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Factor Analysis of Nursing Role Conceptions of Three Groups

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FACTOR ANALYSIS OF NURSING ROLE

CONCEPTIONS OF THREE GROUPS

by

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VITA

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In August of 1982, Ms. Brotherton was granted an assistantship in applied social psychology at Loyola University of Chicago. She became a student affiliate of the American Psychological Association in 1984. Ms. Brotherton is one of the authors of "Increasing Compliance to Medical Treatment Regimens: A Meta-Analysis of Program Evaluation" appearing in the March, 1985 issue of Evaluation and the Health Professions.

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INTRODUCTION

Statement of the problem

Over the past 20 years the leading organization of nurses, the American Nurse's Association, has been striving to increase the professionalism of nurses. One of the organization's strategies has been to develop two levels of nursing, "professional" and "technical," distinguished by educational requirements. Another strategy has been to offer courses in nursing schools that specifically indoctrinate the student nurse with values and goals that are considered professional (ANA, 1965; Whelan, 1984).

During this same time period, research on nurses and nursing students has suggested that there are different "types" of nurses that bring different attitudes and orientations to their occupation. There appear to be three different orientations to nursing, and these three orientations have been used to categorize nurses and nursing students. The instruments measuring these orientations have been used to categorize nursing students at different stages of their education, or nursing students with different types of education. Such research has attempted to demonstrate the effects of nursing education (the specific goal being to professionalize the student) and to determine whether different levels of nursing education (e.g., community college versus four-year college) attract and/or produce different types of nurses.

Purpose and hypotheses

There were two purposes to this thesis. The first purpose was to make a comparison between two questionnaires purportedly measuring the same nursing constructs. The second purpose was to evaluate the possible effects of a nursing course on nursing students by measuring the students' attitudes towards various aspects of nursing before and after taking the course.

The first intention of this thesis was to confirm that two different instruments which were designed to measure three nursing role orientations are actually able to do so. These three nursing role orientations (the professionalizer, the traditionalizer, and the utilizer) were developed by Habenstein and Christ (1955). There has been some doubt, however, that these types of orientations exist. Minehan (1977) used a scale developed by Corwin (1960) to measure three orientations; the professional, the service-traditional, and the bureaucrat. Minehan found through factor analysis that there was much overlap among the respondents' interpretations of the items, e.g., some professional items were more likely to be clustered with service-traditional or bureaucratic items than with other professional items. Minehan (1977) suggested that the beliefs upon which nursing role conceptions are based may have shifted since Corwin's scale was developed. Neither of the instruments to be used in this thesis (Stoller, 1978; Murray, 1983) has been studied enough to verify whether the professionalizer, traditionalizer, and utilizer nursing role orientations as such do indeed exist among nursing students today, or whether these instruments can actually measure the role

orientations. After administering these two instruments to sophomore nursing students at a large midwestern university, factor analysis was used to determine if there were indeed two underlying constructs, the orientations of the professionalizer and the traditionalizer, in one instrument and three underlying constructs, representing all three orientations, in the other. In addition, factor analysis demonstrated whether the individual items belong to the constructs in the fashion the designers intended.

The responses of the nursing students were compared to those of introductory psychology students at the same university who were not majoring in nursing, and to a sample of working nurses. Sampling three groups made it possible to determine if these orientations, if measurable, existed for those who were not considering nursing as a career, and if the orientations were the same, or perhaps stronger for those who were working as nurses.

The second purpose of this thesis was to compare the responses of these same nursing students to the above mentioned items both before and after taking a course entitled "Professional Role Development." Using one of the instruments, this thesis demonstrated how the nursing student sees herself and how she sees the "ideal nurse" on two of the orientations, the professionalizer and traditionalizer. This allowed a comparison to be made between the self concept of the student and to what she may have aspired. The second instrument, which includes the third orientation of the utilizer, assessed attitudes towards behaviors and beliefs the three orientations would be expected to represent. The professional role

development course presented characteristics, skills and goals of the professional nurse in addition to encouraging the nursing student to adopt these values for herself. Changes in students' attitudes and opinions that may be due to the effect of the course were also measured using the individual items.

Hypotheses tested included: 1) there would be less difference, or "role conflict" when comparing how the nursing student sees herself and how she views the ideal nurse at the posttest than at the pretest, either because the student had gained a more realistic image of the ideal nurse, or because she now felt she had more of the characteristics of the ideal nurse, or both; 2) the orientations of the students would be diffuse at the pretest, and more defined at the posttest; 3) regardless of the student's orientation prior to the course, this orientation would shift in the direction of the professionalizer at the posttest, assessed by comparing the orientations to those of the psychology students and nurses; 4) the orientations of the introductory psychology students would be diffuse and possibly self-contradictory, and 5) the orientations of working nurses would be more professional than either the nursing students or the psychology students.

In summary, this thesis sought to determine whether the instruments involved measured the constructs they were intended to and whether these constructs existed in the same form for non-nursing students and nurses. Second, this thesis served as a pretest-posttest evaluation of a course designed to introduce "professional" nursing values to sophomore nursing students.

REVIEW OF RELATED LITERATURE

This section describes: (a) problems the nursing profession
faces in its attempt to professionalize nurses and (b) research into
the personality characteristics, nursing role orientations and self
concepts of nursing students. In addition, the relation between the
present study and previous research will be discussed, with an
emphasis on its contribution to nursing research.

Professional identity of nurses

Ever since the American Nurse's Association (ANA) was founded in
1896, nursing has been striving to develop a professional identity.
In many ways nursing has been successful in its attempts. Nursing has
developed theories of patient care, regularly improves techniques of
education and service through research, and educates many of its
practitioners in institutions of higher learning (Bixler & Bixler,
1959). However, the nursing profession has yet to receive the respect
and esteem of its closely allied profession, medicine. Aydelotte
(1983), in reviewing several different perspectives on the
characteristics of a profession, notes that the one prevailing theme
is that of autonomy: "In order to achieve full professional status,
an occupational group must exercise autonomy within its defined area
of practice" (p. 832). A profession must have the authority to
govern itself, as well as the power to have a positive influence on
the environment in which its services are delivered. It may be
difficult for the nursing profession to ever gain such autonomy as

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long as it is, in reality and in the lay image, subservient to medicine.

This last point is conceptually similar to what many observers feel is the real obstacle to the goal of the nursing profession; a low regard by society for female professionals in general. Ninety-seven percent of nurses today are female (Alley, 1982). As a women's profession, it is felt that "it will not be possible for the profession to realize first class status while society accords second class status to the majority of its practitioners" (Dachelet, 1978, p. 31). It is beyond the scope of this review to fully cover the political and social effects of sexism on the nursing profession and its adherents. Several discussions on the topic can be found in Muff (1982).

Another major problem that the nursing profession must resolve, and hopes to soon, is the confusion surrounding the nursing role and the required education for it. At this time, there are three accepted routes for becoming a registered nurse (RN). A nurse may have an associate degree (AD) by graduating from a community college, a nursing diploma from a three year hospital-based school, or a baccalaureate of science in nursing (BSN) from a university or college based four year program. Since 1965, the ANA has set goals for rectifying the situation. The ANA will require two separate levels of nurse functions in 1985, and these two levels will be taught by two separate educational systems. The "professional nurse" will be a college graduate who will carry out tasks that require a broad, theoretical base. The "technical nurse" will graduate with a

community college education and will perform the more mechanical and concrete tasks of nursing (ANA, 1965). It should be noted, however, that approximately 20% of nurses belong to the ANA, and that probably even fewer nurses agree with this policy (Yeager, 1983). It may be possible that such discord among the governing body and its constituents may further alienate many women (from this point on, nurses shall be referred to as women) from the profession, which brings up another major problem in nursing: attrition.

Attrition

There are over 1.6 million RNs in the United States, yet only 76.6% of them are employed. Nearly 22% of the nurses no longer practicing nursing left the profession voluntarily. Nearly one fifth of these nurses are employed in different areas, the rest are inactive (Alley, 1982). Like many "women's professions" (e.g., teaching, library science), nursing is seen as an occupation that can support a women adequately until she marries. At that time she assumes family responsibilities, however, there are ample opportunities for part-time work. Indeed, 32.2% of the employed RNs work part-time. Because of the need for nurses, the once retired nurse is able to return to work relatively easily. Not viewing nursing as a life-long career may possibly weaken the stature of the profession.

Not all RNs leave nursing solely for family duties. McCloskey (1975) found that nurses who left their jobs for family reasons would have stayed if they had been offered more rewards. The most important reward to these women would have been the opportunity to attend educational programs, followed by: more opportunities to continue

course work to earn credits for a more advanced degree, more opportunities for career advancement other than assistant head nurse or head nurse, and more recognition for their work from peers and supervisors. Wandelt, Pierce and Widdower (1981) suggest that nurses leave the profession as a result of "career stagnation." Nurses see themselves as professionals, and yet are unable to exercise control over their own clinical practice. All of the above desired values belong to a "profession." It is no surprise that those who do stay in nursing may try to alleviate their frustration by job-hopping in search of an opportunity to achieve some kind of professional status. In 1980 the national average nursing turnover rate was 40% (Hospital Week, October 23, 1981). In the few years since that time, the turnover rate has dropped markedly. This has been attributed to the overall uncertain economic condition of the nation, which has lead to lower hospital occupancy rates and a greater frequency of nurses being a major or even the primary wage-earner in their families. It is feared that the lowered turnover rate will lessen hospital administration's concerns about nursing job satisfaction, such as the granting of the above desired rewards (Dolan, 1983).

As might be expected, attrition and turnover do not occur equally at all levels of nursing positions. Turnover among nurses is the highest among new employees and the lowest at the highest levels of nursing positions (Price, 1973). Naturally, the newest employees are more likely to be young and single, and may be more likely to job-hop, or leave nursing for family reasons. However, many researchers speculate that the reason neophyte nurses so readily leave

their jobs is because they are suffering "reality shock" (Kramer, 1974). Reality shock occurs when the new graduate finds that caring for patients and assessing their needs, indeed, many of the values and techniques she has learned during the educational process, are given lower priority than the repetitive, non-judgmental tasks that are forced upon her. As the nursing student of today may be the "professional" of tomorrow, there has been much concern about her personality characteristics, values, role orientations and self conceptions and how these attributes might work to her advantage in achieving professional status. These characteristics, however, might leave her vulnerable to reality shock. Research findings on these attributes will be discussed below.

Personality characteristics of nursing students

Common stereotypes would indicate that nurses are typically submissive, unassertive and nurturing. Aga and Muff (1982) suggest that "nursing schools attract and reinforce passive individuals who find themselves out of their depth in work situations that require decision-making, autonomy, conflict management, and so on ..." (p. 75). If this is true, it is important for nursing education to be cognizant of these characteristics that might impede the educational and professional progress of nursing students. With this in mind, researchers have used personality characteristics to predict attrition, to compare students of different educational programs and to assess the possibilities of producing professional, autonomous nurses.

Olesen and Whittaker (1968) found some rather discouraging results in their three year longitudinal study of BSN students. They found that students who eventually dropped out of the program displayed, as measured by the Omnibus Personality Inventory, more ability in complex thinking, had greater impulse expression and lower authoritarian needs than the successful students. The successful students became experts at "fronting," which involved predetermining the faculty's expectations and attempting to become the ideal student based on these expectations. Contrary to these findings, Knopke, using Edwards Personality Preference Schedule (EPPS), found that unsuccessful BSN students demonstrated a greater need for structure and organization and a lower need for self assertion and exhibition of leadership than successful students (1979). However, only 10 students dropped out of Olesen and Whittaker's study (as opposed to 63 in Knopke) and therefore these students may not be representative of the typical nursing school dropout.

Several researchers have tried to find a personality pattern of the nursing student. Levitt, Lubin and Zuckerman compared the student nurse to the general college woman using the EPPS (1962). The characteristic personality pattern of needs prior to clinical training in nursing school deemphasized masculine needs such as autonomy, dominance and aggression. Predominate needs were more "feminine," such as succorance, nurturance and abasement. Bailey and Claus (1969), also using the EPPS, reported similar patterns for nursing students, plus an additional affiliation need. Schultz (1965) however, found high scores on need for change, autonomy and

hetereosexuality.

Other research has focused on finding differences among the students of the three educational programs. Meleis and Farrell (1974) found that graduating seniors from the three programs were essentially alike. Baccalaureate students rated higher on structure and autonomy factors of leadership than students of the other two programs. However, diploma students placed the highest value on research, whereas the BSN students were just the opposite. Compared to non-nursing college students, the nursing students were overall more inclined to be affiliative, trusting and ethical. Richards (1972) looked at intelligence as well as personality variables. There were no statistically significant differences among the three groups in leadership potential, responsibility, emotional stability or sociability. Differences in intelligence were also not found. Baccalaureate students did have a more professional orientation to nursing practice than did the diploma or AD students.

A common lament in the nursing literature is that as long as nurses have typically feminine values, nursing will never achieve professional status. Stromberg (1976) used the Masculinity-feminity (Mf) scale of the MMPI on a group of nursing students made up of diploma, AD, and BSN students. Although there were no differences among the students on Mf, there was a relationship between the nursing students' sex role identity and their image of nursing. As the sex role identity became more masculine, the image of nursing became more in line with that advanced by the nursing profesion (as measured by Frank's Image of Nursing Questionnaire, or FINQ). Till (1980) also

used the FINQ in conjunction with the Bem Sex Role Inventory on 56 entering and 36 graduating BSN students. The graduating students were more masculine that the entering students, but still more feminine than the general college female. The entering and exiting students' answers and the professionally "correct" answers to the FINQ were significantly different, with the graduating students' image of nursing closer to that of the profession's. Contrary to Stromberg (1976), sex role identity did not appear to influence the image of nursing. Finally, Meleis and Dagenais (1981) found no difference between nursing students of the three educational programs and regular college females on sex role identity. Furthermore, sex role identity did not distinguish between the programs. In summary, the sex role identity of nursing students does not seem to be very much different that other female students, when measured with sex role inventories.

In the search for a more professional nurse, investigators have measured self-actualization, autonomy and self-esteem. Goldstein (1980) used the Personal Orientation Inventory to measure self-actualization in BSN and AD graduating students. Self-actualization is believed to be an indicator of leadership potential, and, as hypothesized, the BSN students scored significantly higher than did the AD students, which runs somewhat contrary to Richards' finding (1972) of no difference on leadership potential between the two groups. Self-esteem and selected personality traits were measured in 75 senior BSN students by Lewis, Bentley and Sawyer (1980). High self-esteem was positively correlated with such traits as endurance, nurturance and affiliation (as measured by the Adjective

Check List). Aggression and succorance were negatively correlated with self-esteem.

Dagenais and Meleis (1982), using the Nurse Self-Descriptive form, directly measured nursing professionalism, powerlessness and self-esteem among students of the three educational programs. Professionalism was found to be negatively correlated with powerlessness and with practical outlook (which is defined as representing an interest in practical activities, along with the traits of authoritarianism, conservatism, and non-intellectual interests). Autonomy and social extroversion were both positively correlated with professionalism. Educational level was not significantly correlated with professionalism, although educational aspiration was. Murray and Morris (1982) concluded that nursing degree was associated with nursing professionalism. Using the Pankrantz Nursing Questionnaire for measuring nursing professionalism, Murray and Morris found that BSN students scored significantly higher on professional autonomy than the combined students of the other two schools, and higher on the Rejection of Traditional Role Limitations than the AD students (1982). The different findings of these two studies may be explained by the inclusion of attitudes towards patients' rights in the operationalization of nursing professionalism by Murray and Morris (1982). Dagenais and Meleis (1982) do not include patient rights advocacy as a component of professionalism.

While this has not been a comprehensive review of the literature on the various personality characteristics nursing students may or may not have, it would appear, nevertheless, that there is no overriding

"type." The average nursing student has more typically feminine values

and needs, which is not very surprising considering the historically

feminine nature of nursing. As the nurse progresses in educational

level (i.e., AD through BSN) she may be more autonomous and

demonstrate more leadership potential; however, the student may have

brought these attributes into the program and are consequently not the

result of education. The nursing student's sex role identity may be

more masculine the more professional her image of nursing is, which

again is not totally surprising, as the professionalism of nursing may

call upon the rejection of some typically feminine behaviors, such as

passivity and submissiveness.

Therefore, with the somewhat tenuous connection between higher

education and professionalism, nursing may be on the right track with

the differentiation between the two levels of nurses and their

particular educational requirements.

Nursing role orientations

Several researchers have suggested that there are different

types of orientations to nursing. Habenstein and Christ (1955) were

probably the first to categorize nurses after noticing three different

orientations to nursing following extensive interviews with Missouri

nurses. Briefly, the three orientations will be described and will be

later referred to in describing similar orientations.

The traditionalizer uses the traditional, "Nightingale-ish"

tenets from the past for a basis for action. She sees herself in a

nurturant, supportive position, with primary loyalty to the patients'

well being. The traditionalizer will rarely challenge the authority

of the physician, as she feels the nurse's position is always

subordinate to the physician's. The professionalizer legitimates her

authority on the basis of scientific knowledge, advocates the

advancement of this knowledge, attempts to avoid becoming emotionally

or personally involved with patients and feels a nurse can make a

definite contribution to the planning of patient care. The utilizer

sees nursing as a job, not a calling or a career. She is concerned

about completing the tasks of the job and evaluates change in terms of

benefits to herself. Nursing is not a dominant part of her self

identity.

Meyer (1959)also suggested that there were three nursing types:

the administering angel (traditionalizer), the efficient professional

(professionalizer) and the modern nurse, who is a synthesis of the two

previous types. The modern nurse shows concern with the psychological

aspect of illness and applies scientific as well as intuitive methods

to patient care. The utilizer is not found in this trinity.

Corwin (1961) likewise found three orientations: the

service-oriented (traditionalizer), the professionally-oriented

(professionalizer), and the bureaucratically oriented. The latter is

different from the utilizer in that she sees nursing as a career, but

a career specializing in rules, procedures, paperwork and that is

rewarded for skill in administration. She is more closely aligned

with the employing organization rather than with patients or nursing

per se.

Holliday's (1964) three types are more idealistic images rather

than physicial realities; however, they closely resemble the

orientations already described of the traditionalizer, the professionalizer and the modern nurse. Davis and Olesen (1964) describe four images: the advanced professional, the traditional, the bureaucratic, and the lay image. The lay image has bits of the traditionalizer in addition to rather Hollywood type dramatic and mystical elements. Dagenais and Meleis (1982) found three concepts of nursing which they called professionalism, work ethic, and empathy.

Do these orientations really exist today? Corwin, Taves and Haas (1961) found that nursing students who acquired professional values in school came into conflict with the bureaucracy of the hospital. Kramer (1974) has based several studies on Corwin's scale for measuring role conceptions. Minehan (1977) attempted to update Corwin's scale, feeling its language was outdated. She administered both the new tool and Corwin's instrument to 42 RNs employed at a hospital. Through factor analysis, the results indicated that not only were the two instruments incomparable but there was overlap in the respondents' interpretations of both of the scales' items. Factors were not solely made up of professional or bureaucratic items, but instead consisted of combinations of items representing the different orientations. The author suggested that the beliefs upon which nurse role conception are based have shifted since the early 1960's.

Nevertheless, these orientations are used in nursing research today. Chiefly they are used as reference points against which changes in values are measured. Davis and Olesen (1964) studied the changes in four different nursing images mentioned earlier students

may experience after completing one year of nursing school. The authors found that lay images held steady, bureaucratic and traditional images became weaker, and professional images strengthened markedly. Overall, the lay, bureaucratic, and traditional images were more heavily endorsed than the professional image.

Brown, Swift and Oberman (1974) attempted to replicate the Davis and Olesen study (1964). Brown, Swift and Oberman found that at entry, the nursing students of their study were very similar to the subjects of the older study at entry. After one year a general deterioration of images was evident as none was held as strongly as before. The greatest weakening occurred among the traditional, lay, and bureaucratic images. The professional image held steady except for the dramatic drop in one of its attributes, nursing as an occupation that is highly respected. This rather sad drop also occurred during the 1964 study. Both studies also measured the personal importance of the various nursing attributes to the nursing students. Values endorsed by the two groups were basically similar and remained relatively constant over the first year. The older students in the second study were less attached to professional norms and values than the beginning students.

Both Murray (1983) and Stoller (1978) used Habenstein and Christ's (1955) orientations in their research. Murray hypothesized that one of the reasons nurses leave their jobs is that they find it difficult to meet public expectations. Role conflict was measured as the difference the nurse felt existed between the public's role expectations for a nurse and her own nursing image. The

professionalizer and traditionalizer orientations were used. All of
the self images were lower than the public images. Role conflict was
highest among second and third year nursing students. The second and
third year students were also more likely to intend to leave nursing.
Murray suggested that conflict might be highest for these students
because, although they were now aware of public demands, they felt as
yet unable to cope with them.

Stoller (1978) measured the conceptions of the nursing role in
first year and graduating students of a diploma school. The entering
students had rather an unclear, contradictory conception of nursing,
endorsing both traditionalizer and utilizer orientations rather
highly. The graduating students' conceptions of nursing were more
traditional and professional. The differences between the two classes
involved greater demands for autonomy and an increased awareness of
the nurse's ability to contribute to patient care among the senior
students. However, the senior students were less likely to highly
endorse other professional attributes and instead emphasized the
one-to-one relationship between the nurse and patient, a traditional
value. They also rejected many utlizer attributes.

Whelan (1984) used the Corwin Role-Orientation Instrument (1962)
as modified by Bevis (1973) to determine whether students were
"professionalized" in the process of attending a special baccaluareate
nursing program that emphasized professional attributes. This program
was for RN's pursuing a baccalaureate nursing degree. Graduating
students from this program held role orientations which were less
bureaucratic, more professional and more service-oriented than

entering students.

Once again, a clear cut picture of the typical nursing student is not evident. It can be generally agreed that the nursing role expectations prior to nursing school will be different than those a student has upon graduation. How much of this change can be directly attributable to the educational process is uncertain, but it is very probable that the professional role socialization that occurs during nursing school may contribute to the acquisition of a professional orientation, as well as subsequent job dissatisfaction.

Self concepts of nursing students

A somewhat dated study (Fox, 1961) found that only 10% of nursing students made their career choice after 17, compared to 41% of college women enrolled in non-nursing majors. More recently it was found that although high school seniors had very positive attitudes towards nursing in general, they exhibited extreme ignorance as to what nurses do (Rudov, 1976). It would seem then that the typical 18 year old nursing student may not fully understand what she is getting into, and so may enter school with inappropriate nursing role conceptions, as was discussed in the previous section. One of the goals of the nursing profession is that the educational process may instill in the student a more realistic conception of the nurse through professional socialization.

Several researchers have studied the self concept of nursing students during different stages in education and in comparison to those of faculty members'. In Brown, Swift and Oberman's study (1974), the students' conceptions of nursing became more like the

faculty's after one year of study, but these values were not necessarily incorporated into the students' own value systems. George (1982) gave 132 BSN students the 20 Statements Test in which one answers the question, "Who am I?". If a nursing reference was made among the first five answers, the nurse concept was considered to be primary to the student. There were no significant differences among sophomores, juniors, or seniors on the incidence of primary nursing concepts, contrary to what was hypothesized. A rather sad finding was that 46 (35%) of the students made no references to nursing at all! Dalme (1983) looked at the relationship between the professional identity nursing students developed and the perceptions of their peers, faculty and staff nurses. She found that peer influence was the strongest of the three influences in developing professional identities for both sophomores and juniors. For the sophomores, this influence was the only influence, whereas the juniors were affected by all three. Peer influence was also evident in Waltz's study on faculty influence and student preference for practice (1978). Students' biases toward faculty members were influenced by faculty members' reputations among the students. This in turn influenced the students' preferences for practice.

Self concept as a _professional_ nurse may not be dominant for most nursing students, yet they do perceive themselves differently than do other students. Davis compared nursing students' and social work students' self images and their images of their chosen professions, hypothesizing that the self concepts might be similar as these two occupations are considered feminine (1969). Both sets of

students took the Gough Adjective Check List, rating their "self," and then the characteristics for nurses and for social workers. Nursing students tended to rate themselves as dependable, methodical, capable and conscientious, a pattern of traits that is very similar to that produced by having the nursing students and the social workers rate nurses. The social workers described themselves as independent, spontaneous and assertive, while describing social workers as capable, forceful and strong willed. Davis suggested that the social workers tended to define themselves as individuals first, and secondarily as social workers. The reverse was true for the nursing students.

From these studies, limited in number admittedly, it would appear that nursing students can identify with professional nursing values as exemplified by faculty and staff nurses; however, these values may not necessarily be incorporated into the nursing students' self concepts. Peer influence is particularly persuasive in the adoption of a professional nursing self concept. This may be particularly relevant, as the Professional Role Development class that the nursing students attended is the first part of a three year course. The nursing students take the class in their sophomore, junior and senior years of school, each class presumably geared for the greater sophistication in knowledge and clinical skills each group of students has. As each class (e.g., of 1985) takes the entire three part course together, it could be assumed that peer influence might be particularly strong here.

Of the above mentioned studies that measured changes in values

of nursing students, all are cross-sectional in design except for

Davis and Olesen (1964). In the above study, the same group of

students were assessed twice; the first time as they entered the BSN

program as sophomores and the second time as they began the second

year of the program as juniors. The design for this thesis is

longitudinal as well; however, there was only be one semester between

assessments. These students had only one nursing course other than

the Professional Role Development course. The most similar study in

terms of attempting to measure a particular element of the nursing

student's education, rather than the overall effect, is the Whelan

study (1984) in which RN's were exposed to a two year curriculum

specifically designed to introduce "professional" values.

As discussed earlier, this thesis used factor analysis on the

two instruments (Stoller, 1978; Murray, 1983) as Minehan (1977) did

with the Corwin Role-Orientation Instrument. The results of such

analyses determined whether there are the three underlying constructs

(professionalizer, traditionalizer, utilizer) in the two instruments

and whether the individual items belong to the constructs as intended

by the designers. If the three orientations cannot be demonstrated,

factor analysis will determine what constructs are there instead, and

whether these constructs are the same for nursing students, nurses,

and college students not majoring in nursing. Additionally, the

reponses of the nursing students exposed to a course on nursing

professionalism were examined to determine the possible effects of

such a course on the orientations and attitudes of the students.

METHOD

Subjects

After obtaining permission from the nursing program of a large
midwestern religously affliated university, the questionnaire was
administered to 82 sophomore nursing students (all female) in
attendance for the first day of the "Professional Role Development"
class in January, 1984. The questionnaire was again administered in
May, 1984 on the last day of class to all the students in attendance.
This class, taught by a RN with a Ph.D. in nursing, met three times a
week, 50 minutes per session. Besides presenting the historical
development of nursing, various theories relating to the role of the
nurse in the health care setting (e.g., systems, role, and
communication theories) were presented. Some of the objectives of the
course included volunteer service, membership in a student nursing
organization and setting professional growth goals for oneself.

During the same semester, female non-nursing majors taking
Introductory Psychology classes were recruited via the Introductory
Psychology subject pool. These students received one psychology lab
credit upon completion of the questionnaire. One-hundred and fifty
female nurses employed at the medical center of this same university
were surveyed during September of 1984.

Materials

The questionnaire was composed of three parts. The first part consisted of a modified and edited version of the questionnaire used by Murray (1983). In Murray's study, nursing students and nurses were asked to rate their image of themselves and the public image of nurses along three dimensions; professional, traditional, and personality. Each dimension consisted of eight adjectives or adverbs and their antonyms. Using a five-point scale, the subjects rated how closely these words described themselves or the public image of nurses. Murray (1983) derived the descriptors used for the professional and traditional dimensions from the work of Habenstein and Christ (1955).

For the purposes of the present study, only the professional and traditional dimensions, with slight modifications, were used from Murray's survey (1983). One set of antonyms on the professional dimension, "dim-clever", was changed to "dull-clever", as "dim" is not as commonly used in the United States to describe slow-wittedness as it is in Britain (where Murray's study took place). Because of this change, the antonyms "dull-lively" in the traditional dimension were altered to "lethargic-lively". The personality dimension included the trait of sympathy, however, sympathy is a key component of the traditional orientation, and so "unsympathetic-sympathetic" was included as part of the traditional dimension for this study. The antonyms "quiet-talkative" were removed from the traditional nurse as it is unclear how they represent the traditional nurse (by Murray's arrangement, the traditional nurse is talkative). "Delicate-healthy" was changed to "weak-healthy", as perceiving oneself as delicate may

be just as positive as perceiving oneself as healthy. "Weak" is a
more negative antonym. The antonyms "unhappy-happy" were changed to
"unhappy-cheerful" to reduce the number of direct opposite antonyms
(e.g., disorganized-organized). Based on the literature on the
"professional" nurse, "persistent-innovative" was added to the
professional dimension. This set was to represent the creativity the
nursing profession would like its nurses to possess. See Appendix A
for the revised scale.

These 17 sets of antonyms were arranged in random order with
some having a negative adjective/adverb first and others having a
positive adjective/adverb first. The order of represented dimensions
was also randomized. The nursing students, psychology students, and
nurses were first asked to describe themselves using the
adjectives/adverbs, and then to describe the "ideal nurse."

The second part of the questionnaire was made up of 21
statements from Stoller's (1978) study on nursing role conceptions,
plus four more contributed by the instructor of the Professional Role
Development course. Stoller did not specify which statements
represented which orientation, i.e., traditional, professional or
utilitarian and contact with her has not been possible. However, the
21 statements were given to a nursing school faculty member familiar
with nursing role orientations who categorized the statements by
orientation. Her categorizations were very similar to mine. The
result was seven utilitarian, six professional, and eight traditional
statements. The subjects were asked to evaluate their responses to
the 25 statements (including the four contributed by the instructor).

Following Stoller, the subjects were to answer using a seven-point scale, ranging from strongly disagree to strongly agree. See Appendix B for a list of the 25 statements.

The final part of the questionnaire asked for background information of the subjects. As the nursing students were to take the questionnaire twice, they were asked to write down the last four digits of their Social Security number, thus serving as an identifier for pretest-posttest evaluation. The psychology students and the nurses were not asked this. All subjects were asked their age and marital status. Nursing and psychology students were asked about their experience in patient care, ranging from none to work as a registered nurse. Nurses and nursing students were asked at what age they had decided to become a nurse. Nurses were asked what nursing degree they had and how many years they had worked since receiving their degree. Psychology students were asked their major, or the major they were strongly considering. See Appendix C for the complete questionnaire.

Procedure

The questionnaire was administered to the nursing students on the first and last days of the Professional Role Development course. The instructor of the course was not in the room at the time. The students were assured that the questionnaire was not part of the course, and that all the answers would be kept confidential. The questionnaire was administered to small groups of psychology students throughout the same semester.

The administration procedure for the nurses was somewhat more complicated. In order to reduce the amount of intrusion into the nurses' working day, nine head nurses of reasonably large sized departments at the university's medical center were contacted and asked to help distribute the questionnaires. Each head nurse was sent a packet of 15 questionnaires (one, with a very large department, was sent 30), totalling 150 questionnaires. Although BSN educated nurses were required for this study, it was considered to be too much trouble to ask the head nurses to screen respondents; therefore, a screening question (asking for nursing degree) was included on the questionnaire. Since the head nurses were asked to hand out the questionnaires at their discretion, the sample is far from random. An inter-office mail envelope was attached to each questionnaire, addressed to the Nursing Service office of the medical center. The nurses were instructed to place the completed questionnaire into the envelope provided.

RESULTS

This section will be organized around the purposes and specific
hypotheses of the thesis. First, the subjects will be briefly
described, followed by a presentation of their responses to the
questionnaire. Then the major questions of the thesis will be
discussed. The factor analyses of the two instruments to determine
orientations for the various groups will be described, followed by
pretest-posttest comparisons of the nursing students, ending with a
discussion of the how the groups answered the questionnaire
differently. Variables that were associated with a particular
characteristic of each group will also be discussed.

To make this section less cumbersome, several abbreviations are
used. Nursing students are referred to as NSs, introductory
psychology students are PSs, and working nurses are RNs. The scales
are referred to as "Yourself" (first part of the first instrument),
"Ideal Nurse" (second part of the first instrument), and "Behavior".
Abbreviations of the 25 items of Behavior are in Appendix B.

It was felt that a statistically significant alpha level of .05
would be too lenient given the large number of statistical tests
performed on the data. Ryan (1959) suggests that a more appropriate
alpha level is to be found by dividing the overall alpha level desired
by the number of statistical tests. In the case of the present
analysis, the resulting alpha level would approximately equal .0003.
Feeling that this is rather too stringent, a somewhat arbitrary
compromise of .02 was used, which represents an intermediate level of

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stringency. Therefore, all significant results reported here have a probability level of .02 or less.

Respondents

Of the 82 NSs who took the questionnaire on the first and last days of the Professional Role Development class, 18 were present only for the first day, and another 18 were present only on the last day, leaving 64 present on both days. These 64 students were identified by the last four digits of their Social Security numbers that they were instructed to write down on the questionnaire. Attendance on both of these days does not, however, indicate a perfect attendance record for the semester; therefore, it can only be assumed that these students were indeed present during the majority of the class sessions. Over the course of the same semester (Spring 1984), 64 female PSs completed the questionnaire. Of the 150 questionnaires given to female RNs at the Loyola University Medical Center, 70 were returned, a return rate of 47%. Sixteen of the questionnaires had been completed by nurses who did not have a BSN and two were completed by nurses with Master's degrees. The resulting 52 RNs with BSNs only were used in the data analysis. Table 1 presents various characteristics of the three groups. As can be seen, the NSs had some older, returning women students among the mostly younger women, while PSs were made up of typically college-aged women. Although the RNs were significantly older than the other two groups, they were still rather young, which also shows up in their years of nursing experience as a BSN, the average amount being less than five years.

Table 1

Age, Marital Status, and Patient Care
Experience for Three Groups

	NSs (n=64)		PSs (n=64)	RNs (n=52)
	Pretest	Posttest		
Mean age	20.5	20.7	18.8	27.5 a
(range)	(18-39)	(18-39)	(18-24)	(23-48)
Married	5	5	2	24
Patient care experience				
None	34	26	48	—
Volunteer	20	27	14	—
LPN/Aide	9	9	2	—
Diploma school	1	1	—	—
Years working	—	—	—	4.7
(range)				(1-21)

a Significantly different from NSs and PSs at $\underline{p}$ < .02

The majority of PSs had had no experience with patient care, while half of the pretest NSs were similarly non-experienced. Over the course of the semester, however, seven NSs gained volunteer experience. Chi-square analysis of the relationship between patient care experience and group (NSs and PSs) did show a significant effect, X^2 = 16.96, $\underline{p}$ = .009.

Both the NSs and RNs had decided to become nurses at about the age of fifteen and a half. The ranges of ages given were also similar; 6-26 for pretest NSs, 5-24 for posttest NSs (showing some variation in memory) and 4-25 for the RNs. The expected majors of the PSs were quite varied. Social science and business were chosen by 13 each of the PSs. Science was chosen by 11 students, while four chose math/computer science, another four picked humanities/law and two each chose fine arts, education and social work. Eleven of the PSs were undecided on major.

Method of Analysis

Item Means

Tables 2 and 3 present the means and standard deviations of the responses of the various groups. The item which was added to the first instrument, Innovative-Persistent, was found not to be a true pair of antonyms. The variation in the answers of the respondents also indicated the confusion surrounding this item (some respondents checked both ends of the scale for Ideal Nurse), and so it was dropped from subsequent analyses. A cursory examination of Table 2 reveals that the Ideal Nurse was rated higher than Yourself on all the items (except Innovative-Persistent) by all the respondents. In addition,

Table 2

Means and Standard Deviations of Yourself and Ideal
Nurse for Three Groups (1=low, 5=high)

	NSs								PSs				RNs			
	Yourself				Ideal Nurse				Yourself		Ideal Nurse		Yourself		Ideal Nurse	
	Pretest		Posttest		Pretest		Posttest									
	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD
Innovative	2.77	.93	2.95	.96	2.73	1.16	2.86	1.54	3.16	.99	2.67	1.18	2.92	.87	3.39	1.34
Organized	3.77	.87	3.80	.89	4.88	.33	4.83	.38	3.92	1.12	4.79	.51	4.38	.66	4.94	.24
Competent	4.42	.53	4.44	.53	4.80	.41	4.91	.29	4.38	.68	4.86	.35	4.58	.57	4.96	.19
Knowledgeable	4.11	.51	4.08	.51	4.77	.43	4.84	.41	4.17	.52	4.69	.59	4.25	.59	4.90	.30
Careful	4.30	.55	4.23	.61	4.89	.31	4.88	.38	4.06	.81	4.84	.60	4.52	.50	4.98	.14
Skillful	3.94	.66	3.89	.65	4.81	.39	4.92	.27	3.78	.79	4.81	.50	4.17	.66	4.90	.36
Industrious	3.94	.59	4.03	.64	4.66	.48	4.72	.45	3.92	.74	4.45	.71	4.21	.70	4.86	.40
Efficient	4.25	.59	4.22	.45	4.83	.38	4.89	.32	4.17	.63	4.81	.43	4.23	.54	4.94	.24
Clever	3.80	.62	3.89	.65	4.44	.69	4.58	.59	3.92	.57	4.30	.88	3.69	.80	4.54	.64
Healthy	4.41	.61	4.39	.63	4.78	.45	4.81	.43	4.36	.68	4.81	.39	4.35	.71	4.85	.36
Coolheaded	3.39	.99	3.34	.95	4.25	.93	4.33	.80	3.28	1.03	4.20	.86	3.48	.87	4.19	.77
Sympathetic	4.61	.55	4.55	.59	4.73	.48	4.72	.52	4.41	.71	4.56	.69	4.19	.56	4.54	.64
Warm	4.39	.58	4.48	.59	4.77	.43	4.80	.44	4.33	.69	4.47	.80	4.21	.75	4.77	.42
Cheerful	4.33	.54	4.36	.63	4.66	.48	4.63	.55	4.08	.80	4.45	.69	4.21	.88	4.64	.60
Friendly	4.56	.53	4.64	.55	4.83	.38	4.86	.39	4.39	.61	4.69	.50	4.31	.78	4.81	.44
Lively	4.28	.58	4.20	.60	4.53	.56	4.56	.53	4.09	.71	4.28	.74	4.02	.80	4.50	.61
Confident	4.61	.99	3.84	.84	4.70	.49	4.78	.52	3.45	1.17	4.45	.85	3.76	.99	4.56	.64

Table 3

Means and Standard Deviations of Behavior for
Three Groups (-3=strongly disagree, +3=strongly agree)

| | NSs | | | | RNs | | PSs | |
| | Pretest | | Posttest | | | | | |
	M	SD	M	SD	M	SD	M	SD
Not show pat upset	.77	1.62	.59	1.63	-.21	1.83	1.02	1.64
Thing of pat problems	-.17	1.61	-.05	1.65	-.71	1.68	.16	1.82
1-to-1 relationship	1.20	1.51	1.45	1.58	.65	1.45	.61	1.56
Become close	1.06	1.14	.97	1.10	.58	1.60	.84	1.53
Wife/mother	1.55	.93	1.48	1.32	.75	1.20	1.34	1.14
Dedication to pat	1.66	1.04	1.59	1.78	1.04	1.19	1.69	.97
Help people	2.31	.79	2.17	.81	1.69	1.09	2.37	.68
Sympathy) science	.14	1.59	.22	1.44	-.14	1.48	.11	1.62
Not criticize	.09	1.92	.28	1.69	-.73	1.59	.47	1.88
10% raise	-.98	1.37	-1.19	1.45	-.04	1.87	-.31	1.68
Job	-.10	1.54	-.24	1.48	-1.59	1.25	.13	1.49
Train for money	-1.05	1.38	-1.23	1.39	.31	1.85	-.13	1.79
Not think of pat	-.53	1.35	-.42	1.42	.33	1.68	-.27	1.62
Money rewarding	-1.44	1.12	-1.77	1.14	-1.77	1.23	-1.55	.97
Not disrupt	.35	1.54	-.17	1.54	-.96	1.48	.48	1.72
Think clearly	1.61	1.28	1.75	1.21	2.08	.88	1.81	.91
Science	.63	1.50	.00	1.38	.50	1.48	.73	1.41
ANA	.50	1.27	1.60	1.43	.04	1.61	.47	1.35
Tell Dr.	.91	1.33	1.14	1.22	1.64	1.12	1.16	1.32
Care plan	1.98	.83	2.23	.66	2.27	.69	1.53	1.23
Contribute views	1.37	1.45	1.41	1.39	1.85	1.09	1.47	1.43
Kinder to men	1.41	1.56	.69	1.84	1.31	1.42	.77	1.77
Assume responsibility	2.61	.75	2.53	1.14	2.73	.60	2.36	1.03
Self-actualization	1.66	.88	2.13	.78	.88	1.13	1.48	.91
Theory	1.19	1.08	1.91	.90	1.71	1.05	.89	1.11

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the variability of the ratings for the Ideal Nurse is lower than the ratings for Yourself. This suggests that not only was the Ideal Nurse seen truly as an ideal, but that there was a fair amount of agreement concerning the ratings of the Ideal Nurse.

Factor Analysis

The purpose of factor analysis is to determine whether there are underlying constructs that account for observed relationships among the variables in question (Kim & Mueller, 1978). In the present case, factor analysis will determine whether there are certain underlying constructs (e.g., Traditional) that are responsible for the covariation among certain variables (e.g., friendly, sympathetic, and so forth). If these particular constructs do not seem to be present, factor analysis will reveal what constructs are there instead, and will also reveal whether RNs, NSs and PSs respond to the instruments in such a fashion as to demonstrate different or similar constructs, or orientations, to nursing.

All of the items of the instruments were coded so that a high value represented an endorsement of the variable in question. For each group (i.e., NSs pretest, NSs posttest, RNs, and PSs), the responses to the 16 items for Yourself, the 16 for Ideal Nurse and the 21 items for Behavior were factor analyzed. All the factors were constructed using principle components extraction and Variamx rotation via SPSSx. A maximum number of factors (two, three or four) was specified prior to each analysis, and was determined by what question was being pursued.

The results of the factor analysis will be presented by major question asked. In order to facilitate this discussion of the factor analysis, factors that were considered interpretable were given names, e.g., Traditional. Unfortunately, not all factors were easily labeled. Some factors were given identical names although they were not identical in pattern, as considering the large number of factors found, it was impossible to create unique factor names for factors that were only slightly different in the pattern in which the items loaded. The tables in the following sections present for the various scales all the loadings of rotated factors that had Eigenvalues greater than one as well as explaining at least 10% of the variance (unless other wise noted).

Does the first instrument measure the underlying constructs of the Traditionalizer and Professional? The answer to this question is a definite "yes," when one is describing oneself. Tables 4 and 5 present the factors, factor loadings and the percent of variance explained by the factors for the three groups, while Table 6 presents the percentage of items that loaded in the patterns the proposed Traditional and Professional orientations would predict. From these tables it can be seen that one can describe oneself very easily with these two dimensions. Neither the pattern of loadings nor the amount of variance explained changes much for pretest-posttest NSs. An interesting difference between NSs and RNs is that the Traditional factor explains 12.2% to 13.9% more variance of the RNs responses than for NSs responses, possibly indicating that this "side" of their personalities is more salient than it is for NSs. Another difference

Table 4

Largest Loadings for Two Factors, NSs
Yourself and Ideal Nurse Pretest-Posttest

	Yourself Pretest		Ideal Nurse Pretest		Yourself Posttest		Ideal Nurse Posttest	
	Traditional	Professional	Factor 1	Factor 2	Traditional	Professional	Professional	Traditional
Organized		.34		.65		.63	.61	
Competent		.74		.59		.46	.81	
Knowledgeable		.50	.56			.47	.82	
Careful	.55		.81		.58		.42	
Skillful		.39	.76		.36		.73	
Industrious		.64		.59		.31		.69
Efficient		.46	.84			.70	.68	
Clever		.51		.64		.71		.71
Healthy		.52		.61	.23		.53	
Coolheaded	.56		.35		.62			.34
Sympathetic	.57		.80		.61			.63
Warm	.70		.85		.60			.77
Cheerful	.60			.84	.66			.68
Friendly	.72			.67	.58		.61	
Lively	.56			.59	.48			.72
Confident	.36		.68			.46	.29	
Variance explained	22.3%	13.1%	45.1%	10.1%	24.0%	13.2%	33.8%	13.9%
Total variance explained	35.4%		55.2%		37.2%		47.7%	

Table 5

Largest Loadings for Two Factors, RNs and PSs Yourself and Ideal Nurse

	RNs Yourself		RNs Ideal Nurse		PSs Yourself		PSs Ideal Nurse	
	Traditional	Professional	Traditional	Professional	Professional	Traditional	Factor 1	Factor 2
Organized		.76		.69	.67			.66
Competent		.68		.80	.66			.55
Knowledgeable		.61		.73		.52		.78
Careful		.55		.81	.56		.54	
Skillful		.64	.66		.44			.70
Industrious	.50		.65		.54		.80	
Efficient		.76		.64	.68		.84	
Clever	.64		.72			.72	.59	
Healthy	.34			.61	.55		.64	
Coolheaded	.22		.54			.49	.42	
Sympathetic	.47		.29			.51		.78
Warm	.66		.50			.48	.63	
Cheerful	.82		.82			.48	.70	
Friendly	.69		.66			.60		.57
Lively	.83		.52		.74			.56
Confient	.62		.71			.62	.43	
Variance explained	36.2%	12.2%	38.4%	13.5%	26.3%	13.1%	37.4%	11.2%
Total variance explained	48.4%		51.9%		39.4%		48.5%	

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Table 6

Yourself and Ideal Nurse Percentage of Items Matched
to Proposed Orientations for Three Groups

Subscale	Group	% of items matched
Yourself	NS-pretest	87.5
	NS-posttest	81.2
	RN	87.5
	PS	75.0
Ideal Nurse	NS-pretest	50.0
	NS-posttest	69.0
	RN	75.0
	PS	56.0

between these groups is that the Professional factor explains the most variance for PSs, but the least variance for the other two groups. This seems somewhat odd, especially when one considers that PSs are younger than the other groups.

The resulting factors for Ideal Nurse explain much more variance than found for Yourself; but only for the RNs do the factors resemble the proposed orientations, here matching three out of four items. A nice progression in the "image" of the Ideal Nurse is seen by comparing pretest-posttest NSs, and then comparing these factors to the RNs conception of the Ideal Nurse. Pretest NSs conception of the Ideal Nurse does not come close to matching the proposed model. At the posttest, the factors for Ideal Nurse are more similar to the model, and are also similar to the RNs factors. One's conception of the Ideal Nurse matches the proposed model the more one has been exposed to nursing.

Three factor solution. The possibility that a third factor might contribute to interpretability and the amount of variance explained was pursued. Ten percent more variance explained by a third factor was arbitrarily considered to be important addition. A third factor for NSs Yourself does explain 10% more variance at both the pretest and the posttest (see Table 7). Out of the 16 items, 13 load in the same pattern both times, making up three new factors loosely named Personality, Ministrant, and Performance. Of interest here is how the Personality and Performance factors switch relative positions from pretest to posttest, possibly indicating a change in salience over time for these two constructs.

Table 7

Largest Loadings for Three Factors,
NSs Yourself Pretest-Posttest

	Yourself Pretest			Yourself Posttest		
	Personality	Ministrant	Performance	Performance	Ministrant	Personality
Organized			.47	.71		
Competent			.63	.64		
Knowledgeable			.61	.53		
Careful		.67			.67	
Skillful			.62		.48	
Industrious	.48			.29		
Efficient			.55	.65		
Clever	.44			.65		
Healthy	.71					.67
Coolheaded		.57			.59	
Sympathetic		.81			.75	
Warm		.67			.77	
Cheerful	.63					.63
Friendly	.75					.61
Lively	.67					.75
Confident	.30					.44
Variance explained	22.3%	13.1%	10.0%	24.0%	13.2%	10.1%
Total variance explained		45.3%			47.4%	

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A third factor does not contribute sufficiently to Ideal Nurse for NSs pretest, but it does add 10.8% more variance explained at the posttest (Table 8). However, interpretation is not aided by this third factor. A third factor for PSs Ideal Nurse also explains an additional 10% of the variance, but similarly does not bring sense to the resulting factors. Other analyses failed to find additional factors that added at least 10% more variance explained.

Does the second instrument measure the underlying constructs of the Traditionalizer, Professional, and Utilizer? The answer to this question is, basically, "no." Tables 9 and 10 present the various factors for the three groups. Not only do the items not load as the proposed orientations would predict, they do not load very similarly from group to group, but result in seven different factors.

A confounding variable for the NSs pretest and for PSs is the wording of the statements of Behavior. Of the 21 statements by Stoller (1978), 13 are of the "a nurse should" nature, while the remaining seven are of a more personal "I would" nature. For NSs pretest the Ideal Nurse factor emerges, made up solely of "a nurse should" items. The PSs students were similarly influenced. At the posttest, the NSs were not as easily swayed by "a nurse should," while the RNs were not influenced at all.

Besides the Ideal Nurse factor, NSs pretest and PSs share another factor, Reward, that appears to be bipolar. Items loading on Reward seem to be either intrinsically rewarding or extrinsically rewarding. If one scores high on the intrinsically rewarding set of items, then one tends to score low on the extrinsically rewarding set

Table 8

Largest Loadings for Three Factors,
NSs Ideal Nurse Pretest-Posttest

	Ideal Nurse Pretest			Ideal Nurse Posttest		
	Factor 1	Factor 2	Factor 3	Factor 1	Factor 2	Factor 3
Organized		.67				.46
Competent		.90				.80
Knowledgeable		.61				.79
Careful	.78			.63		
Skillful	.72			.80		
Industrious			.45		.64	
Efficient	.81			.80		
Clever			.65		.76	
Healthy			.49	.59		
Coolheaded			.55			.56
Sympathetic	.79				.57	
Warm	.85				.72	
Cheerful			.67		.74	
Friendly		.50		.74		
Lively			.82		.68	
Confident	.66					.62
Variance explained	45.1%	10.1%	8.9%	33.8%	13.9%	10.8%
Total variance explained		64.1%			58.5%	

Table 9

Largest Loadings for Three Factors, NSs Behavior Pretest-Posttest

	Behavior Pretest			Behavior Posttest		
	Ideal Nurse	Reward	Cool Professional	Devoted Professional	Bureaucrat	Empathy
Not show pat upset (A) a	.55				.52	
Think of pat problems (I)			-.42			.78
1-to-1 relationship (A)	.68					.51
Become close (I)		.37				.75
Wife/mother (A)		.65		.60		
Dedication to pat (A)	.53			.69		
Help people (A)	.50			.65		
Sympathy > science (A)	.45					.54
Not criticize (A)	.31				.40	
10% raise (I)		-.70			.64	
Job (I)		.63		.51		
Train for money (I)		-.55			.64	
Not think of pat (I)			.70			.57
Money rewarding (I)		-.64			.48	
Not disrupt (A)	.59				.34	
Think clearly (A)	.60				.44	
Science (A)			.56		.50	
ANA (A)		.38		.70		
Tell dr. (I)			.54	.34		
Care plan (A)	.36			.58		
Contribute views (A)			.53	.58		
Variance explained	18.9%	12.6%	8.5%	19.6%	12.4%	8.7%
Total variance explained		40.0%			40.8%	

a (A) = a nurse should, (I) = I would

Table 10

Largest Loadings for Three Factors,
RNs and PSs Behavior

	RNs Behavior			PSs Behavior		
	Empathy	Bureaucrat	Underpaid Patient Advocate	Ideal Nurse	Reward	Empathy
Not show pat upset (A) a		.85		.51		
Think of pat problems (I)	.75					.83
1-to-1 relationship (A)			.52	.50		
Become close (I)	.68					.73
Wife/mother (A)			-.24	.51		
Dedication to pat (A)			.41	.60		
Help people (A)			.52		-.47	
Sympathy > science (A)	.40			.56		
Not criticize (A)		.68		.29		
10% raise (I)			.57		.77	
Job (I)		.55		.44		
Train for money (I)			.54		.72	
Not think of pat (I)	-.67					-.70
Money rewarding (I)		.35			.59	
Not disrupt (A)		.51		.40		
Think clearly (A)		.37		.57		
Science (A)			.66	.20		
ANA (A)		.41			-.04	
Tell Dr. (I)			.52			.51
Care plan (A)	.45				-.34	
Contribute views (A)			.51		-.57	
Variance explained	15.4%	13.2%	11.1%	13.2%	11.8%	10.3%
Total variance explained		39.7%			35.3%	

a (A) = a nurse should, (I) = I would

of items, and vice versa.

The third factor for NSs pretest is Cool Professional. This factor includes half of the Professional items, plus some items that indicate some detachment from patients, such as not thinking about the personal problems of patients.

NSs posttest, PSs and RNs share (very loosely) a factor labeled Empathy. This factor mostly concerns becoming close to patients and caring about their personal problems. NSs posttest and RNs also share a factor labeled Bureaucrat. Items involving "smooth sailing" (e.g., not disrupting or criticizing), some Professional items and some money concerns load here. Two factors not shared by any other group are the Devoted Professional of NSs posttest, and the Underpaid Patient Advocate of RNs. Devoted Professional combines Traditional and Professional items, while the Underpaid Patient Advocate combines some of these same Traditional and Professional items with the issue of inadequate pay.

As the third factor on Behavior for both the pretest and posttest of NSs explained roughly 8.5% of the variance, factor analyses were done on Behavior for NSs requesting only two factors. Again, results yield the Ideal Nurse factor at the pretest, and a more defined Reward factor (see Table 11). However, the results for the posttest came closest to representing the proposed orientations. Here the Ideal Nurse includes seven of eight Traditional items while the second factor includes six of the seven Utilizer items. The Professional items are split 50/50 on these two factors.

Table 11

Largest Loadings for Two Factors, NSs Behavior Pretest-Posttest

	Behavior Pretest		Behavior Posttest	
	Ideal Nurse	Reward	Ideal Nurse/ Traditional	Utilizer/ Professional
Not show pat upset (A) a	.46			.50
Think of pat problems (I)		.42	.47	
1-to-1 relationship (A)	.55		.53	
Become close (I)		.32	.52	
Wife/mother (A)		.67	.46	
Dedication to pat (A)	.68		.68	
Help people (A)	.56		.70	
Sympathy > science (A)	.31		.39	
Not criticize (A)	.28			.38
10% raise (I)		-.73		.68
Job (I)		.54	.58	
Train for money (I)		-.59		.67
Not think of pat (I)		-.39		.38
Money rewarding (I)		-.59		.52
Not disrupt (A)	.51			.31
Think clearly (A)	.66			.41
Science (A)	.27			.48
ANA (A)		.37	.64	
Tell dr. (I)	.36			.26
Care plan (A)	.46		.52	
Contribute views (A)	.73		.57	
Variance explained	18.9%	12.6%	19.6%	12.4%
Total variance explained	31.5%		32.0%	

a (A) = a nurse should, (I) = I would

How similar are the resulting factors for the three groups?

Comparability in the factor patterns between the groups was assessed by tallying up the number of items that loaded in similar patterns. The percentages of items that loaded similarly on a particular factor for each comparison, e.g., RNs and pretest NSs, are shown in Table 12. Again, the most agreement is found with Yourself, followed by Ideal Nurse and finally, Behavior. There is some shifting about from pretest to posttest such that, at the pretest, NSs factor patterns from Yourself more closely resembled RNs than they did at posttest. The pretest-posttest shift is in the opposite direction for Ideal Nurse. PSs and RNs do not agree much on the Ideal Nurse, as might be expected. As mentioned earlier, Behavior yielded a variety of factors, so it is not surprising that very few items load on similar factors when looking at the three groups.

Similarity of factor patterns tells whether the factors are made up of the same items or not, but it does not assess the differences in magnitude of the factor loadings. From the comparisons of Table 12 where 67% of more of the items were matched, the difference of the values of the loadings was taken and summed (using absolute values) for each factor, as in Bryant and Veroff (1982). The means of these magnitude differences for each factor are presented in Table 13. Here we can see that some factors are quite stable in magnitude, particularly the factors for Yourself and Ideal Nurse. Large differences in magnitude were found for Behavior, with some items loading so differently as to be positively loaded for one group and negatively loaded for another.

Table 12

Yourself, Ideal Nurse and Behavior Percentage
of Items Matched Among the Three Groups

Scale	Groups	Factors	% of items matched
Yourself	RNs-NSs pretest	2	75.0
	RNs-NSs posttest	2	68.7
	PSs-NSs pretest	2	75.0
	PSs-NSs posttest	2	56.0
	PSs-NSs	2	75.0
Ideal Nurse	RNs-NSs pretest	2	50.0
	RNs-NSs posttest	2	81.2
	PSs-NSs pretest	2	56.0
	PSs-NSs pretest	3	68.7
	PSs-NSs posttest	2	62.5
	PSs-NSs posttest	3	56.0
	PSs-RNs	2	56.0
Yourself-Ideal	RNs	2	87.5
	PSs	2	56.0
Behavior	RNs-NSs pretest	3	38.0
	RNs-NSs posttest	3	67.0
	PSs-NSs pretest	3	67.0
	PSs-NSs posttest	3	43.0
	PSs-RNs	3	43.0

Table 13

Average Difference of Loading Magnitude
of Matched (67% or greater) Factors

		Average Difference		
Subscale	Group	Factor1	Factor2	Factor3
Yourself	NSs pretest-posttest	Trad = .07	Prof = .23	
Yourself	NSs pretest-posttest	Pers = .08	Mini = .04	Perf = .11
Yourself	RNs-NSs pretest	Trad = .18	Prof = .23	
Yourself	RNs-NSs posttest	Trad = .19	Prof = .14	
Yourself	PSs-NSs pretest	Trad = .14	Prof = .14	
Yourself	PSs-RNs	Trad = .14	Prof = .08	
Ideal	PSs-NSs pretest	Fact1= .07	Fact2= .16	Fact3= .16
Ideal	RNs-NSs posttest	Trad = .17	Prof = .12	
Yourself-Ideal	NSs pretest	Pers = .13	Mini = .11	Perf = .16
Yourself-Ideal	RNs	Trad = .15	Prof = .14	
Behavior	PSs-NSs pretest	Fact1= .09	Fact2=1.10	Fact3= .89 a
Behavior	RNs-NSs posttest	Fact1= .30	Fact2= .20	Fact3= .37 a

a Major differences in positive-negative loadings.

<u>How</u> <u>do</u> <u>the</u> <u>factors</u> <u>change</u> <u>from</u> <u>pretest</u> <u>to</u> <u>posttest</u> <u>for</u> <u>the</u>
<u>nursing</u> <u>students?</u> Table 14 presents the percent of items loading on
similar factors for the pretest and posttest. For Yourself there is
very little change. The factors are similar and at both times explain
roughly the same percentage of variance. The main difference here is
the switch (mentioned earlier) in salience of the Personality and
Performance factors of the analyses for three factors.

The factors for the Ideal Nurse are not very similar; however,
the two factors more closely resembled the proposed orientations at
the posttest than at the pretest (Table 6), indicating some shift to a
standard "ideal" over time. There is likely to be some instability
within the Ideal Nurse responses (for the RNs and PSs as well as for
the NSs) as the result of a ceiling effect and low variation. Such
instability may be relected in the general uninterpretability of the
Ideal Nurse factor.

Nearly two-thirds of the items loaded in similar patterns when
comparing Yourself and Ideal Nurse for two factors. This percentage
(62.5%) did not change from pretest to posttest. This might suggest
that the difference (or similarity) between Yourself and the Ideal
Nurse is rather stable over time.

The factors for Behavior are so dissimilar between pretest and
posttest, that looking back at Tables 9 and 11 may be necessary for
the following discussion. For both the two- and the three-factor
solutions a major differences is the waning of the "a nurse should"
influence. At the posttest for two factors, "a nurse should" is still
evident, yet is subsumed under Traditional. Also different for two-

Table 14

Yourself, Ideal Nurse, and Behavior Percentage of
Items Matched Pretest, to Posttest for NSs

Scale	Time	Factors	%of items matched
Yourself posttest-pretest		2 factors	81.2
		3 factors	81.2
Ideal Nurse pretest-posttest		2 factors	44.0
		3 factors	62.5
Ideal Nurse-Yourself pretest		2 factors	62.5
		3 factors	68.7
Ideal Nurse-Yourself posttest		2 factors	62.5
		3 factors	44.0
Behavior pretest-posttest		2 factors	48.0
		3 factors	33.0

and three-factor solutions is the issue of money. At pretest, money concerns are rejected by NSs and this shows up in the Reward factor, made up of intrinsic (e.g., "I would become close to patients") and extrinsic (e.g., "If I could get a 10% raise out of the nursing field, I would take it") items. At this time, the rewards of nursing for NSs are either intrinsic or extrinsic, but never both. At the posttest, money concerns are just as strongly rejected (see Table 3); however, they are integrated into more professional concerns. Over the course of the semester the NSs appear to have recognized that, like it or not, low pay is part and parcel of being a nurse.

An additional comparison of the pretest and posttest factors is to determine whether the NSs responded more "professionally" at the posttest. One way of assessing change in "professionality" is to compare the factors of NSs to PSs and RNs, hypothesizing that NSs will be more like PSs at the pretest, but more like RNs at the posttest. Looking at both Tables 12 and 13, it can be seen that at the pretest, Yourself for NSs is very similar to Yourself for both PSs and RNs, with the similarity of loading magnitudes greatest between NSs and PSs (although factors switch in relative importance) than between NSs and RNs. Oddly enough, the magnitude of factor loadings is even more similar for PSs and RNs. At the posttest, NSs share fewer items with either PSs or RNs, although the drop in shared items is greatest for PSs. Again, the switch in salience for Personality and Performance might suggest that such work-oriented issues are now more important.

At the pretest the image of the Ideal Nurse for NSs is closer to that of PSs than RNs, however, at the posttest NSs are closer to RNs.

This change suggests that NSs had less vague images of the Ideal Nurse, growing more cohesive and similar to RNs and the proposed orientations over time.

By the time of the posttest, NSs were less influenced by the "a nurse should" statements of the Behavior instrument, possibly because of a more realistic idea of what nurses do. In terms of resembling the two other groups, NSs did not resemble RNs at the pretest and did resemble PSs. The difference in the magnitude of the loadings between NSs and PSs is substantial, mostly a result of positive and negative loadings flip-flopping on the items for the two groups (see Tables 9 and 10). At posttest, NSs more closely resemble RNs than PSs, but again, the magnitude of loadings is very different. As mentioned earlier, money concerns are now accepted by NSs, as they are for RNs, however, they are kept separate from patient care concerns, grouped under the Bureaucrat factor. The RNs, on the other hand, can been seen as more practical perhaps, knowing that caring for patients and not being paid enough for this care go together. One might even conceive of RNs as martyrs, but perhaps they are just being realistic. PS and RNs were very dissimilar from each other.

Data from the NSs posttest are used to represent NSs in all of the subsequent analyses comparing the three groups. The decision to use the posttest data was made because at the time of the posttest, NSs were one-third of the way through their nursing education, and so may be conceptualized as being near the middle of a continuum of "nursing awareness." PSs would be at the low end and RNs would be located at the high end of this continuum.

Do the proposed underlying constructs resemble each other?
Because the two instruments were both designed to measure the
Professional and Traditional orientations, comparisons were made to
see how similar the instruments were in these respects. By summing up
the particular variables that "belonged" to a particular orientation
and to a particular referent, the subscales of the proposed
orientations were created for both instruments. The subscales were
then assessed for reliability (see Table 15). The subscales of the
first instrument (Yourself Traditional, Yourself Professional, Ideal
Nurse Traditional and Ideal Nurse Professional) are very reliable.
The subscales of Behavior are not as reliable (the items of Instructor
were not conceived to represent a scale). These subscales were then
correlated with each other for each group (see Tables 16, 17, and 18).
Correlations of probability levels of .02 or less are reported in
Table 19. Considering that the orientations of Professional and
Traditional are believed to be represented in both of these two
instruments, relatively few of the expected relationships achieve
statistical significance. The Traditional subscale from Behavior
correlates with Ideal Nurse Traditional for RNs, does not correlate
with anything for PSs and correlates with Professional from Behavior
for NSs. The Professional subscale from Behavior does correlate with
Ideal Nurse Professional for NSs, but also correlates with Ideal Nurse
Traditional and the Traditional subscale from Behavior. Utilizer is
positively correlated with Yourself Professional and negatively
correlated with Instructor for NSs. Instructor is positively
associated with Professional for both NSs and RNs. In general,

Table 15

Reliabilities (Cronbach's Alpha) of Proposed
Subscales for Three Groups (NSs posttest)

Subscale	Group		
	RNs	PSs	NSs
Yourself Trad	.81	.60	.67
Yourself Prof	.77	.70	.68
Ideal Nurse Trad	.75	.74	.75
Ideal Nurse Prof	.79	.80	.74
Traditional	.51	.61	.67
Professional	.31	.29	.53
Utilizer	.47	.41	.43
Instructor	.40	.17	.13

Table 16

Intercorrelations of the proposed
subscales for RNs

| | Yourself and Ideal Nurse | | | | Behavior | | |
Yourself & Ideal Nurse	Y-Trad	Y-Prof	ID-Trad	ID-Prof	Trad	Util	Prof
Y-Prof	.67						
ID-Trad	.24	.18					
ID-Prof	.19	.20	.69				
Behavior							
Trad	.15	.08	.32	.16			
Util	.14	-.10	.13	-.03	.04		
Prof	.14	-.02	.02	-.12	.16	.17	
Inst	.20	.14	-.03	-.01	.14	-.15	.34

Y=Yourself
ID=Ideal

Table 17

Intercorrelations of the proposed
subscales for PSs

Yourself & Ideal Nurse	Yourself and Ideal Nurse				Behavior		
	Y-Trad	Y-Prof	ID-Trad	ID-Prof	Trad	Util	Prof
Y-Prof	.51						
ID-Trad	.44	.24					
ID-Prof	.28	.11	.69				
Behavior							
Trad	.15	.18	− .02	−.09			
Util	.08	.03	−.04	−.08	.09		
Prof	.23	.22	.11	.16	.19	.01	
Inst	.14	.09	−.01	.10	.03	.03	.08

Y=Yourself
ID=Ideal

Table 18

Intercorrelations of the proposed
subscales for NSs (posttest)

Yourself & Ideal Nurse	Yourself and Ideal Nurse				Behavior		
	Y-Trad	Y-Prof	ID-Trad	ID-Prof	Trad	Util	Prof
Y-Prof	.34						
ID-Trad	.22	.12					
ID-Prof	.11	.21	.68				
Behavior							
Trad	.17	.03	.24	.21			
Util	.24	.37	-.11	.11	.13		
Prof	.08	.18	.32	.42	.52	.20	
Inst	.05	.05	.18	.09	.16	-.30	.33

Y=Yourself
ID=Ideal

Table 19

Significant Inter-correlations of the
Proposed Subscales for Three Groups

Yourself and Ideal Nurse   Behavior

Yourself &
Ideal Nurse

	Y-Trad	Y-Prof	ID-Trad	ID-Prof	Trad	Util	Prof
Y-Prof	NS,RN,PS(+)						
ID-Trad	PS(+)*						
ID-Prof	PS(+)	*	NS,RN,PS(+)				
Behavior							
Trad	*		RN(+)*				
Util		NS(+)					
Prof		*	NS(+)	NS(+)*	NS(+)		
Inst						NS(-)	NS,RN(+)

Y=Yourself
ID=Ideal

* Location of an expected positive correlation

ratings for Yourself and Ideal Nurse are intercorrelated. However, several nonexistent relationships are worth noting. Utilizer is associated with neither Professional or Traditional, and Traditional from Behavior is not associated with Professional for Yourself or Ideal Nurse. Overall, the correlations between the two instruments are not what would be expected.

Pretest-Posttest Comparisons of the Nursing Students

The following section will discuss statistically significant differences between pretest and posttest means for NSs. Using the subscales of Yourself, Ideal Nurse and the Behavior instrument in total (subscales not particularly reliable, see Table 15), pretest-posttest comparisons were made for NSs using paired t-tests. Such tests should demonstrate whether there were any significant changes in the way in which the NSs responded to the variables after taking the Professional Role Development class. There were, however, no signficant pretest-posttest differences in how NSs answered these scales. There was a significant difference between the ratings for the Ideal Nurse and Yourself (Ideal Nurse always higher) at both the pretest and posttest ($p < .001$); however, these differences were not significantly different from each other. In other words, NSs did not see themselves any closer to the Ideal Nurse after taking the course.

Pretest-posttest analyses using subscales created by the factor analyses were conducted. As Yourself had fairly similar factors across tests, subscales were created by summing up the items that loaded consistently both times. As Table 20 presents the reliabilities of these subscales at pretest and posttest. As these

Table 20

Reliabilities (Cronbach's Alpha) and Pretest-Posttest
Comparisons of Subscales Based on Factor Analyses of NSs Yourself

Subscale	Pretest	Posttest	2-tailed prob.
Performance Organized Competent Knowledgeable Clever Industrious Efficient	.60	.64	.50
Personality Healthy Friendly Cheerful Lively Confident	.59	.64	.31
Ministrant Coolheaded Careful Sympathetic Warm	.62	.69	.73

scales were reliable, paired t-tests were done only to reveal, again, no significant differences between the pretest and posttest (see Table 20). Because the factors for Ideal Nurse were not similar enough at pretest and posttest to construct subscales, no further analysis was done. The conclusion here, then, is that NSs did not change from pretest to posttest in their ratings of themselves, but instead maintained stable views of their self concepts.

Item comparisons. As there was an overall significant difference between Yourself and Ideal Nurse at both the pretest and posttest, paired t-tests were done on each item, e.g., Yourself healthy vs. Ideal Nurse healthy. All items were significantly higher for Ideal Nurse than for Yourself, except Sympathetic (in the same direction, but not significant) at the pretest. NSs rated themselves very high on sympathy.

Factor analysis on the Behavior instrument (including Instructor variables) revealed two factors that were too unreliable to be used as pretest-posttest comparison subscales. Therefore, subscales made up of the items as proposed (see Appendix B) were constructed and assessed for reliability. The reliabilities here were also fair to poor, so pretest-posttest comparisons using subscales of the Behavior instrument was not considered possible.

Age and experience. The subscales (previously mentioned) of Personality, Performance, and Ministrant developed from factor analysis of Yourself; the proposed subscales of Professional and Traditional from Ideal Nurse; and the proposed subscales of Traditional, Professional, Utilizer, and Instructor from Behavior were

correlated with (a) age, (b) "age decided to become a nurse," and (c)
patient care experience. At the pretest, age was significantly
negatively correlated with Traditional, Professional, and Utilizer
from Behavior. These correlations suggest that comparative youth and
enthusiasm for beginning a nursing education leads one to espouse
strong beliefs. At the posttest, age at which these students decided
to become nurses was positively correlated with Personality,
Ministrant and Professional-Ideal Nurse. This might indicate that the
more mature one is when deciding upon nursing, the more one can
identify with such subscales as Personality and Ministrant, and the
more aware one is of the Ideal Nurse. Also at the posttest, patient
care experience was positively correlated with Professional-Ideal
Nurse, suggesting that more exposure to nursing leads to a more
"standard" Ideal Nurse.

Summary. Overall, the NSs did not see themselves differently
after taking the Professional Role Development course, at least as
assessed by these scales. Factor analyses do indicate some changes;
however, it is not clear how one would statistically compare different
factor structures from two time periods. At both the pretest and
posttest there were significant differences in how NS perceived
themselves and the Ideal Nurse; however, this difference did not
change over time, contrary to what had been hypothesized.

Comparisons of the Nursing Students, Psychology Students and Nurses

As mentioned above, comparisons of the three groups use data
from the posttest for NSs. An analysis of variance comparing
Yourself, Ideal Nurse and Behavior reveals significant differences

among the groups on Ideal Nurse and Behavior, $F(2,177)=5.50, p<.005$, and $F(2,177)=4.47, p<.013$, respectively. One-way analyses of variance were done on each item within these two scales, followed by a posteriori tests (Scheffé) on the items for which a difference was indicated by the one-way analysis of variance. This procedure was used to reduce the total number of statistical tests to avoid capitalizing on chance (i.e., Type I errors).

Table 21 presents the results of the Scheffé test listing the items on which the groups responded differently, and the direction of their responses. PSs differed significantly from some other group on 15 of the 16 items, which is as might be expected considering their comparative naiveté regarding nursing. In fact, in nine of these comparisons, PSs are significantly different from RNs. NSs were also somewhat naive, as they were also different from RNs in eight of the comparisons. The direction of these differences are generally as might be expected. The PSs are idealistic and naive, the NSs are just idealistic, whereas the RNs are practical and experienced. Comparing the difference between Ideal Nurse and Yourself for the three groups revealed no significant difference.

Additional analyses of the responses of the nurses and psychology students. The following describes additional analyses of the RNs and PSs data. Some of the relationships explored were between various subscales of the instruments and (a) age, (b) patient care experience and (c) expected major. It was hoped that further insight into the causes for the differences between the NSs, RNs, and PSs would be gained from these analyses.

Table 21

Items from Ideal Nurse and Behavior on
Which the Three Groups Differed

Ideal Nurse
Warm   NS > PS
Industrious   RN > PS

Behavior
1-to-1 relationship   NS > PS
Wife/mother   NS > RN
Not show pat upset   PS > RN
Dedication to pat   PS > RN
Not criticize   PS > NS >> RN a
10% raise   RN > PS >> NS
Job   PS > NS >> RN
Train for money   RN > PS >> NS
Not disrupt   PS > RN
Science   PS > NS
ANA   NS >> PS > RN
Careplan   RN > NS >> PS
Self-actualization   NS >> PS >> RN
Theory   NS > RN >> PS

a   ">>" indicates that this group is significantly
    different from the other two groups.

The difference between Ideal Nurse and Yourself was significant for RNs. Each item was rated significantly higher for the Ideal Nurse than for Yourself. This result is almost identical to that of the NSs.

Guessing that there might be a relationship between RNs' age, nursing experience, and age at which they decided to become nurses, various subscales were correlated with these variables. These subscales were created from the factor analyses for Yourself and Ideal Nurse, and from the proposed orientations for Behavior. The reliabilities are reported in Table 22. Again, subscales from Behavior are not very reliable. Twenty-one of the resulting 24 correlations of age, years of nursing experience, and age at which a nursing career was chosen were negatively correlated with these subscales. However, these relationships were significant only when correlating years of experience and personality for oneself. Maturation appears to leaves one less effusive and enthusiastic overall.

The difference between Ideal Nurse and Yourself was also significant for PSs, and for each item the direction was as expected. Sympathetic, Warm, and Lively were not significantly different. The PSs rated themselves highly on sympathy and warmth, and rated the Ideal Nurse comparatively low on liveliness.

As for the RNs, the relationships between PSs' age and patient care experience with the various subscales were explored. Expected major was used as a grouping variable, somewhat arbitrarily divided up into "hard" and "soft" majors. Hard consisted of science,

Table 22

Reliabilities (Cronbach's Alpha) of Factor Analyses
Created Subscales and Proposed Subscales for Yourself,
Ideal Nurse and Behavior for RNs

Subscale		Cronbach's Alpha
Performance	Ideal Nurse	.81
Organized Competent	Yourself	.80
Knowledgeable Careful		
Skillful Efficient		
Personality	Ideal Nurse	.81
Healthy Coolheaded	Yourself	.84
Sympathetic Warm		
Cheerful Industrious		
Friendly Lively		
Confident Clever		
Traditional		.51
Professional		.31
Utilizer		.47
Instructor		.40

math/computer and business majors ($n=28$). Soft students were those majoring in humanities/law, social science, fine arts, education and social work ($n=25$). It was believed that the Hard majors might have a more practical view of themselves and nursing, while Soft majors might be more idealistic. Hard and Soft majors did not differ significantly on age or patient care experience.

Subscales were, again, created from factor analyses for the first instrument and from the proposed subscales from the Behavior instrument. Reliabilities for these scales are reported in Table 23. There were some differences between the two groups. Age negatively correlated with all the subscales except Instructor for Hard majors, but was negatively correlated with only Ideal Nurse-Three, Traditional, Utilizer and Professional for Soft majors. There were similar differences with the correlations of patient care experience and the subscales. However, the only signficant correlations were within the Hard major. Age was negatively correlated with Performance and the first two subscales of Ideal Nurse. It is unfortunate that the latter are so uninterpretable. These same subscales are positively correlated with age for the Soft majors.

Perhaps students of the Hard majors do actually have more academically challenging majors than those of the Soft group, and so with increased exposure to their majors (this can only be assumed to be associated with age), have had the opportunity to become less sure of themselves in the performance area. Alternatively, perhaps those who are more certain about their performance are more likley to select Soft majors.

Table 23

Reliabilities (Cronbach's Alpha) of Factor Analyses
Created Subscales and Proposed Subscales for Yourself,
Ideal Nurse and Behavior for PS

Subscale	Cronbach's Alpha
Performance Organized Efficient Competent Healthy Careful Lively Skillful Industrious	.76
Personality Knowledgeable Warm Clever Cheerful Coolheaded Friendly Sympathetic Confident	.66
Ideal Nurse-One Careful Healthy Efficient Warm Clever	.77
Ideal Nurse-Two Organized Skillful Competent Sympathetic Knowledgeable Friendly	.80
Ideal Nurse-Three Industrious Lively Coolheaded Confident Cheerful	.72
Traditional	.61
Professional	.29
Utilizer	.41
Instructor	.17

DISCUSSION

The discussion briefly summarizes the results of this thesis
with potential implications of these findings for nursing education
and nursing practice following. The limitations of the present study
are then discussed, followed by suggestions for future research in
this area.

Summary

Dimensions of nursing. The major purpose of this thesis was to
determine if the two instruments from Stoller (1978) and Murray (1983)
can indeed measure the proposed nursing orientations of the
Professionalizer, the Traditionalizer, and the Utilizer. Factor
analyses of the responses of 64 nursing students, 64 psychology
students, and 52 working nurses to the first instrument revealed that
the professional and traditional orientations can be used to describe
oneself. Only for the nurses and the nursing students at the posttest
do these two orientations come close to describing the Ideal Nurse.
It was also found that the nursing students were able to describe
themselves with three additional factors: Personality, Performance,
and Ministrant.

The second instrument, labeled Behavior for the purposes of this
thesis, did not appear to have the three underlying constructs of
Traditionalizer, Professionalizer, and Utilizer that could account for
the relationships between the 21 variables making up the instrument.
Factor analyses of the answers of the various respondents instead

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revealed seven different orientations to nursing, some of which were shared among the various groups of respondents, some unique to a particular group. These factors were labeled Ideal Nurse, Reward, Cool Professional, Devoted Professional, Bureaucrat, Empathy, and Underpaid Patient Advocate. Each one of these factors was composed of various combinations of the variables from the proposed orientations of Traditional, Professional, and Utilizer. The responses to the Behavior instrument most closely resembled the proposed orientations when a maximum of two factors was specified when analyzing the nursing students' posttest responses. Here the proposed Traditional and Utilizer items appeared to cluster together, but the Professional items were split between these two groups.

A possibly confounding variable for the Behavior instrument was the wording of the statements. Of the 21 statements, 13 were of the "a nurse should" nature, while the remaining seven were of a more personal "I would" nature. The psychology students and the pretest nursing students appeared to be unduly influenced by the rather prescriptive "a nurse should" statements, which became grouped under the Ideal Nurse factor. Nurses were not similarly influenced.

Although the two instruments both purportedly measure the Traditional and Professional orientations, there were very few significant relationships between the two instruments in these areas. In summary, the two instruments do not appear to be measuring the proposed orientations (except when describing oneself), the subscales of these orientations are not clearly associated with each other across instruments, and the Behavior instrument brings out different

kinds of orientations depending upon the respondent's knowledge of nursing. The latter point would suggest that orientations to nursing are not stable, fixed entities, but vary according to one's experience with nursing.

Changes in professional image during a course. The second purpose of this thesis was to evaluate the responses of the nursing students to these two instruments before and after taking a Professional Role Development course. The nursing students' views of themselves were relatively stable over the course of the semester. The factors underlying the measurement instrument were similar at both the pretest and the posttest, and statistical tests of the Yourself subscale revealed no significant pretest-posttest differences. One point that is important is the switching in relative importance of the Personality and Performance factors which was revealed by requesting a three factor solution. The Personality factor explains the most variance at the pretest, while the Performance factor explains the least. This changes at the posttest, suggesting that issues pertaining to Performance are more of a concern to the nursing students than formerly.

The conception of the Ideal Nurse was not as stable, and changed to approximate the proposed model and the nurses' conception of the Ideal Nurse at the posttest, although there was not a significant pretest-posttest difference on the entire subscale. The factors of the Behavior instrument were very different at the posttest than at the pretest, although, again, no significant differences were found when the instrument was tested as a whole. The nursing students were

less influenced by "a nurse should," and perhaps had more refined images of nursing. Attitudes towards financial concerns shifted over the course of the semester. At the pretest, concern over inadequate remuneration was an "either-or" situation. If one was concerned about money, then one did not particularly care about the intrinsic rewards of nursing; and if one was concerned about the intrinsic rewards of nursing, then one did not particularly care about money. By the time of the posttest, these same concerns could be expressed as part of the Bureaucrat factor, issues to be grumbled about, but accepted.

As Murray (1983) found, there was a significant difference in the way the nursing students viewed themselves and the Ideal Nurse. Contrary to what was hypothesized, this difference did not change over the course of the semester. The nursing students viewed themselves just as differently from the Ideal Nurse at the posttest as they did at the pretest.

Although statistical tests (t-tests) revealed no significant mean pretest-posttest differences for the nursing students, one can see changes in the nursing students relative to the psychology students and nurses when comparing factor structure. The factors underlying nursing students' descriptions of Yourself more closely resembled both the nurses' and the psychology students' factors at the pretest than they did at the posttest. Possibly the nursing students more clearly identified themselves as students of nursing (rather than students in general, or as nurses) after one year of nursing education.

The factors for the Ideal Nurse followed a more predictable

progression: at the pretest nursing students' factors for the Ideal Nurse more closely resembled psychology students' factors than they did those of the nurses'; whereas at the posttest, this resemblance switched. This progression can also be seen when comparing the factors generated from the Behavior questionnaire. The strongest resemblance in factor patterns at the pretest is between nursing students and psychology students; at the posttest it is between nursing students and nurses. These resemblances, however, may be somewhat superficial, as there are large differences in the magnitude of the factor loadings, indicating relative differences in the importance and meaning attached to the various items represented by the factors.

There were signficant mean differences between the nursing students posttest, the nurses, and the psychology students on several items of the Behavior instrument. For the most part, these differences reflected a greater pragmatism on the part of the nurses; an ignorance by the psychology students of the potential autonomy, and knowledge and skills required of the nurse; and the overall enthusiasm of the nursing students for the caring aspects of nursing and rejection of financial concerns. On a continuum of "nursing awareness," psychology students are idealistic and naive, the nursing students are just idealistic, and the nurses are practical and experienced.

Implications of the present results

Ignoring the factor analyses, one could conclude that the Professional Role Development course had no effect on the responses of

the students in the class, as there were no statistically significant mean differences between the instruments from pretest to posttest. However, the fact that there was some shifting in factor structures indicates that some sort of change in the nursing students occurred during the semester. As the two instruments did not prove to clearly measure "professionalism" as they had been designed to, it is hard to assess whether the students were now more professional as a result of this course. The nursing students at the posttest were able to recognize the Professional items as somehow relating to each other, as demonstrated by the existence of the Devoted Professional factor. Because recognizing and identifying with professional values is most likely an objective of the Professional Role Development course, this represents evidence of increased "professionality." The factors of the nursing students at the posttest more closely resembled those of the nurses, who are indeed professional. The closest agreement between these two groups was on the Ideal Nurse. The nursing students were better able to identify the Traditional and Professional aspects of the Ideal Nurse after the course than they were before it.

The next most similar dimension shared by the nursing students and the nurses was the Bureaucrat factor. Bureaucracy is inherent to any professional occupation, and awareness of its existence and effects is possibly beneficial preparing the future nurse for "reality shock." However, it is perhaps somewhat regrettable that greater similarity exits between the Bureaucrat factors of the nurses and nursing students than between the Empathy factors that they also share, although this may be a result of the particular group of nurses

to which the nursing students were being compared. It is interesting to note that, contrary to the present results, the nurses (without BSNs) of Whllan's study (1984) <u>decreased</u> their endorsement of Bureaucratic items after attending an educational program emphasizing professionalism in nursing.

Overall, it would appear that the present sample of nursing students was better able to identify professional nursing values, considered performance related items to be more salient to themselves than before, and resembled in factor structure working nurses more after taking the Professional Role Development course than they did before taking it. As a goal of the course was to identify for the nursing student professional nursing values and to lead her to ascribe these values to herself (i.e., greater importance of Performance over Personality factors; and the Devoted Professional factor), then the course would appear to be successful in achieving this goal.

Although the nurse respondents of this sample were professional, there were some indications that Professional (i.e., ANA) values were not as highly held as were Traditional values. The Traditional factor for both Yourself and the Ideal Nurse explained 22% to 25% more variance for the nurses than did the Professional factor, suggesting that Traditional values such as cheerfulness, confidence, and so on, were more salient to these nurses than were competence and carefulness. Along the same vein, the Empathy factor explained slightly more variance than did the Bureaucrat and Underpaid Patient Advocate factors from the Behavior instrument. Personability and sympathy appear to be more valued than possibly "colder" attributes.

There was a significant negative correlation between the number of years working as a nurse and the Personality for oneself subscale (based on factor analysis). This subscale was comprised of items such as Healthy, Sympathetic, Cheerful, Friendly, Lively and so on (see Table 20). This negative association may be related to "burnout," a phenomenon common to the health professions (Maslach, 1982). Some of the manifestations of burnout among nurses are: increased susceptibility to illness, feelings of discouragement and pessimism, and increased cynicism and resignation in attitude (Muldary, 1983). It is quite possible that the more years these nurses work, the more susceptible they become to burnout, a relationship borne out in the literature on burnout.

Limitations of the present study

It is crucial to remember that the sample of nurses obtained cannot be considered random. Therefore, generalizations to other nurses as well as the representativeness of the nurse-nursing students comparisons remains questionable. The nurses who chose to complete the questionnaire may have been more interested in research than those who dropped out. Research in nursing is strongly espoused as a professional attribute. On the other hand, as the questionnaires were handed out by head nurses, those nurses who returned them may have been attempting to "please the boss." Another motivation might have been that the nurses had "bones to pick" about nursing, or alternatively, were very positive about nursing and used every opportunity to express their enthusiasm.

A possible statistical artifact of the first instrument (Murray, 1983) is the probable ceiling effect of the responses for Ideal Nurse and the corresponding low variation. Low variance in turns tends to attenuate correlations, which would lead to low factor loadings for these items and would possibly affect the interpretability of the factors (Hays, 1981). However, comparing the mean correlation from the Ideal Nurse intercorrelation matrix with the mean correlation from the Yourself intercorrelation matrix indicates that the correlations for the Ideal Nurse are just as strong as for those of Yourself. Thus, although it is true that the factors for the Ideal Nurse are not as readily interpretable as are those for Yourself, this is apparently not due to low correlations resulting from low variance, but may instead be a result of general instability caused by the ceiling effect and low variation.

One major problem for the factor analyses is the relatively small ratio of the number of respondents to the number of variables. Reliability and stability of factors increase as sample size increases. It has been suggested that as a standard rule of thumb, this ratio of respondents to variables should be four-to-one. In the case of the nursing students and psychology students for the first instrument, this ratio is met (64 to 16). However, according to this ratio there should have been at least 84 respondents for each factor analysis of the Behavior instrument. The smallness of the various samples may have restricted reliabilty and should be considered when interpreting the results of the factor analyses (Bonnett & Bowers, 1976; Rummel, 1970).

One semester may have been too short a time period to expect much change in the responses of the nursing students. As these were first year nursing students, none had received clinical training within the educational program. It is likely that the "act of nursing" would strongly affect the beliefs and attitudes of the students, although it is hard to say in what direction attitudes would change. Another limitation to the pretest-posttest evaluation component of this project is that the two instruments may lack validity as assessments of the course and its effects. Only four of the 21 items of the questionnaire were contributed by the instructor of the course, and it should be noted that the responses to three of these items moved in the expected direction at the posttest. Two of the items, Self-actualization and Theory, were significantly different at the posttest than at the pretest. A questionnaire explicitly designed to evaluate the Professional Role Development course might be better able to demonstrate statistically significant effects of the course on the nursing students' attitudes and conceptions of nursing.

Directions for future research

Additional analyses, assessments and populations should be considered for future research in the area of nursing role orientations. As a major purpose of this thesis was to determine if the particualr instruments could measure the orientations as they were intended to, confirmatory factor analysis would have been a more appropriate statistical technique than exploratory factor analysis for more systematic hypothesis testing. Confirmatory factor analysis could be used to impose a particular measurement model on the data;

for instance, that specific variables load only on a particular factor, e.g., Traditional. If it had been demonstrated that the proposed factor model did not account for the data as initially posited, then exploratory factor analysis could have been used to illustrate what factors were there instead, and what particular variables comprised these factors.

As discussed in the previous section, a questionnaire higher in content validity would be a more appropriate instrument for assessing change in nursing students after taking the course. As the Professional Role Development course is taught each year to the nursing students as they progress through the nursing program, an assessment of "professionality" might be more appropriate at the beginning and the end of the three year nursing education, rather than after only one semester. This evaluation, however, would not be able to assess effects of the Professional Role Development course alone, as the students would have taken several other nursing courses, as well as acquired much clinical training. Possibly here would be a more applicable use of the Murray (183) and Stoller (1978) instruments. Change would probably be more apparent after three years of the program and would be likely to be a result of the program (although maturation and other threats to validity would certainly have to be considered).

To avoid the ceiling effects of the Ideal Nurse and to gain information on another possible dimension of nursing, respondents could be asked to rate the "typical nurse" instead of the "ideal nurse." An interesting question here would be, how does the "typical

nurse" compare to the conceptions of the working nurses' selves? Unlike comparisons to the Ideal Nurse (where everyone scored lower), here might be some variability in the responses. A nurse might see herself as friendlier than the typical nurse, yet less efficient, and so forth.

Nursing students and graduates of diploma schools and community college nursing programs would be likely candidates as samples for additional research. Comparisons between the students and graduates of the different programs has led to inconsistent findings regarding "professionality," however, the existence of different factor structures has not been pursued in this area and might prove fruitful. Finally, it might be interesting to discover physicians' conceptions of the Ideal Nurse. How well might the physicians' conception of the Ideal Nurse compare to working nurses' Ideal Nurse? Possible differences might be indicative of physician-nurse relationships.

SUMMARY

Two different instruments purportedly designed to measure the nursing role orientations of the Traditionalizer, Professionalizer, and the Utilizer were administered to a group of nursing students before and after taking a course on Professional Role Development, as well as to a group of female non-nursing majors, and to a group of working nurses. Factor analyses revealed that the Traditional and Professional orientations can be measured when describing oneself, and in limited cases when describing the Ideal Nurse. Factor analyses of the second instrument demonstrated that the various groups of respondents had different orientations to nursing. These factors and statistically significant differences between the groups suggest that experience with nursing affected the responses to the instruments. The non-nursing majors were idealistic and naive, the nursing students were simply idealistic, while the nurses were practical and experienced.

A comparison of the responses of the nursing students before and after taking the semester-long course revealed no statistically different results. However, there was a progression in the similarity of the constructs generated by the factor analyses. Overall, these constructs more closely resembled those of the non-nursing majors at the pretest, and more closely resembled those of the working nurses at the posttest.

The appropriateness of these instruments to evaluate this particular course is questionable; however, as tools to assess

differences in the conceptions of nursing between different groups of people varying in nursing experience they appear to be useful.

REFERENCES

Aga, S. E., & Muff, J. (1982). Brainstorming for job satisfaction.
    In J. Muff (Ed.), Socialization, sexism, and stereotyping. St.
    Louis: C.V. Mosby.

Alley, L. (1982). Nursing shortage? Turnover? Maldistribution?
    Imprint, 29(4), 20-23.

American Nurses's Association Committee on Education. (1965).
    Position on education for nursing. American Journal of Nursing,
    65, 106.

Aydelotte, M. K. (1983). Professional nursing: The drive for
    governance. In N.L. Chaska (Ed.), The nursing profession: A
    time to speak, New York: McGraw-Hill.

Bailey, J. T., & Claus, K. E. (1969). Comparative analysis of the
    personality structure of nursing students. Nursing Research,
    18, 320-326.

Bevis, M. E. (1973). Role conception and continuing learning
    activities of neophyte collegiate nurses. (Doctoral
    dissertation, University of Chicago, 1972). Comprehensive
    Dissertation Index, 33, 369.

Bixler, G. K., & Bixler, R. W. (1959). The professional status of
    nursing. American Journal of Nursing, 59, 1142-1146.

Bonnett, S. & Bowers, D. (1976). An introduction to multivariate
    techniques for social and behavioral sciences. New York: John
    Wiley & Sons.

Brown, J. S., Swift, Y. B., & Oberman, M. L. (1974).
    Baccalaureate students' images of nursing: A replication.
    Nursing Research, 23, 53-59.

Bryant, F. B., & Veroff, J. (1982). The structure of psychological
    well-being: A sociohistorical analysis. Journal of Personality
    and Social Psychology, 43, 653-673.

Corwin, R. G. (1960). Role conception and mobility aspiration: A
    study in formation and transformation of bureaucratic,
    professional, and humanitarian nursing identities. Unpublished
    doctoral dissertation, University of Minnesota, Minneapolis.

Corwin, R. G. (1961). The professional employee: A study of
    conflict in nursing roles. In J.K. Skipper and R.C. Leonard
    (Eds.), Social interaction and patient care. Philadephia: J.B.
    Lippincott.

Corwin, R. G., Taves, M., & Haas, J. (1961). Professional disillusionment. Nursing Research, 10, 141-144.

Corwin, R. G., & Taves, M. J. (1962). Some concomitants of bureaucratic and professional conceptions of the nurse role. Nursing Research, 11, 223-226.

Dachelet, C. Z. (1978). Nursing's bid for increased status. Nursing Forum, 17, 18-45.

Dagenais, F., & Meleis, A. I. (1982). Professionalism, work ethic, and empathy in nursing: The nurse self-descriptive form. Western Journal of Nursing Reseach, 4, 407-422.

Dalme, F. C. (1983). Nursing students and the development of professional identity. In N.L. Chaska (Ed.), The nursing profession: A time to speak. New York: McGraw-Hill.

Davis, A. J. (1969). Self-concept, occupational role expectations, and occupational choice in nursing and social work. Nursing Research, 18, 55-59.

Davis, F., & Olesen, V. L. (1964). Baccalaureate students' images of nursing: A study of change, consensus, and consonance in the first year. Nursing Research, 13, 8-15.

Dolan, C. (1983, January 17). Tough times ease shortage of nurses. The Wall Street Journal, pp. 17-21.

Fox, D. J. (1961). Career decisions and professional expectations of nursing students. New York: Teachers College Press.

George, T. B. (1982). Development of the self-concept of nurse in nursing students. Research in Nursing and Health, 5, 191-197.

Goldstein, J. O. (1980). Comparison of graduating A.D. and baccalaureate nursing students' characteristics. Nursing Research, 29, 46-49.

Habenstein, R. W., & Christ, E. A. (1955). Professionalizer, traditionalizer, and utilizer. Columbia, MO: University of Missouri.

Hays, W. L. (1981). Statistics (3rd ed.). New York: Holt, Rinehart and Winston.

Holliday, J. (1964). Ideal traits of the professional nurse described by graduate students in education and in nursing. Journal of Educational Research, 57, 245-249.

Kim, J. & Mueller, C. W. (1978). Introduction to factor analysis: What it is and how to do it. Beverly Hills: Sage Publications.

Knopke, H. J. (1979). Predicting student attrition in a baccalaureate curriculum. Nursing Research, 28, 224-227.

Kramer, M. (1974). Reality shock: Why nurses leave nursing. St. Louis: C.V. Mosby.

Levitt, E. E., Lubin, B., & Zuckerman, M. (1962). The student nurse, the college woman, and the graduate nurse: A comparative study. Nursing Research, 11, 80-82.

Lewis, J., Bentley, C., & Sawyer, A. (1980). The relationship between selected personality traits and self-esteem among female nursing students. Educational and Psychological Measurement, 40, 259-260.

Maslach, C. (1982). Burnout, the cost of caring. Englewood Cliffs, NJ: Prentice-Hall.

McCloskey, J. C. (1975). What rewards will keep nurses on the job? American Journal of Nursing, 75, 600-602.

Meleis, A. I., & Dagenais, F. (1981). Sex-role identity and perception of professional self in graduates of three nursing programs. Nursing Research, 23, 461-468.

Meyer, G. (1959). Conflict and harmony in nursing values. Nursing Outlook, 7 389-399.

Minehan, P. L. (1977). Nurse role conception. Nursing Research, 26, 374-379.

Muff, J. (Ed.) (1982). Socialization, sexism, and stereotyping. St. Louis: C.V. Mosby.

Muldary, T. W. (1983). Burnout and the health professionals: Manifestations and management. Garden Grove, CA: Capistrano Press.

Murray, L. M., & Morris, D. R. (1982). Professional autonomy among senior nursing students in diploma, associate degree, and baccalaureate nursing programs. Nursing Research, 31, 311-313.

Olesen, V. L., & Whittaker, E. (1968). The silent dialogue. San Francisco: Jossey-Bass.

Price, J. L. (1973). The correlates of turnover (Sociology Working Paper Series #73-1). Iowa City: University of Iowa.

Richards, M. A. (1972). A study of differences in psychological characteristics of students graduating from three types of basic nursing programs. Nursing Research, 21, 258-261.

Rummel, R. J. (1970). Applied factor analysis. Evanston, IL:

Northwestern University Press.

Rudov, M. H. (1976). High school seniors' attitudes and concepts of nursing as a profession. Methesda, MD: Department of Health, Education, and Welfare.

Ryan, T. A. (1959). Multiple comparisons in psychological research. Psychological Bulletin, 56, 26-47.

Schultz, E. D. (1965). Personality traits of nursing students and faculty concepts of desireable traits: A longitudinal comparative study. Nursing Research, 14, 261-264.

Stoller, E. P. (1978). Preconceptions of the nursing role: A case study of an entering class. Journal of Nursing Education, 17, 2-14.

Stromberg, M. (1976). Relationship of sex role identity to occupational image of female nursing students. Nursing Research, 25, 363-369.

Till, T. S. (1980). Sex-role identity and image of nursing of females at two levels of baccalaureate nursing education. Nursing Research, 29, 295-300.

Whelan, E. G. (1984). Role-orientation change among RNs in an upper-division level baccalaureate program. Journal of Nursing Education, 23, 151-155.

APPENDIX A

APPENDIX A

Professional

Persistent	Innovative
Inefficient	Efficient
Clumsy	Skillful
Disorganized	Organized
Lazy	Industrious
Careless	Careful
Incompetent	Competent
Ignorant	Knowledgeable
Dull	Clever a

Traditional

Unfriendly	Friendly
Unhappy	Cheerful b
Weak	Healthy
Cold	Warm
Shy	Confident
Hot-headed	Cool-headed
Lethargic	Lively
Unsympathetic	Sympathetic c

a   changed from "Dim-Clever"
b   changed from "Unhappy-Happy"
c   added from personality dimension,
    in place of dropped "Quiet-Talkative"

APPENDIX B

Traditional

1. A nurse should never let a patient know if she or he is upset about the patient's condition (not show pat upset).

2. I would frequently think about the personal problems of my patients when I go home (think of pat problems).

3. The one-to-one personal relationship between a nurse and his or her patients is the most important aspect of nursing (1-to-1 relationship).

4. I would frequently become very close to patients who stayed in the hospital for a long time (become close).

5. Being a good nurse takes many of the same qualities as being a good wife or mother (wife/mother).

6. The most important quality for a nurse is a strong sense of dedication to her or his patients (dedication to pat).

7. The most satisfying aspect of being a nurse is being able to help people (help people).

8. It is more important for a nurse to be understanding and sympathetic than is is for a nurse to be good at science (sympathy > science).

Utilitarian

1. A nurse should never criticize or ignore the directive of the nursing supervisor (not criticize).

2. If I could get a ten percent salary raise by taking a job outside the nursing field, I would probably decide to take it (10% raise).

3. My job at the hospital would be the most important part of my life (job).

4. If someone paid me to go back to school, I would probably decide to train for a job with a better financial future than nursing offers me (train for money).

5. I would do a good job at the hospital but I would not often think about the patients on my floor when I went home (not think of pat).

6. I feel my job as a nurse will be more financially rewarding than intrinsically rewarding (money rewarding).

7. A nurse should avoid at all cost disrupting the daily schedules on the floor (not disrupt).

Professional

1. The most important quality for a nurse is the ability to think clearly and rationally (think clearly).

2. The most important part of a nurse's training is the scientific knowledge acquired and the techniques learned (science).

3. It is important for a nurse to belong to a professional organization like the ANA (ANA).

4. If I disagreed with something a physician said about a patient on my floor, I would not hesitate to tell him or her (tell Dr.)

5. A nurse has an important contribution to make in deciding the plan of care for her or his patients (care plan).

6. A nurse should always contribute his or her views on the patient's medical condition to the physician when he/she makes his rounds (contribute views).

Instructor

1. Women are kinder to men than women are to women (women kinder to men).

2. A nurse must assume responsibility for his or her actions (assume responbility).

3. Nursing offers a unique opportunity for self-actualization (self-actualization).

4. A theoretical base is essential for professional practice (theory).

APPENDIX C

This is a survey on nursing as part of a research project.
All surveys are anonymous and all responses are confidential
(please, no names), but do not feel you have to complete the
survey if you do not want to. However you will find it does not
take long to complete the survey (10-15 minutes), and your thought-
ful responses will be greatly appreciated.

There are three parts to the survey; please complete each
part in order. When you have completed the survey, please enclose
it in the envelope provided and drop it in interdepartmental mail.
Thank you very much.

Please use the following adjectives to describe yourself. For example, if you think of yourself as being a bit loud, you would put a check-mark as in the example below.

Loud __ ✓ __ __ __ Quiet

Thank you.

Innovative	__ __ __ __ __	Persistent
Disorganized	__ __ __ __ __	Organized
Weak	__ __ __ __ __	Healthy
Incompetent	__ __ __ __ __	Competent
Ignorant	__ __ __ __ __	Knowledgeable
Cool-headed	__ __ __ __ __	Hot-headed
Unsympathetic	__ __ __ __ __	Sympathetic
Careless	__ __ __ __ __	Careful
Cold	__ __ __ __ __	Warm
Clumsy	__ __ __ __ __	Skillful
Cheerful	__ __ __ __ __	Unhappy
Industrious	__ __ __ __ __	Lazy
Unfriendly	__ __ __ __ __	Friendly
Lethargic	__ __ __ __ __	Lively
Inefficient	__ __ __ __ __	Efficient
Confident	__ __ __ __ __	Shy
Clever	__ __ __ __ __	Dull

Again, using the same adjectives, please describe the <u>ideal nurse</u>.
If you believe that the ideal nurse is a bit on the quiet side, you
would put a check-mark as in the example below.

Loud ___ ___ ___ _✓_ ___ Quiet

Thank you.

Innovative	___	___	___	___	___	Persistent
Disorganized	___	___	___	___	___	Organized
Weak	___	___	___	___	___	Healthy
Incompetent	___	___	___	___	___	Competent
Ignorant	___	___	___	___	___	Knowledgeable
Cool-headed	___	___	___	___	___	Hot-headed
Unsympathetic	___	___	___	___	___	Sympathetic
Careless	___	___	___	___	___	Careful
Cold	___	___	___	___	___	Warm
Clumsy	___	___	___	___	___	Skillful
Cheerful	___	___	___	___	___	Unhappy
Industrious	___	___	___	___	___	Lazy
Unfriendly	___	___	___	___	___	Friendly
Lethargic	___	___	___	___	___	Lively
Inefficient	___	___	___	___	___	Efficient
Confident	___	___	___	___	___	Shy
Clever	___	___	___	___	___	Dull

Thank you for your patience. This is the last part of the survey. I would appreciate your thoughtful responses.

Directions: Please pretend you are a nurse and indicate with checkmark how much you agree or disagree with each of the following statements as you would as a nurse. Here is an example:
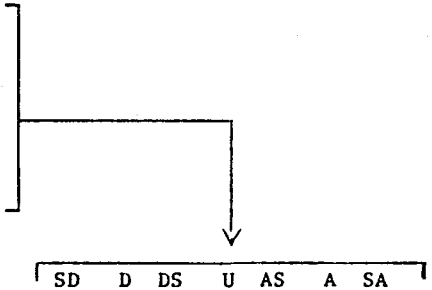
A nurse should be kind to all of his or her patients.

If you agree with this statement, you would put a check-mark under the 'A' for Agree.

```
SD   D  DS   U  AS   A  SA
:___:___:___:___:___:_✓_:___:
```

Thank you very much.

```
SD = Strongly disagree
 D = Disagree
DS = Disagree somewhat
 U = Uncertain
AS = Agree somewhat
 A = Agree
SA = Strongly agree
```

```
SD   D  DS   U  AS   A  SA
```

1. A nurse should never let a patient know if she or he is upset about the patient's condition. . . . . :___:___:___:___:___:___:___:

2. I would frequently think about the personal problems of my patients when I go home. . . :___:___:___:___:___:___:___:

3. A nurse should never criticize or ignore the directive of the nursing supervisor. . . . :___:___:___:___:___:___:___:

4. The most important quality for a nurse is the ability to think clearly and rationally. . :___:___:___:___:___:___:___:

5. Women are kinder to men than women are to women. . . . . :___:___:___:___:___:___:___:

6. The one-to-one personal relationship between a nurse and his or her patients is the most important aspect of nursing. . . . . :___:___:___:___:___:___:___:

7. A nurse must assume responsibility for his or her actions . . . . :___:___:___:___:___:___:___:

	SD	D	DS	U	AS	A	SA

8. If I could get a ten percent salary raise by
    taking a job outside the nursing field, I
    would probably decide to take it. . . . . :___:___:___:___:___:___:___:

9. The most important part of a nurse's
    training is the scientific knowledge acquired
    and the techniques learned. . . . . :___:___:___:___:___:___:___:

10. I would frequently become very close to
    patients who stayed in the hospital for a
    long time . . . . :___:___:___:___:___:___:___:

11. My job at the hospital would be the most
    important part of my life . . . . :___:___:___:___:___:___:___:

12. It is important for a nurse to belong to a
    professional organization like the ANA. . . . . :___:___:___:___:___:___:___:

13. Nursing offers a unique opportunity for
    self actualization. . . . . :___:___:___:___:___:___:___:

	SD	D	DS	U	AS	A	SA

14. Being a good nurse takes many of the same
    qualities as being a good wife or mother. . . . :___:___:___:___:___:___:___:

15. If someone paid me to go back to school,
    I would probably decide to train for a job with
    a better financial future than nursing
    offers me . . . . :___:___:___:___:___:___:___:

16. If I disagreed with something a physician
    said about a patient on my floor, I would not
    hesitate to tell him or her . . . . :___:___:___:___:___:___:___:

17. The most important quality for a nurse is
    a strong sense of dedication to her or his
    patients. :___:___:___:___:___:___:___:

18. I would do a good job at the hospital but
    I would not often think about the patients on
    my floor when I went home . . . . :___:___:___:___:___:___:___:

19. A theoretical base is essential for profes-
    sional practice . . . . :___:___:___:___:___:___:___:

20. The most satisfying aspect of being a
    nurse is being able to help people. . . . . . . :___:___:___:___:___:___:___:

| | | SD | D | DS | U | AS | A | SA |

21. A nurse has an important contribution to make in deciding the plan of care for her or his patients . . . . :___:___:___:___:___:___:___:

22. It is more important for a nurse to be understanding and sympathetic than it is for a nurse to be good at science. . . . . :___:___:___:___:___:___:___:

23. I feel my job as a nurse will be more financially rewarding than intrinsically rewarding. :___:___:___:___:___:___:___:

24. A nurse should always contribute his or her views on the patient's medical condition to the physician when he/she mades his rounds . . :___:___:___:___:___:___:___:

25. A nurse should avoid at all cost disrupting the daily schedules on the floor . . . . :___:___:___:___:___:___:___:

Thank you very much.

In order to compare your responses to others, a little information about yourself is necessary.

Last four digits of your Social Security number _____ a

Age _____

Marital status ____ unmarried

              ____ married

What has been your previous experience in patient care? b

____ none

____ volunteer

____ LPN/aide

____ training in diploma school

____ as a RN

What is your nursing degree? c

____ AD

____ BSN

____ MSN

____ PhD

At what age did you decide to become a nurse? ____ d

How many years have you been working since your nursing degree? ____ c

What is your major, or the major you are strongly considering? ____ e

a nursing students only
b nursing students and psychology students
c nurses only
d nursing students and nurses
e psychology students only

APPROVAL

The thesis submitted by Sarah E. Brotherton has been read and
approved by the following committee:

Dr. Emil J. Posavac, Director
Professor, Psychology, Loyola

Dr. Fred B. Bryant
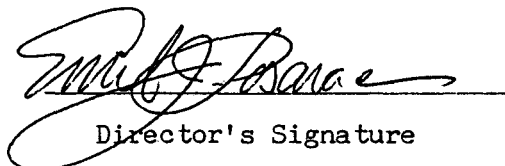Assistant Professor, Psychology, Loyola

Dr. Mary Pat Ryan
Associate Professor, Nursing, Loyola

The final copies have been examined by the director of the thesis and
the signature which appears below verifies the fact that any necessary
changes have been incorporated and that the thesis is now given final
approval by the Committee with reference to content and form.

The thesis is therefore acceptted in partial fulfillment of the
requirements for the degree of Master of Arts.

April 17, 1985
Date

[signature]
Director's Signature