that the PRB(T) value falls below the .05 level of significance. In both extraversion and tough poised, the null hypothesis that there was no difference in the two groups was rejected. For the factor extraversion, female nursing students were more extraverted with 6% of the variance attributed to the sex difference. For the factor, tough

TABLE 8

t VALUES COMPUTED FROM THE DIFFERENCES OF TWO MEANS WITH DEGREES
OF FREEDOM = 48 FOR FOUR SECOND-STRATUM SOURCES (FACTORS)
AND THREE DERIVED CRITERIA SCORES

Variable	Males N=24		Females N=26		t Value	PRB(T)	W^2 (Omega-squared)
	Mean-X	Var-X	Mean-Y	Var-Y			
<u>Second-Stratum Sources</u>							
Extra-version	5.038	2.121	6.119	4.794	-2.039	0.044*	.06
Anxiety	5.208	2.890	5.092	2.218	0.257	0.794	
Tough	5.667	3.342	6.827	3.084	-2.289	0.025*	.08
Poised							
Indepen-	6.096	3.037	5.708	2.637	0.815	0.576	
dence							
<u>Criteria Scores</u>							
Neurot-							
icism	5.762	3.291	4.773	3.295	1.926	0.057	
Leader-							
ship	5.787	3.252	6.835	3.251	-2.051	0.043*	.06
Creativ-							
ity	7.175	3.740	6.004	3.551	2.168	0.033*	.07

poised, female nursing students employed a more rational, objective approach than males with 8% of the variable attributed to the sex difference.

Extraversion ($t = 2.039$) $p < .044$ $W^2 = .06$

Tough Poised ($t = 2.289$) $p < .025$ $W^2 = .08$

Two of the derived criteria scores, leadership and creativity, have t values falling beyond the .05 level of significance. Therefore, the null hypothesis that there was no difference in the two groups was rejected in both. For the criterion leadership, female nursing students showed higher leadership potential with 6% of the variable attributable to the sex differences. For the criterion creativity, male nursing students showed higher creativity potential with 7% of the variable attributable to the sex difference.

Leadership ($t = 2.051$) $p < .043$ $W^2 = .06$

Creativity ($t = 2.168$) $p < .033$ $W^2 = .07$

Myers-Briggs Type Indicator

Type distributions were identified for 24 males and 26 females. The following differences were found.

The male sample had notably more introverts than the female sample (41.67% compared to 26.92%) and notably more thinking types than the females (75% compared to 19.23%) and more perceptive types than the females (54.16% compared to 34.61%).

In the first group of four: IJ, IP, EP, EJ, the males have notably more IP types than the females (33.33% compared to 11.53%). In the second group of four combining perception and judgment, the males had notably more ST types than the females (41.66% compared to 11.53%) and notably more NT types than the female (33.33% compared to 7.69%). In the third group of four, the males had notably more NP types than the females (37.50% compared to 19.23%). In the fourth grouping focusing on tough mindedness, the males had notably more TJ types (45.83% compared to 15.38%). The most notable difference in this group is the absence of any FJ types in the males compared to 50.00% in the females.

The last group of four: IN, EN, IS, ES, is ordered in relation to academic measures, with the IN's being the most academic, the EN's being the active innovators, the IS's being the practical and realistic, and the ES's being the pragmatic (McCaulley, 1981). The most notable difference in this group was more male IN types than female (25.00% compared to 11.53%). See Table 9.

Demographic Data

The participants consisted of 24 males and 26 females. The age of the participants ranged from 20 to 38 for the females and 21 to 43 for the males.

TABLE 9

SEX DIFFERENCES IN NURSING STUDENTS AS IDENTIFIED
BY THE MYERS-BRIGGS TYPE INDICATOR

MBTI Preference	Males		Females	
	N	%	N	%
E	14	58.33	19	73.07
I	10	41.67	7	26.92
S	12	50.00	14	53.84
N	12	50.00	12	46.15
T	18	75.00	5	19.23
F	6	25.00	21	80.76
J	11	45.83	17	65.38
P	13	54.16	9	34.61
IJ	2	8.33	4	15.38
IP	8	33.33	3	11.53
EP	5	20.83	6	23.07
EJ	9	37.50	13	50.00
ST	10	41.66	3	11.53
SF	2	8.33	11	42.30
NF	4	16.66	10	38.46
NT	8	33.33	2	7.69
SJ	8	33.33	10	38.46
SP	4	16.16	4	15.38
NP	9	37.50	5	19.23
NJ	3	12.50	7	26.92
TJ	11	45.83	4	15.38
TP	7	29.17	2	7.69
FP	6	25.00	7	26.92
FJ	0	--	13	50.00
IN	6	25.00	3	11.53
EN	6	25.00	9	34.61
IS	4	16.66	4	15.38
ES	8	33.33	10	38.46

The mode, median, and mean for the males was 27 years of age. For the females the mode was 21 years, the median was 22 years, and the mean was 20.38 years.

More males were married (10 compared to 3) and fewer were divorced (1 compared to 4).

Fewer males' initial declared major was nursing (7 compared to 16).

More males had previous undergraduate degrees (9 compared to 4).

More males estimated their parents' income in the \$10,000 to \$19,999 than females (9 compared to 6). More females estimated their parents' income as \$40,000+ (12 compared to 6).

In comparing the employment goals of the male and female nursing student, the most notable difference was in staff nursing, expanded role nursing, nurse anesthetists, military nursing, and public health as shown in Table 10. In the choice of staff nursing, 14 (58.3%) males and 20 (76.9%) females identified a rank order of 1 through 5. However, 20.8% of the males as compared to 61.5% of the females identified staff nursing as first or second priority.

For expanded role nursing, 16 (66.7%) males and 14 (53.8%) females identified a rank order of 1 through 5. For the males, 20.8% compared to 11.5% for the females

TABLE 10

COMPARISON OF EMPLOYMENT GOALS OF MALE
AND FEMALE NURSING STUDENTS

Employment Areas	Male		1-2 Priority	Female		1-2 Priority
	N	%		N	%	
Critical Intensive Care	18	75.0	41.7	18	69.2	54.5
Staff Nursing	14	58.3	20.8	20	76.9	61.5
Expanded Role Nursing	16	66.7	20.8	14	53.8	11.5
Nursing Education	9	37.5	12.5	12	46.2	--
Nurse Anesthetist	11	45.8	25.0	9	34.6	11.5
Military Nursing	11	45.8	20.8	6	23.0	19.2
Nursing Admini- stration	13	54.2	12.5	11	42.3	11.5
Geriatric Nursing	4	16.7	8.3	7	26.9	11.5
Public Health	4	16.7	8.3	12	46.2	7.7

identified expanded role nursing as first or second priority.

For nurse anesthetist, 11 (45.8%) males and 9 (34.6%) females identified a rank order of 1 through 5. For the males, 25.0% compared to 11.5% of the females identified nurse anesthetist as first or second priority.

For military nursing, 11 (45.8%) males and 6 (23.0%) females identified a rank order of 1 through 5. For the males, 20.8% compared to 19.2% of the females identified military nursing as first or second priority.

For public health, 4 (16.7%) males and 12 (46.2%) females identified a rank order of 1 through 5. However, 8.3% of males and 7.7% of females identified public health as first or second priority.

In comparing the reasons given for choosing the profession of nursing for the male and female student in nursing, the most notable difference was in Interest in Helping People, Job Security, Interest in Health Care, Interest in Medicine, and Interest in Nursing.

In the choice of Interest in Helping People, 16 (66.7%) males and 22 (84.6%) females identified a rank order of 1 through 5. For the males, 33.3% compared to 73.0% for the females identified Interest in Helping people as first or second priority, as shown in Table 11.

TABLE 11

COMPARISON OF REASONS GIVEN FOR CHOOSING THE
PROFESSION OF NURSING BY MALES AND FEMALES

Reasons	<u>Males</u>		1-2 Priority	<u>Females</u>		1-2 Priority
	N	%		N	%	
Job Availability	16	66.7	25.0	17	65.4	11.5
Interest in Research	4	16.7	12.5	5	19.2	7.7
Interest in Helping People	16	66.7	33.3	22	84.6	73.0
Job Security	18	75.0	12.5	16	61.5	26.9
Job Mobility	11	45.8	8.3	10	38.5	23.0
Interest in Health Care	19	79.2	37.5	16	61.5	19.2
Interest in Medicine	19	79.2	45.8	12	46.1	23.0
Interest in Nursing	13	54.2	16.7	23	88.5	46.2

For Job Security, 18 (75.0%) males and 16 (61.5%) females identified a rank order of 1 through 5. For the males, 12.5% compared to 26.9% for females identified Job Security as first or second priority.

For Interest in Health Care, 19 (79.2%) males and 16 (61.5%) females identified a rank order of 1 through 5. For the males, 37.5% compared to 19.2% for the females identified Interest in Health Care as first or second priority.

For Interest in Medicine, 19 (79.2%) males and 12 (46.1%) females identified a rank order of 1 through 5. For the males, 45.8% compared to 23.0% for the females identified Interest in Medicine as first or second priority.

For Interest in Nursing, 13 (54.2%) males and 23 (88.5%) females identified a rank order of 1 through 5. For the males, 16.7% compared to 46.2% for the females identified Interest in Nursing as first or second priority.

Both males and females described the reactions of their friends and significant others as supportive, positive, accepting, and encouraging. (See Appendix D). Two males (9%) responded no to family and significant others having been supportive. (See Sppendix E.)

VI. SUMMARY

Chapter IV has presented the analysis of the data collected from 24 male and 26 female students enrolled in professional nursing programs in Tennessee. Within the chapter the purpose of the study and the statement of the problem were reiterated. The characteristics of the male student enrolled in professional nursing programs in Tennessee were identified. The characteristics of the female student enrolled in professional nursing programs in Tennessee were identified. And finally, a comparison of the characteristics of the male and female nursing student was conducted.

CHAPTER V

SUMMARY, FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

I. SUMMARY

This study developed from the recognition that the much needed health care provider, the male nurse was not being produced in sufficient quantity. A beginning point to solve the problem of attracting and retaining the male was a descriptive analysis of the male student enrolled in professional nursing programs in Tennessee. The enrollment of males in baccalaureate nursing programs in Tennessee is similar to that of the enrollment of males in nursing programs nationally.

Several studies have indicated that there are changes from the earlier stereotyped nursing student to that of the current female nursing student. Therefore, a descriptive analysis of the female currently enrolled in professional programs in Tennessee was included in the study. A comparison of the male and female student was conducted. The similarities and differences in the male and female were described.

The study population included 24 males which were 70.6% of the entire population of males enrolled

in the professional nursing programs in Tennessee. The female population consisted of 26 randomly selected students to equal the population of males from each program included in the study. Two personality instruments and a demographic questionnaire were completed by each of the participants.

The resulting data were used to identify the profile of the male and the female enrolled in professional nursing programs in Tennessee. Comparisons of characteristics of the male and the female were addressed. The t test for difference between two means was used to determine the difference in the two populations: the male nursing student and the female nursing student as described from the 16 P.F. instrument. The Omega-squared (W^2) test of significant difference was used to compute the relationship between the variables accounted for by sex. The findings from the Myers-Briggs Type Indicator and the demographic data questionnaire were analyzed and described.

II. FINDINGS

The major findings based on the analysis of the data collected in this study were as follows:

1. The age of the male student ranged from 21 years to 42 years with a mode, median, and mean of 27 years of age.

2. The age of the female student ranged from 20 years to 38 years with the mode of 21 years, the median of 22 years, and the mean of 20.4 years of age.

3. The marital status of the male was 10 married, 1 divorced, and 13 single.

4. The marital status of the female was 3 married, 4 divorced, and 19 single.

5. All study subjects had had previous work experiences.

6. Four males and 9 females had had no previous health field experience.

7. Seven male students identified their initial declared major as nursing and 16 indicated initial majors other than nursing.

8. Sixteen female students identified their initial declared major as nursing and 10 indicated initial majors other than nursing.

9. Eleven males had previous undergraduate degrees and two had masters degrees with one having a Ph.D. degree.

10. Five females had previous undergraduate degrees and one had a masters degree.

11. Sixteen males and 13 females did not identify having kinship to nurses.

12. Nine males indicated their parents' income to be in the \$10,000 to \$19,999 range and 6 indicated their parents' income to be over \$40,000.

13. Five females indicated their parents' income to be in the \$10,000 to \$19,999 range; 6 indicated \$20,000 to \$39,999 and 12 indicated their parents' income to be over \$40,000.

14. Employment goals by area, as identified by the male were of a greater percent in critical intensive care, 75.0%; expanded role nursing, 66.7%; staff nursing, 58.3%; and nursing administration, 45.8%.

15. Employment goals by area, as identified by the females were of a greater percent in staff nursing, 76.9%; critical intensive care, 69.2%; expanded role nursing, 53.8%; nursing education, 46.2%; and public health, 46.2%.

16. Males chose the profession of nursing for the following reasons: interest in health care, 79.2%; interest in medicine, 79.2%; job security, 75.0%; interest in helping people, 66.7%; and job availability, 66.7%.

17. Females chose the profession of nursing for the following reasons: interest in nursing, 88.5%; interest in helping people, 84.5%; job availability, 65.4%; job security, 61.5%; and interest in health care, 61.5%.

18. Both males and females indicated that their family and significant others were supportive of their choice of nursing as a chosen profession.

19. The null hypothesis that there was no difference in the two groups, the male and female nursing student, was rejected for Factor F and Factor I of the 16 P.F. primary source traits.

20. Female students were more impulsive, lively, and happy-go-lucky (Factor F).

21. Male nursing students were more tender minded (Factor I).

22. For the second-stratum source trait extraversion, female nursing students were more extraverted.

23. For the second-stratum source trait tough poised, female nursing students used a more rational, objective approach than male nursing students.

24. For the derived criterion score, leadership, female nursing students showed higher leadership potential.

25. For the derived criterion score, creativity, male nursing students showed higher creativity potential.

26. Eighty-seven percent of the males were more self-sufficient than group oriented.

27. Eighty-three percent of the males were more sober and serious than happy-go-lucky.

28. Seventy-five percent of the males were more self-disciplined than undisciplined.

29. Seventy-five percent of the males were more tender minded than tough minded.

30. Seventy-one percent of the males were more forthright than shrewd.

31. Sixty-seven percent of the males were more venturesome than shy and timid.

32. Sixty-seven percent of the males were more dominant than not assertive.

33. Seventy-seven percent of the females were more dominant than not assertive.

34. Seventy-seven percent of the females were more conscientious than expedient.

35. Sixty-nine percent of the females were more venturesome than shy and timid.

36. Sixty-nine percent of the females were more abstract thinking than concrete thinking.

37. Sixty-five percent of the females were more self-sufficient than group oriented.

38. Sixty-two percent of the females were more self-disciplined than undisciplined.

39. Sixty-two percent of the females were more self-assured than apprehensive.

40. Sixty-two percent of the females were more practical than imaginative.

41. According to self-reported preference (Myers-Briggs Type Indicator), 25 percent of the males were ESTJ type, extraverted thinking with sensing.

42. Thirteen percent of the males were ENTJ, extraverted thinking with intuition.

43. Thirteen percent of the males were INTP, introverted thinking with intuition.

44. Thirteen percent of the males were INFP, introverted feeling with intuition.

45. Eight percent of the males were ENTP, extraverted intuition with thinking and eight percent were ISTJ, introverted sensing with feeling.

46. Four percent of the males were ISTP, introverted thinking with sensing; four percent were ISFP, introverted feeling with sensing.

47. Four percent of the males were ESTP, extraverted, sensing with thinking; four percent were ESFP, extraverted sensing with feeling; and four percent were ENFP, extraverted intuition with feeling.

48. Fifty-eight percent of the males preferred extraverted and 42 percent preferred introverted.

49. Seventy-five percent preferred thinking and 25 percent preferred feeling.

50. Fifty-four percent of the males preferred perception and 46 percent preferred judging.

51. Forty-two percent of the males preferred ST, practical and matter of fact.

52. Thirty-three percent preferred NT, logical and ingenious.

53. Forty-six percent of the males preferred TJ, logical, executive.

54. Thirty-three percent of the males preferred ES, pragmatic.

55. Twenty-three percent of the females were ESFJ, extraverted feeling with sensing.

56. Fifteen percent of the females were ENFP, extraverted feeling with intuition.

57. Fifteen percent of the females were ENFP, extraverted intuition with feeling.

58. Eight percent of the females were ESTJ, extraverted thinking with sensing.

59. Eight percent of the females were ESFP, extraverted sensing with feeling.

60. Eight percent of the females were ISFJ, introverted sensing with feeling.

61. Four percent of the females were ENTJ, extraverted thinking with intuition; four percent were INTP, introverted thinking with intuition; four percent were ISTP, introverted thinking with sensing, four percent were ISFP, introverted feeling with sensing; four percent were INFJ, introverted intuition with feeling; and four percent were INTJ, introverted intuition with thinking.

62. Seventy-three percent of the females preferred extraversion and 27 percent preferred introversion.

63. Eighty-one percent of the females preferred feeling and 19 percent preferred thinking.

64. Sixty-five percent of the females preferred judging and 35 percent preferred perception.

65. Forty-two percent of the females preferred SF, sympathetic and feeling.

66. Thirty-eight percent preferred NF, enthusiastic and insightful (communication skills).

67. Fifty percent of the females preferred FJ, executive and sympathetic, who wished to use feeling in controlling their world.

68. Thirty-eight percent of the females preferred ES, pragmatic.

69. Thirty-five percent of the females preferred EN, active innovative.

70. Both the male and female students were more extraverts than introverts.

71. The males preferred thinking (75%) and the females preferred feeling (81%).

72. The females preferred judging (65%) and the males preferred perception (54%).

73. Forty-two percent of the males compared to 12 percent of the females preferred ST, practical and matter of fact.

74. Eight percent of the males and 42 percent of the females preferred SF, sympathetic and friendly.

75. Seventeen percent of the males and 38 percent of the females preferred NF, enthusiastic and insightful.

76. Thirty-three percent of the males and 8 percent of the females preferred NT, logical and ingenious.

77. Forty-six percent of the males and 15 percent of the females preferred TJ, logical executive.

78. Twenty-five percent of the males and 27 percent of the females preferred FP, sympathetic and adaptable.

79. Fifty percent of the females and 0 percent of the males preferred FJ, executive and sympathetic.

80. Twenty-five percent of the males and 12 percent of the females preferred IN, knowledge is more important for its own sake.

81. Twenty-five percent of the males and 35 percent of the females preferred EN, knowledge is important for creating change.

82. Seventeen percent of the males and 15 percent of the females preferred IS, knowledge is important to establish truth.

83. Thirty-three percent of the males and 38 percent of the females preferred ES, knowledge is important for practical use.

III. CONCLUSIONS

Based on the study findings the following conclusions were drawn:

1. The addition to the profession of nursing of the male and his use of logic and impersonal analysis will enhance the expansion of the much needed research component and the creative application of the new knowledge to the improvement of nursing practice. The male nursing student waited longer to enter the professional nursing program than the traditional female. He had more work experiences in fields other than nursing. He was more responsible and achievement oriented. His motives for entering the profession of nursing were for employment as well as interest in the health care fields. He was warm hearted, imaginative and introspective, providing for the nursing profession manpower to meet the intellectual and scientific patient care needs demanded of current and future professional nurses.
2. The female nursing student was changed from the previously described stereotypical nursing personality toward professionalism. The tough poised, rational

objective approach, and leadership potential of the female student will provide an assertive client advocate and a future nurse competent in the expanding role and function of professional nursing. Unlike the male, she was younger, less responsible, and more outer and other directed. Nursing was also seen by the female as a means of employment as well as an interest in the health care field. She was likely to come from a high socioeconomic background and nursing was her initial educational endeavor.

3. The characteristics of the male and female nursing students were more similar than different. Both were more stereotypically masculine than feminine. Males were more scientific and technical oriented and females were more people oriented.

IV. RECOMMENDATIONS

The following recommendations are based on the findings and conclusions of this study:

1. The study should be replicated enlarging the sample.
2. The study should be replicated on a national basis to rule out regional biases.

3. The study should be used as a basis for longitudinal study to validate the changing personality of the female and the profile of the male student in professional nursing.

4. A similar study should be conducted more nearly matching the two samples according to demographic data.

5. A similar study should be conducted to compare the profile of the male and female in private, religiously conservative institutions and in public state supported institutions.

6. A similar study should be conducted identifying the characteristics of male and female nurses who are practicing nurses.

7. A similar study to compare the student in professional nursing programs and the practicing nurse should be conducted.

The summary, findings, conclusions, and recommendations of the study have been presented in Chapter V. In the summary an overview of the study was provided. The findings described 83 facts based on the analysis of the data collected in the study. The conclusions were supported by the the facts previously presented and

were concluded by the author in respect to the stated purpose and the research questions of the study. The recommendations were seen as a means of further validation and extension of the findings of the study.

CHAPTER VI

EPILOGUE

Introduction

The changing health care scene as well as changes in the health manpower population affects not only the health care system but each member of society. The new era in health, changing the focus from primarily illness care to total health care, calls for changes in the preparation and composition of the health provider. The advanced technology and knowledge explosion of the past several decades have contributed to the changing needs. Tasks and responsibilities are much more diversified and disseminated than in the past. A significant provider of health care is the nurse.

A new era in nursing began when the preparation of the nurse changed from the apprenticeship to that of a college education based on the liberal arts and sciences. Concurrently, the role of the nurse was changing from that of the handmaiden to that of an autonomous practitioner of nursing, whether it be in the institutional setting or in ambulatory care. There was a recognition within the profession of nursing that nursing care differed from medical care and that while the nurse provided prescribed medical care, she also provided

nursing care. As the role of the nurse changed, there was an additional recognition of the need to provide total health care. The primary nurse practitioner has emerged in the present decade as a significant member of the primary health care providers.

A phenomenon of the changing health care scene has been a nationally recognized shortage of practicing nurses. The changing role of the nurse, the nursing shortage, and the societal trends away from sex-linked occupations have influenced a recognized need to encourage the male into the predominately female profession of nursing. An additional factor of concern is the current trend in decline in number of nursing school graduates. The addition of males to the nursing work force would increase the population and stability of nursing health care manpower.

The traditional female stereotype nurse with feminine need patterns is not congruent with today's health manpower needs nor with the changing role of the nurse. The experiences of the investigator in observing changes in the female currently enrolled in nursing programs as well as a high attrition rate among males entering a baccalaureate program in nursing provided the impetus for the study.

The Study

The study was conducted for the primary purpose of identifying the characteristics of the male enrolled in professional nursing programs in Tennessee. It was believed that the first step in attracting and retaining the male in nursing was the identification of the characteristics of those who were enrolled. A secondary purpose of the study was to identify the characteristics of the females currently enrolled in professional nursing programs in Tennessee. The identification of the characteristics of the female would authenticate their change from the traditional stereotyped female to a more assertive, autonomous client advocate congruent with today's health care needs. In addition, the identification of the characteristics of the female student enrolled in professional nursing programs provided a means of comparison for the male student in nursing.

The students who participated in the study were enrolled in six Baccalaureate Degree Nursing Programs and the one Generic Masters Program in Tennessee. The study population was identified as the entire population of males enrolled in the junior and senior years of the six Baccalaureate Degree Nursing Programs and the entire population of males in the Generic Masters Nursing Program. The female study subjects were to be randomly

selected females to equal the number of males from each program included in the study. Letters were written to the Dean of each program during winter quarter of 1981 requesting their participation and assistance. Each responded with numbers of males enrolled in the programs. From the preliminary information it was anticipated that the study population would be 40 males and 40 females. However, when the final planning for data collection was completed, there was a total of 34 males enrolled in the participating programs. Twenty-four or 70.6 percent of the total population of males participated in the study. Twenty-six or 76.5 percent of the randomly selected females participated in the study.

The instruments used in the study were a demographic questionnaire developed by the investigator and two personality instruments. The literature survey which included personality instruments used in previous nursing studies provided several choices. The choice of personality instruments was narrowed to three and did not include the Myers-Briggs Type Indicator. Consultation was sought with committee members and with the Director of the Counseling Center at The University of Tennessee, Knoxville, as well as with a member of the faculty of the Educational Psychology and Guidance Department. The decision was then made to use the

Cattell 16 P.F. and the Myers-Briggs Type Indicator. The personality instruments provided valuable information and were appropriate for the study.

Problems encountered in data collection were many but were surmounted by the persistence and positive approach of the investigator along with support from the study, committee chairman and committee members.

The findings of the study are enlightening and should provide assistance in recruitment of students, in retention of students and in curriculum development in programs preparing professional nursing students for future practice.

While it was recognized that the findings were for the specific population from one regional area at a given point in time, it should be possible to use the data to develop generalizations. It is also recommended that the study be replicated for further validation of the findings and elimination of regional biases.

The analysis of the data from the 16 P.F. revealed that the male and female students participating in the study were remarkably similar. A significant difference was found in only two of the 16 primary source traits. The finding that the male nursing student was more tender minded was surprising. The

additional 16 P.F. findings were also of interest.

The fact that the female student was significantly more extraverted, employed a more rational objective approach and showed higher leadership potential and that the male student showed higher creativity potential have implications for retention of the male and female in nursing as well as for curriculum planning. These particular findings may also indicate that the more appressive macho male has not yet been attracted to nursing schools. However, the findings did indicate that both the male and the female student demonstrated personality characteristics that were more masculine than traditionally feminine. Both males and females were more dominant than not assertive, more self-sufficient than group oriented, more self-disciplined than undisciplined, more venturesome than shy and timid, more abstract thinking than concrete thinking, more conscientious than expedient, and more relaxed and composed.

The higher creativity shown by the male nursing student coupled with his liking to work with concrete facts, intellectual ingenious and being adept at problem solving should provide the nursing profession with potential researchers and with persons who have

the capacity for creative application of new nursing knowledge.

The demographic findings supported the premise that today's nursing student was older and frequently had degrees from other fields. The median age of the male was 27 years. Eleven had previous undergraduate degrees (five were in the Generic Masters Program) and 16 indicated initial majors other than nursing. Though the median age of the female was 22 years, five or 19 percent were over 25 years of age and five or 19 percent had previous undergraduate degrees. More females than males reported having kinship to nurses. Thirty-three percent of the males in this study reported kinship to nurses. In the two demographic studies of male students in nursing previously described in this study (Williams, 1973; and Schoenmaker and Radosevich, 1976), one cited 50 percent of the males were married to nurses and the other cited 50 percent of the males were married, four-fifths to nurses. Forty-two percent of the males in this study were married. An interesting finding reported by the females in this study was that 12 or 46 percent came from families with incomes over \$40,000. A total of 16 or 52 percent came from families with incomes greater than \$20,000.

Reasons for choosing nursing and employment goals were not outstandingly different except that interest in medicine was 79.2 percent for the male while interest in nursing was 88.5 percent for the female. This perhaps reflected the influence of societal sex-role typing. Interest in helping people was the second priority for the female and the fourth for the male. Critical intensive care was the second priority for the female and first priority for the male. Expanded role nursing was third priority for both. These career choices coupled with the identified personality characteristics of both male and female indicated their potential for meeting societal need for intelligent nurses who are advocates for patients and who can practice nursing independently as well as in collegueship with other health professionals. A potential role model for the male entering the professional nursing program in the future will not be available due to the small number of males having the career choice of nursing education. Some of the personality source traits supporting this concept were: both male and female students were more self-disciplined, self-sufficient, self-assured, venture-some, conscientious, dominant, sober and stable, emotionally mature, and abstract thinking.

Some interesting findings in relation to the Myers-Briggs Type Indicator were as follows: 73 percent

of the females and 58 percent of the males preferred extraversion. According to Jung's theory, the extravert likes to direct both perception and judgment upon his outside environment, doing his best work in action. This would seem appropriate for nursing students since nursing is a practice profession. Also related to this is the finding in the last group of the quadrants reported, having to do with academic measures. Thirty-eight percent of the females and 33 percent of the males preferred ES, pragmatic, who often perform in real life better than on paper and pencil tests and measurements.

Seventy-five percent of the males preferred thinking and 81 percent of the females preferred feeling. The thinking types are more attracted to technical activity skills and feeling types are more attracted to people activities. This finding concerning the males perhaps speaks to their employment preference for the critical intensive care areas of nursing. Curriculum implications are that the thinking type may need more emphasis on communication skills. If in fact women faculty are more feeling types, there may be indication that they need to give more attention to the expectations of feeling females versus thinking males in relation to the total nursing curriculum.

In terms of judging and perception, 65 percent of the females were judging types and 54 percent of the males were perceptive types. The judging types are dependable, like schedules and order but are less adaptable and open to new information. The perceptive types are readily adaptable, flexible, show interest in independent study and follow their own hunches and interests. This difference in the preference types of the male and female has curriculum implications also.

There were differences noted in the sensing type and intuitive type. Forty-two percent of the males preferred ST, practical and matter of fact, preferring technical skills; and 33 percent of the males preferred NT, logical and ingenious, who like scientific application and pragmatic planning. Forty-two percent of the females preferred SF, sympathetic and friendly, liking tasks aimed at comfort and care; and 38 percent of the females preferred NF, enthusiastic and insightful with good communication skills and psychological understanding.

In academic interests, 34 percent of the females and 25 percent of the males preferred EN, active innovators, interested in creating new possibilities and 38 percent of the females and 33 percent of the males preferred ES, skillful in action, pragmatic with better performance in real life than with pencil and

paper. These findings have implications for curriculum planning. (Much of the interpretation of the types as described above were taken from McCaulley, 1981.)

Conclusions

In conclusion, this study has been not only a valuable academic exercise but also very enlightening to the author in her role as an academician and nursing educator. Longitudinal study further validating the findings would be beneficial in the recruitment of students, in student retention, and in curriculum planning and development. Appendix F shows a comparison of certain demographic findings of the 24 males and the 26 females. The findings based on the data from the demographic questionnaire and the two personality instruments have provided information to accomplish the primary purpose of identifying the characteristics of the male in nursing, the secondary purpose of identifying the characteristics of the female in nursing, and for a comparison of the male and female student in professional schools of nursing in Tennessee.

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APPENDICES

APPENDIX A

DEMOGRAPHIC CHARACTERISTICS QUESTIONNAIRE

Junior _____ Senior _____ Generic Masters _____

Age: _____ Sex: Male _____ Female _____

Marital Status: (Please circle) M S D Widowed

Work Experience: No _____ Yes _____ Type _____

Prior Health Field Experience: No _____ Yes _____

Type _____

Prior College Experience: (Years and months) _____

Initial and declared major(s) (with approximate dates):

Previous degree(s) _____

Vocational and/or other Educational Experience: _____

Date of Declaration of Nursing Major: _____

Kinship to Nurse(s): Wife _____ Sister _____ Brother _____

Mother _____ Other (specify) _____

Parents' Job or Position: Father _____

Mother _____

Estimated Income of Parents:

\$ 3,000 to \$ 9,999 ____; \$10,000 to \$19,999 ____;

\$20,000 to \$39,999 ____; \$40,000+ ____

What are your Employment Goals?

Please rank order your top 5 choices with 1 being your first choice and 5 your last choice.

	1st Job	5 Yrs.	Ultimate Career
Critical Intensive Care	_____	_____	_____
Staff Nursing (general care)	_____	_____	_____
Expanded Role Nursing (practitioner)	_____	_____	_____
Nursing Education	_____	_____	_____
Nurse Anesthetist	_____	_____	_____
Military Nursing	_____	_____	_____
Nursing Administration	_____	_____	_____
Geriatric	_____	_____	_____
Public Health	_____	_____	_____
Other (specify)	_____	_____	_____

Why did you choose the Profession of Nursing?

Please rank order your top 5 choices with 1 being your first choice and 5 your last choice.

Job Availability	_____
Interest in Research	_____
Interest in Helping People	_____
Job Security	_____
Job Mobility	_____
Interest in Health Care	_____
Interest in Medicine	_____
Interest in Nursing	_____
Other (specify)	_____

How do you perceive the reaction of your close friends and significant others to you as a nurse? _____

Have _____ supported your choice of
nursing as a chosen profession?

Your Family, Yes _____ No _____

Significant Others, Yes _____ No _____

(Please use the back of the sheet(s) if you need more
room.)

APPENDIX B

FINDINGS FROM DEMOGRAPHIC DATA

Findings from the demographic data were as follows:

The participants were: junior males, 7; junior females, 9; senior males, 13; senior females, 14; generic males, 5; generic females, 3.

The age of the participants ranged from 20 to 38 for the females and 21 to 43 for the males. The mean median and mode for the males was 27 years. For the females, the mode was 21 years, the median was 22 years, and the mean was 20.38 years.

The question concerning marital status elicited the following:

Males: married, 10; single, 13; divorced, 1.

Females: married, 3; single, 19; divorced, 4.

All participants reported having had work experience. The work experiences were of a wide variety. The reported work experiences were as follows: retail sales, 7; military service, 6; department store cashier, 4; waitress, 4; teacher, 2; secretary, 2; bookkeeper, 2; summer coach and lifeguard, 2; mail clerk; librarian; fire fighter; camp counselor; industrial recreation director.

The responses to the question concerning prior health field experience revealed the following:

Four (4) males and nine (9) females reported not having had prior health field experiences. The prior experiences reported were: Nursing Assistants, 17; Nurse Technicians, 16; Phlebotomists, 4; Army Medic, 3; EMT, Paramedics, 3; Pharmacy Technician, 2; Respiratory Therapy Technician, 2; Lab Technician, 2; Medical Research, 2; Physical Therapy; Navy Corpsman, Medical Services Specialist.

The responses from the question concerning prior college experience ranged from no response to 7 years, 4 months. Four responded 2 years, 15 responded 3 years, 7 responded 4 years, 4 responded 5 years, 6 responded 6 years, and 2 responded 7 years. No responses were given by 10 respondents.

The question concerning initial and declared majors elicited the following responses:

Males: Nursing, 7; majors other than nursing, 16.

Females: Nursing, 16; majors other than nursing, 10.

The question concerning previous degree(s) elicited the following responses:

Males: None, 13; B.S., 6; B.A., 3; A.S.D., 2; M.A., 2; Ph.D., 1. Females: None, 22; B.S., 3; B.A., 1; A.S.D., 1; M.A., 1.

Of the 50 participants, only 12 responded to the question, vocational or other educational experience. The responses were as follows: Paramedic, 2; EMT, 2; Med Tech, 2; LPN, 2; Phlebotomy School, 2; Respiratory Therapy and Nurse Externship.

The participants responded as follows to the question, date of declaration of nursing major:

1977, 2; 1978, 9; 1979, 16; 1980, 12; 1981, 3.

Sixteen males and 13 females for a total of 29 participants either did not respond to the question, kinship to nurse(s) or specified none. The following responses were given:

Kinship to nurse(s): Mother, 5; aunts, 7; sister, 5; wife, 2; cousins, 2; friend, 3; grandmother; stepsister; sister-in-law; stepmother.

Responses to the question concerning parents' job or position were as follows:

Father: Physician, 4; salesman, 4; retired, 7; deceased, 4; engineer, 3; self-employed, 3; principal junior high, 2; repairman, 2; gas company, 2; chief technical advisor with U.N.; executive; minister; theatre manager; car dealer; fire chief; logger; retired Army; college professor; teacher; farmer; electrician; nursing assistant; mail carrier; hospital housekeeping manager; real estate; traffic manager.

Mother: Housewife, 15; secretary, 6; nurse, 5;
teacher, 4; nursing supervisor, 2; factory worker, 2;
deceased, 2; lab technician, 2; social worker; telephone
operator; stock room manager; small business owner;
retired; nurse aide; home health aide; speech and hearing
clinic in public school, organist-piano teacher.

APPENDIX C

EMPLOYMENT GOALS

In response to the question, What are your employment goals? several participants did not provide a response to the 5 years rank ordering of choices and some did not indicate ultimate career choices. The responses, total number(s) indicating choices of 1 through 5 are as follows:

Males				
	Total	First Job By Priority	Total	Ultimate By Priority
Critical Intensive	18	(1=7, 2=3, 3=4, 4=4)	8	(1=1, 2=2, 3=1, 4=1, 5=1)
Care	14	(1=3, 2=2, 3=2, 4=3, 5=4)	3	(3=2, 5=1)
Staff Nursing	16	(1=1, 2=4, 3=6, 4=2, 5=3)	8	(1=2, 2=3, 4=1, 5=2)
Expanded Role	9	(1=2, 2=1, 3=2, 5=3)	5	(1=3, 3=1, 5=1)
Nursing	11	(1=3, 2=3, 3=1, 4=4)	8	(2=1, 3=1, 4=1, 5=1)
Nursing Education	11	(1=2, 2=3, 4=3, 5=3)	5	(1=3, 3=2)
Nurse Anesthetist	13	(1=1, 2=2, 3=4, 4=5, 5=3)	9	(2=1, 3=2, 4=5, 5=1)
Military Nursing	4	(2=1, 4=1, 5=2)	3	(2=1, 4=1, 5=1)
Nursing	4	(3=1, 4=1, 5=2)	0	
Administration	0		3	(1=2, 3=1)
Geriatric Nursing	2	(1=1, 2=1)	0	
Public Health	2	(1=2)	0	
Other: MNT	0		1	(1=1)
Industrial	1	(2=1)	0	
Nursing	2	(1=1, 2=1)	0	
Emergency Room	2	(1=2)	0	
Nursing	0		1	(1=1)
Law	0		0	
Nurse Midwifery	1	(2=1)	0	

Females	Total	First Job By Priority	Total	Ultimate By Priority
Critical Intensive Care	18	(1=5, 2=7, 3=1, 4=1, 5=4)	10	(1=1, 2=3, 3=2, 4=2, 5=2)
Staff Nursing (General Care)	20	(1=14, 2=2, 3=2, 4=1, 5=1)	10	(1=1, 2=1, 3=1, 4=2, 5=5)
Expanded Role Nursing	14	(1=1, 2=2, 3=4, 4=5, 5=2)	13	(1=4, 2=5, 3=2, 4=2)
Nursing Education	12	(1=0, 2=0, 3=3, 4=5, 5=4)	12	(1=2, 2=3, 3=5, 4=1, 5=1)
Nurse Anesthetist	9	(1=1, 2=2, 3=1, 4=3, 5=2)	4	(1=1, 2=2,
Military Nursing	6	(1=1, 2=4, 3=1)	1	(1=1)
Nursing				
Administration	11	(2=1, 3=2, 4=2, 5=6)	9	(1=2, 2=1, 3=1, 4=3, 5=2)
Geriatric Nursing	7	(1=1, 2=2, 3=1, 4=2, 5=1)	3	(3=1, 4=2)
Public Health	12	(1=1, 2=1, 3=7, 4=3)	5	(1=1, 2=1, 5=3)
Other:				
OB, Maternity	1	(2=1)	1	(1=1)
Pediatric				
Nursing, Child Specialist	4	(1=1, 2=2, 3=1, 4=1)	3	(1=1, 4=2)
Missionary	1	(3=1)	0	
Out Patient Nurse	1	(5=1)	1	(3=1)
Hospice	1	(3=1)	1	(3=1)
Law	1	(1=1)	0	

APPENDIX D

REACTION OF CLOSE FRIENDS

Responses to the question, How do you perceive the reaction of your close friends and significant others to you as a nurse, are as follows:

Males:

Supportive, 7; positive, 7; accepted, 5; it's a job, 3; a good profession, 2; encouraging; surprise; some ridicule, others accept; disdainfully; some make the incorrect assumption that I am gay.

Females:

Positive, 6; respect and admiration, 15; support, 15; come to me for advice, 4; family think it is great, 3; acceptance, 2; impressed, 2; job security.

APPENDIX E

CHOICE SUPPORTED BY FAMILY

The following were the findings in response to the question, Have your family/significant others supported your choice of nursing as a chosen profession?

Males:

Your Family - Yes: 22; No: 2

Significant Others - Yes: 22; No: 2

One male who had responded "no" to both questions responded on the back of the sheet the following:

Nursing is still defined as a feminine role by general public and most of my close friends are no exception. The lack of contact since entering . . . is also not well perceived. Most of my friends have college degrees, work 9-5 or 8-4, have weekends off and make more money, therefore, they can't identify with me or my desire to go into nursing. It has caused a "split" or a "cooling" of my close relationships that I had not foreseen in advance.

Females:

Your Family - Yes: 26; No: 0

Significant Others - Yes: 25; No: 1

APPENDIX F

COMPARISON OF CERTAIN DEMOGRAPHIC FINDINGS OF THE TWENTY-FOUR MALES AND TWENTY-SIX FEMALES

Age	Males	Females
20-24	8	21
25-29	10	1
30-34	3	3
35-39	0	1
40-45	1	0
(2 no responses)		

Marital Status	Males	Females
Single	13	19
Married	10	3
Divorced	1	4

Initial Declared Major	Males	Females
Nursing	7	16
Other	16	10

Previous Degrees	Males	Females
B.S., B.A.	9	4
M.S., M.A.	2	1
Ph.D.	1	0

Estimated Income of Parents	Males	Females
\$ 3,000 - 9,999	3	3
\$10,000 - 19,999	9	5
\$20,000 - 39,999	4	6
\$40,000+	6	12

VITA

Wynella Bramblett Badgett was born in Hillsboro, Tennessee, on February 11, 1932. She attended school in Coffee County and graduated from Coffee County High School in 1950.

She received a Diploma in Nursing from Baptist Memorial Hospital School of Nursing in September, 1953 and a Certificate in Pediatric Nursing from the American University and Children's Hospital in Washington, D. C. in 1956. She earned a Bachelor of Science in Nursing degree from The University of Tennessee Center for Health Sciences, Memphis, Tennessee, in June, 1968 and a Master's in Science in Nursing from the University of Maryland in 1970. After completing the master's degree, she was employed as a faculty member in the Department of Baccalaureate Degree Nursing at East Tennessee State University, Johnson City, where she served as Acting Chairman of the B. S. N. Department from 1976 through 1980.

In September of 1980, she entered the Graduate School of The University of Tennessee, Knoxville. She received the Doctor of Education degree in Health Education in August, 1982.

The author is a member of Phi Kappa Phi Honor Society, Phi Delta Kappa, and Sigma Theta Tau National Honor Society of Nursing. She was recognized for Outstanding Achievement

in the Division of Health and Safety, College of Education,
The University of Tennessee, Knoxville, May, 1982.

She is married to Charles B. Badgett, is the mother
of three children--Lynn, Sharon and David--and the grand-
mother of Rebecca, Chris and Nichole.