A Lack of Autonomy in the Contemporary Nursing Student: A Comparative Study

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ABSTRACT

The purpose of this study is to determine whether or not female nursing students are as autonomous as female students in both traditional female occupations and non-traditional occupations. The population included 1,046 undergraduate, female students enrolled in bachelor's degree programs at a state college. Students who participated in the study were from the schools of nursing, education, business and arts and sciences. The two instruments used to measure the characteristics of autonomy, masculinity, and femininity, were the Krutines Autonomy Scale and a modified Bem Sex-Role Inventory Scale.

Students from the schools of nursing and education received the lowest scores on autonomy and masculinity and the highest scores on femininity. Students in the school of nursing scored significantly lower in autonomy and masculinity and significantly higher in femininity than the students from the School of Business and the School of Arts and Sciences. There was no significant difference between the scores of students in the School of Nursing and the School of Education. No significant correlation was found between the variables of parent's occupation, Grade Point Average (GPA), Scholastic Aptitude Test (SAT) scores or feminine scores and the autonomy scores. However, there was a strong correlation between masculinity and autonomy scores.

Introduction

The concept of professional autonomy has been of increasing interest and importance to the nursing profession. The largest health occupation within the health-care industry is nursing and is almost entirely (97%) populated by females (Woods, 1981). There are more than 1.88 million registered nurses in this country, suggesting immense potential for societal and economic power as a work force (Bureau of Health Professions, 1984). However, nurses as a whole enjoy neither economic reward nor status in their work.

Scholars (Etzioni, 1969; Freidson, 1970; Larson, 1977; Dayani, 1983) agree that the characteristic of autonomy is paramount in identifying work as a profession and subsequently achieving financial rewards and status. A central issue is whether the lack of autonomy afforded nurses is in any way a result of specific characteristics of those individuals who select nursing as a career. The terms professional autonomy and individual autonomy are not interchangeable. However, McKay (1983) states that the terms are related and overlap, while Katz (1969) describes how individual autonomy can transfer to the larger concept of professional autonomy over a period of time.

Lack of autonomy in the nursing profession has been a steadily growing concern affecting both professional nurses and health-care consumers. Nursing leaders and scholars often focus on the characteristic of autonomy as the ingredient most needed and desired by both the individual nurse and the profession. Why are nurses critical to retain it? The profession needs to examine the reasons for this situation. One obvious explanation is the structure of the profession itself and the health-care system of which nursing is a part. However, is the lack of autonomy experienced by nurses also related to the type of the individuals attracted to nursing? The desire to be autonomous and the ability to function autonomously are not necessarily coexistent in the individual nurse.

While the individual nurse and the profession at large are striving for external autonomy, simultaneous examination of the student nurse's internal psychological characteristics seems appropriate. Nursing needs to continue to examine nursing students for the type of individual attracted to the profession. Scholars must be wary of accepting nurse profiles reflected in dated research. In preparation for increased professional autonomy, nursing correspondingly needs to understand the nature of those who are attracted to the profession.
**Literature Review**

The student nurse has been a subject of interest for study for over 35 years in an effort to understand the person drawn to the profession. As early as 1938, the The National League of Nursing Education determined a list of characteristics which described a "good nurse." Spaney (1953) presents some of the characteristics listed in a 1945 revised list, whose characteristics included: cheerful, conscientious, cooperative, and having respect for authority.

How the student nurse historically compared to female students in other professions lends insight into the issue. A study done by Reece (1961) over 25 years ago using the EPPS (Edwards Personal Preference Schedule) supports the findings of earlier researchers. Reece found that nursing students that withdrew from nursing were found to be more similar to the general student population than to the student nurse population. Successful nursing students were more submissive, deferent, nurturant, and respectful of authority than "college women in general."

One year after the Reece (1961) study, Levitt, Lubin, and Zuckerman (1962) again compared student nurses with "all college women." Results revealed that the personality patterns of nursing students differed significantly from the patterns of general college women. The study showed that student nurses as compared to other college women ranked high on order, succor, and abasement and ranked lower on achievement, autonomy, dominance, and aggression.

Support for the 1962 study came later from Bailey and Claus (1969). Their findings showed that nursing students revealed significantly higher scores than the general female college students in such characteristics as deference, nurturance and endurance. Again, nursing students ranked significantly lower than the norm group in the characteristics of autonomy, dominance, and aggression.

The next year, using a different research instrument, Adams and Klein (1970) found similar results concerning nursing students' characteristics. However, again nursing students, as compared to general female college students, scored higher on deference and lower on dominance and autonomy.

Carl Edwards (1969) discussed the personality and motivational factors contributing to the selection of nursing as a profession and the impact of nursing education on the development of the student nurse. It was concluded that nursing students have personalities conducive to prolonged latency in the adolescent stage and that the educational setting encourages this latency. Edwards stated that when compared to female students in other disciplines, nursing students were said to experience this latency to a greater extent. In addition, results from a questionnaire revealed that student nurses have lower achievement motivation.

Results from a more recent study by Till (1980) using Bem's Sex Role Inventory questionnaire differs from earlier studies comparing nursing students to general female college students. The findings were in contrast to earlier studies that found nursing students possessing significantly more characteristics of femininity than the general female student population. However, Till's study did support earlier studies that nurses possess personalities consistent with highly feminine orientations. Neither entry level nor exit level nursing students differed from the general college subjects in sex-role identity based on contemporary categories. Only baccalaureate nursing students were used in this study and Till suggested that baccalaureate nursing students may be more similar to baccalaureate female students in general than are diploma or associate degree nursing students.

Interestingly, the Till study found that there was a positive effect of the nursing education program on the level of endorsement of masculine characteristics. Specifically, that as the nursing student progressed through the program, she exhibited less feminine characteristics. However, these findings could not be generalized to other nursing students. The Till study was done with students at Stanford University which is a private, elite, and highly selective academic institution. Hence, it is possible that the Stanford nursing students were not typical of the average nursing student.

Previous studies, most of which are at least 15 years old, revealed that nursing students do not possess characteristics that reflect an autonomous nature. This raises the question that if a profession is developing from a non-autonomous student population, how could the outcome possibly be an autonomous professional? It is possible that the natural progression of a non-autonomous student to a non-autonomous professional has resulted in the current status of nursing which enjoys little autonomy in general. The purpose of this study is to determine if nursing is still attracting students who score lower than female students attracted to other professions concerning the characteristic of autonomy.

**Hypotheses**

1. There is no difference in autonomy between female nursing students and female students in other traditional female professions.
2. There is no difference in autonomy between female nursing students and female students in non-traditional professions.

**Method**

This is a descriptive correlational study involving a psychometric problem where the researcher describes the relationship among variables. The study is cross-sectional in design in that all the data were collected at one point in time. Deans and chairs of the four schools involved identified the appropriate faculty to obtain proportioned numbers of class levels. The faculty members administered the questionnaire following accompanying guidelines within a two-week period in the beginning of the fall semester. Although there are three types (two-, three-, or four-year)
of nursing programs that can lead to certification as a registered nurse, this study was limited to the four year program resulting in a bachelor of science in nursing degree. The reason for this selection was that the student nurse population in a baccalaureate degree program would be most appropriate for comparison with other female college students in baccalaureate programs having similar admissions requirements.

Other student populations included in the study were freshmen, sophomore, junior, and senior female students from three other schools within the college. The additional schools were chosen because their individual departments prepared students for a traditional female occupation or a non-traditional occupation. The female students enrolled in traditional female occupations were selected from the school of education. Female students enrolled in non-traditional occupations were selected from the school of business and the school of arts and sciences.

The sample size distribution was as follows: school of nursing-366; school of education-357; school of business-166; and school of arts and sciences-157. In the school of education, students from the following departments were tested: elementary education, early childhood education and reading, special education, speech pathology and audiology, and education of the hearing impaired. Within the school of business, students from the following departments were tested: accounting, management, marketing, business administration (included finance and information systems), and business education (included administrative office management and distributive education). Within the school of arts and sciences, students from the departments of biology, chemistry, physics, math (included statistics) and computer sciences were tested. All student responses were voluntary and anonymous as the rights and dignity of all subjects involved were protected.

Table 1: General overview of correlation coefficients with autonomy scale scores.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Number</th>
<th>Correlation Coefficient</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>OCCUP.</td>
<td>1037</td>
<td>0.032</td>
<td>0.302</td>
</tr>
<tr>
<td>G.P.A.</td>
<td>1032</td>
<td>0.076</td>
<td>0.014</td>
</tr>
<tr>
<td>V.S.A.T.</td>
<td>1035</td>
<td>0.052</td>
<td>0.097</td>
</tr>
<tr>
<td>M.S.A.T.</td>
<td>1037</td>
<td>0.026</td>
<td>0.410</td>
</tr>
<tr>
<td>MASCUL</td>
<td>1046</td>
<td>0.449</td>
<td>0.0001</td>
</tr>
<tr>
<td>FEMINE</td>
<td>1046</td>
<td>-0.141</td>
<td>0.0001</td>
</tr>
</tbody>
</table>

P = probability value for error

Table 2: Student participants by school.

<table>
<thead>
<tr>
<th>School</th>
<th>Number</th>
<th>Percent of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nursing</td>
<td>366</td>
<td>35.0%</td>
</tr>
<tr>
<td>Education</td>
<td>357</td>
<td>34.1%</td>
</tr>
<tr>
<td>Business</td>
<td>166</td>
<td>15.9%</td>
</tr>
<tr>
<td>Arts and Sciences</td>
<td>157</td>
<td>15.0%</td>
</tr>
<tr>
<td>Total</td>
<td>1046</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

A three-section questionnaire was used to collect three types of data. The first section of the instrument was designed to collect demographic data such as level of education, school, and department in which student was enrolled, parent's occupation, grade point average (GPA), and Scholastic Aptitude Test (SAT) scores.

The second section of the questionnaire was the autonomy scale devised by W.M. Kurtines. The scale consisted of (25) True/False items. Kurtines, in a 1974 study, presented evidence that the characteristic of autonomy could be identified through certain characteristics isolated out from the analysis of the California Q Sort (Q-sort) and the California Psychological Inventory (CPI). In 1978, using CPI items and an autonomy Q-sort profile, Kurtines reported the development of an autonomy scale that could provide a measurement of autonomy. The autonomy scale was derived through the sequential use of two common item selection strategies: criterion keying and factor analysis for internal consistency.

The average reliability of the scale across three samples was .61, suggesting that the scale had adequate reliability. Validity of the scale was determined by visual inspection of the items and by the item analysis results. Correlations and regression analysis with the CPI indicated that high ratings for autonomy are associated with a set of factors including achievement orientation, interpersonal aggressiveness, and masculinity.

The third section of the instrument consisted of 20 masculine and 20 feminine attributes from the Bem Sex-Role Inventory. Bem's (1974) Sex-Role Inventory of masculine and feminine attributes was used to further substantiate the presence or absence of the characteristic of autonomy based on the traditional relationship with masculinity. Specifically, items designated as masculine on the Bem Inventory are descriptive of autonomous behavior rather than of non-autonomous behavior; eg, defends own beliefs, independent, assertive, willing to take risks, self-sufficient, willing to take a stand, individualistic, etc. The
researcher accepted the reliability based on scores in the Stanford University sample (masculinity alpha = .86, femininity alpha = .80). Validity was assessed based on the results of T-tests revealing that masculine and feminine scores differed significantly from each other and from self-perceptions at p less than .05.

While the characteristic of autonomy is not synonymous with masculinity, it has been suggested that as masculinity is traditionally defined, the characteristic of autonomy is more likely to be associated with masculinity than with femininity. So while not synonymous, autonomy and masculinity are analogous and possibly even predictive of each other.

### Data Analysis

Data from the questionnaires were submitted on computer scan sheets, entered on a data file and analyzed by computer, using Statistical Analysis System (SAS) programs. The questionnaire required 79 responses and there were 1,046 questionnaires that were analyzed. Scores on the autonomy and masculine/feminine scales were obtained for each subject.

The characteristics examined were autonomy, masculinity/femininity, and demographic variables such as parent's occupation, GPA, and VSAT/MSAT scores. Correlations between the two scales and the demographic variables are discussed later. The statistical methods used to examine the data included: 1. descriptive statistics: frequency distributions, measures of central tendency, measures of variability, and correlations, and 2. inferential statistics: T-test, ANOVA F, Scheffe's test, and Tukey's test.

The primary statistical method used for the inferential analysis of the data was ANOVA F which indicates whether or not a set of more than two means are significantly different from each other. However, ANOVA F does not reveal which of the means differ from each other. For more detailed information about the differences among the means, multiple comparison methods such as Scheffe's and Tukey's tests (Einst and Gabriel, 1975) are appropriate. Einst and Gabriel (1975) stated, "Scheffe's test is compatible with the overall ANOVA F test in that Scheffe's method never declares a contrast significant if the overall F test is nonsignificant." Scheffe's test is the most widely applicable of all the methods of post hoc comparison as it permits comparisons of pairs of means and of complex combinations of means.

In addition, Tukey's test was used since it is designed for making all possible pairwise comparisons between means and is more powerful in a statistical sense than Scheffe's test (Shavelson, 1981).

Also, if one has unequal cell sizes, Tukey is the method of choice (Einst and Gabriel, 1975). In general, Shavelson (1981) states that most widely applicable methods for making post hoc comparisons are Scheffe's test and Tukey's HSD (honestly-significant-difference) test. Analysis of the data for this study necessitated comparison of more than two means, required identification of the particular means that differed significantly, and consisted of unequal cell sizes. Therefore, ANOVA F, Scheffe's and Tukey's tests were appropriate.

In order to improve the quality of inference, the following items were carefully verified: normality assumption, linearity (scatter plot) for Pearson's correlation coefficient, multiple comparisons for ANOVA, and SAS GLM (General Linear Models) for unbalanced ANOVA.

### Results

Analysis of 1,046 questionnaires revealed the following: 1. no significant relationships between autonomy and parent's occupation, GPA, VSAT/MSAT scores, or feminine scores; and 2. a positive correlation was shown between autonomy and masculine scores (see Table 1).

#### General Student Profile: There were almost equal numbers of students in the school of nursing, in the school of education, and in the combined schools of business and arts and sciences (see Table 2). Parent's occupation appeared comparably represented in each of the seven categories for the four schools. Categories of parent's occupation included: 1. professional & technical; 2. managerial, official, proprietor; 3. craftsman & foreman; 4. operator (machinery/equipment); 5. service worker; 6. retired; and 7. other. GPA scores in the four schools did not differ significantly.
TABLE 5
COMPARISON OF SCHOOL OF NURSING TO THE 1. SCHOOL OF EDUCATION 2. SCHOOL OF BUSINESS AND SCHOOL OF ARTS AND SCIENCES USING ANOVA F CONCERNING MASCULINITY SCORES:

<table>
<thead>
<tr>
<th>School</th>
<th>Pr GT F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nursing Vs. Education</td>
<td>0.9284</td>
</tr>
<tr>
<td>Nursing Vs. Business and Arts &amp; Sciences</td>
<td>0.0330</td>
</tr>
</tbody>
</table>

TABLE 6
COMPARISON OF SCHOOL OF NURSING TO THE 1. SCHOOL OF EDUCATION 2. SCHOOL OF BUSINESS AND SCHOOL OF ARTS AND SCIENCES USING ANOVA F CONCERNING FEMININITY SCORES:

<table>
<thead>
<tr>
<th>School</th>
<th>Pr GT F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nursing Vs. Education</td>
<td>0.0010</td>
</tr>
<tr>
<td>Nursing Vs. Business and Arts &amp; Sciences</td>
<td>0.0001</td>
</tr>
</tbody>
</table>

TABLE 7
RANK ACCORDING TO MEAN SCORES BETWEEN THE CHARACTERISTICS OF AUTONOMY, MASCULINITY, & FEMININITY

<table>
<thead>
<tr>
<th>School</th>
<th>Autonomy</th>
<th>Masculinity</th>
<th>Femininity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arts &amp; Sciences</td>
<td>1</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Business</td>
<td>2</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Education</td>
<td>3</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Nursing</td>
<td>4</td>
<td>4</td>
<td>2</td>
</tr>
</tbody>
</table>

Rank code:
(Highest Mean Scores) 1---2---3---4 (Lowest Mean Scores)

However, comparison of GPA scores of different schools is probably not meaningful because of different curriculum requirements and grading policies. The VSAT scores in the four schools also did not differ significantly. Comparison of the MSAT scores among the schools revealed statistically significant differences. Scores of students from the school of education were significantly lower than the scores of students from the other three schools. Also students from the school of nursing scored significantly lower than did the students from the school of arts and sciences.

Autonomy Scale: The highest mean autonomy score was in the school of arts and sciences followed closely by the school of business. The lowest mean autonomy score was in the school of nursing with the mean score in the school of education only slightly higher. Among all four schools the scores were found to differ significantly in a statistical sense with a probability value for error of 0.0566 (see Table 3).

An additional analysis of variance for comparing nursing separately to the other schools revealed: 1. There was no statistically significant difference between nursing and education; and 2. There was a statistically significant difference between nursing and the combined non-traditional occupations found in the schools of business and arts and sciences with a probability value for error of 0.0161 (see Table 4).

Masculine and Feminine Sex-Role Inventory: The highest mean masculine score was in the school of arts and sciences followed closely by the school of business. The lowest mean masculine score was in the school of nursing with the mean score in the school of education only slightly higher. There were no statistically significant differences between the means for the masculine scores among the four schools.

However, when nursing was compared separately to education, and to the combined schools of business and arts and sciences, significant differences were found. An additional analysis of variance comparing nursing separately to the other schools revealed that for masculinity: 1. There was no statistically significant difference between nursing and education; and 2. There was a statistically significant difference between nursing and the combined non-traditional occupations found in the schools of business and arts and sciences with a probability value for error of 0.0332 (see Table 5).

Among the schools, the differences in means of feminine scores were found to be statistically significant except between the school of arts and sciences and the school of business. The lowest mean feminine score was in the school of arts and sciences, followed by the second lowest mean score in the school of business. The highest mean feminine score was in the school of education, followed closely by the school of nursing.

An additional analysis of variance comparing nursing separately to the other schools revealed that for femininity: 1. There was a statistically significant difference between nursing and education; and 2. There was a statistically significant difference between nursing and the combined non-traditional occupations found in the schools of business and arts and sciences with a probability value for error of 0.0001 (see Table 6).

Among all four schools, autonomy scores were found to correlate with masculinity scores. In addition, an interesting pattern was revealed in the scores for autonomy, masculinity, and femininity among the four schools. The highest mean scores for both autonomy and masculinity were in the school of arts and sciences, followed by the school of business. The lowest mean scores for autonomy and masculinity were in the school of nursing, followed by the second lowest mean scores in the school of education. In addition, femininity scores correlated inversely with autonomy scores except with a minor reversal between nursing and education (see Table 7).
Discussion

The first hypothesis stating that there is no difference in autonomy between female nursing students and female students in other traditional female professions fails to be rejected. Although the mean score for autonomy was lower for the students in the school of nursing than for the students in the school of education, the difference was not statistically significant.

The second hypothesis stating that there is no difference in autonomy between female nursing students and female students in non-traditional professions is rejected. The mean score for autonomy was lower for the students in the school of nursing than for the students in the school of business and the school of arts and sciences. This difference was statistically significant.

Masculinity scores for nursing students followed the same pattern as the scores on autonomy. Scores for students in the school of nursing were slightly lower than the scores for students in the school of education although the differences were not statistically significant. There was a statistically significant difference between the nursing scores and the student scores found in the schools of business and arts and sciences. The mean femininity scores were highest in the school of education, followed by scores from the school of nursing. Students from the school of arts and sciences obtained the lowest femininity scores, followed by the second lowest scores in the school of business. The differences in means of feminine scores were found to be statistically significant except between the school of arts and sciences and the school of business.

These results represent only one academic institution which draws from a predominantly middle-class population and, therefore, cannot be generalized to all nursing students. Nevertheless, potential implications for the future of nursing should be considered. Additional research should be done on the type of female attracted to the nursing profession today. Understanding the characteristics of this population would enable nursing education to develop interventions for dealing with this particular problem.

The professional socialization process that occurs throughout nursing education could be better harnessed to promote desired autonomous behaviors. Specifically, nursing education could consciously develop strategies for encouraging desired behaviors by identifying curriculum content and experiences that would be “autonomy promoters.” Nursing educators are capable of identifying autonomy promoting concepts and activities if convinced of their importance.

The role of women and work in American society has changed in the last 25 years. Expanding opportunities for women has had a resultant effect upon the type of woman attracted to the nursing profession. As nursing school enrollments decline, nursing must be prepared to compete with other professions for women that possess the potential for autonomous behavior. Nursing must be able to promise women opportunities where they can function in an autonomous manner. Nursing education is positioned to be the force for dealing with increasing the characteristic of autonomy in nursing students.

References


