A Test of Cohen's Developmental Model for Professional Socialization With Baccalaureate Nursing Students

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ABSTRACT

The study was designed to test the Cohen (1981) model of professional socialization, which proposes that nursing students progress through four developmental stages of unilateral dependence, negative/independence, dependence/mutuality, and interdependence as they advance through an educational program. The Professional Socialization Staging Scale (PS₃), consisting of four subscale scores representative of the stages, was administered to 422 students enrolled in eight clinical nursing courses. Instrument revision was accomplished using a cross-validation design, and the study hypotheses were tested with 214 subjects in the cross-validation subsample. Significant findings (p < .05) were that beginning students were more dependent than were graduating students, that older students were less dependent and more highly interdependent than were younger students, and that students with concurrent work experience in nursing-related fields were more highly interdependent than were students without concurrent work experience. With all groups of students evidencing the interdependence stage, no relationship was found between the sequential developmental stages and level of enrollment. Thus results of the study failed to support the Cohen model (McCain, 1984).

Because socialization is the process whereby a professional culture is transmitted, an understanding of this process is crucial to any profession, but especially so for an emerging profession such as nursing. Professional socialization for nursing occurs primarily during the period of formal nursing education. Thus the goal of nursing education is to ensure the survival of the occupation by transmitting to future practitioners not only the knowledge and skills of nursing, but also the values and norms characteristic of professional nurses. With survival of the occupation at stake, the development of professional role behaviors is of critical concern. Yet little is known about the process whereby students internalize the professional culture, and there is evidence that schools of nursing are not effectively or consistently achieving the goals of professional socialization (Cohen, 1981; Jacox, 1978; Kramer, McDonnell, & Reed, 1972; Lysaught, 1981; Styles, 1982).

In a 1981 publication entitled The Nurse's Quest for Professional Identity, Helen Cohen proposed a developmental model of professional socialization. Although Cohen presented a thorough review of the theoretical and research literature to support the stages of the model, there was no evidence that the model had been empirically validated. As a first step toward increasing the effectiveness and consistency of professional socialization for nursing, the study was undertaken to test the Cohen (1981) model of the professional socialization process.

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Statement of Purpose and Problems

The purpose of the study was to ascertain whether baccalaureate nursing students evidence the developmental stages of the Cohen model of the professional socialization process. The specific focus was on identifying empirically the existence of stages in the proposed model, using the investigator-designed Professional Socialization Staging Scale (PS³). The following problems were addressed by the study:

1. Are the developmental stages of professional socialization significantly different among groups of baccalaureate nursing students at different levels of enrollment in the educational program in nursing?
2. If there are significant differences in the developmental stages among groups of students at different levels of enrollment, are there relationships between the stages and level of enrollment in the educational program such that baccalaureate nursing students evidence progression through the developmental stages as time of enrollment increases?
3. Do the variables of age, race, gender, marital status, previous or concurrent work experience in nursing-related fields, or the presence of an immediate family member who is a nurse significantly affect the developmental stages of professional socialization among baccalaureate nursing students?

Theoretical Framework

Professional socialization was viewed as the interactive process by which an individual integrates a professional role into the self-concept through the acquisition and internalization of the requisite knowledge, skills, values, attitudes, and norms of the profession (Jacox, 1978; Moore, 1970). The Cohen model is based on Harvey, Hunt, and Schroeder’s (1961) theory of concept development, the stages of which are thought to apply not only to childhood development, but also to the learning of any new role or important skill. Adapting the work of Harvey and associates, Cohen (1981) proposed a four-stage model that incorporates Erikson’s (1963) theory of human development and Kelman’s (1961/1971) theory of social influence. Although the rate of progress through the stages of the professional socialization process may vary, one of Cohen’s fundamental propositions is that “the student must experience each stage in sequence to feel comfortable in the professional role” (p. 16). Furthermore, Cohen asserted that satisfactory socialization depends on the positive resolution of all four stages.

In Stage I, Unilateral Dependence, the individual is reliant upon external controls and adheres to the limits set by authorities. “Concepts must be accepted without question from external sources because the person lacks the necessary experience and knowledge to criticize or question” (Cohen, 1981, p. 61).

Stage II, Negative/Independence, is characterized by a cognitive rebellion, whereby the individual begins to question the concepts presented by authorities in an attempt to be free of external controls. The student develops the capacity for critical thinking and thus begins to sever the reliance on external authority for concepts and facts (Cohen, 1981).

In Stage III, Dependence/Mutuality, cognitive rebellion is replaced by more realistic evaluations of the environment and the individual begins to integrate others’ ideas. The student develops the capacity for evaluative thinking and tests facts and ideas objectively (Cohen, 1981).

In Stage IV, Interdependence, the need for independence and the commitment to mutuality are integrated, and the individual gains the capacity to exercise independent judgment. The professional socialization process culminates with the integration of a professional role identity into the individual's self-concept (Cohen, 1981).

Review of Research

Several studies offer supportive evidence that professional socialization for nursing is a developmental process involving changes in students’ values and attitudes as they progress through their educational experiences (Bell, 1982; Brown, Swift, & Oberman, 1974; Collins, 1981; Crocker & Brodie, 1974; Eron, 1955; Fleischer, 1978; Friedman, 1971; Giebe, 1977; Hosinski, 1967; Knox, 1971; May & Ilardi, 1970; Olesen & Davis, 1966; O’Neill, 1973; Psathas, 1968; Siegel, 1968; Stein, 1969; Tetrau, 1976; Warner & Jones, 1981). Although no studies were found that attempted to test Cohen’s (1981) model, a limited number of studies offer supportive evidence for one or more of the proposed developmental stages of socialization.

One of the first comparative studies of nursing students’ attitudes was conducted by Ingmire in 1952. When baccalaureate students’ responses to structured interview questions were compared by classes, Ingmire concluded that the groups of students’ attitudes toward nursing were in fact different. Students in the first year enjoyed their classes and, in general, were happy in school. The second-year students were generally dissatisfied and were highly critical of their educational program. In the third and final year of the program, student dissatisfactions were focused on their professional roles, specifically as team members. According to Cohen’s (1981) interpretation of the Ingmire study, the first-year students evidenced the compliance of stage I, whereas the second-year students demonstrated the resistance of stage II, and the third-year students were coping with stage III issues.

In support of stage I, Gunter (1969) found that beginning baccalaureate nursing students were more dependent on the views of others than they were independent and self-supportive. The students were “less inner-directed and more outer-directed, possibly indicating a tendency toward external conformity” (p. 62).
TEST OF COHEN'S MODEL

The findings of Fleischer's (1978) study of the development of professional self-concept among baccalaureate students are supportive of the negative/independence characteristic of stage II. In acceptance of the faculty's images of nursing, there was less consensus among second-level students than there was among first- or third-level students, indicating that the second-level students were less accepting of the faculty's views of the profession.

In a closely related study, Siegel (1968) found that in their images of nursing, seniors corresponded more closely with the faculty's images than did sophomores in a baccalaureate program. This finding and the similar findings of Bell (1982), Crocker and Brodie (1974), and Gliebe (1977) are supportive of Cohen's (1981) assertion that during stage III, students begin to "incorporate others' ideas into their own thoughts and judgments" (p. 18).

In support of stage IV, Stoller (1978) found that seniors in a diploma program attached less importance to the nursing role in their total conceptions of self than did freshmen. The findings of Stoller's study can be interpreted as evidence that the seniors had integrated the professional role into all other life roles, thereby assigning the professional role less significance within the total self-concept.

Assumptions

The major assumptions of the study were as follows:

1. Professional socialization for nursing is a developmental process (Cohen, 1981).
2. Stages of the developmental process of professional socialization are identifiable and measurable (Loevinger, 1966).
3. There is no pretest effect in study subjects who participated in pilot testings of the PSIS either three months or nine months prior to the study (Willson & Putnam, 1982).

Definition of Terms

Professional socialization was defined as the four-stage developmental process whereby baccalaureate nursing students integrate a professional role into their self-concepts. The stages of the developmental process were operationally defined in terms of scores on the PSIS, which consisted of four subscale scores corresponding to the stages proposed by Cohen (1981).

Baccalaureate nursing students were defined as generic students enrolled in one of eight clinical nursing courses offered at the University of Alabama School of Nursing. Level of enrollment referred to the students' point of progression through the clinical nursing courses. Operationally, level of enrollment was determined by the number of clinical nursing courses that students had completed, ranging from zero for the beginning students to seven for the graduating seniors.

Design of the Study

The descriptive study was designed to enable concurrent measurement of the proposed developmental stages at all levels of enrollment in the nursing program. Because the study was designed to test Cohen's model, generalizability of the findings was not the major consideration. Rather, threats to the internal validity of the study design were of paramount importance. To control threats to internal validity resulting from differences among the curricula and faculty of various nursing programs, the students enrolled in a single school of nursing were selected for inclusion in the study.

Instrument

When the PSIS was administered to the subjects, the instrument consisted of 25 situations, each followed by four
responses corresponding to the stages of Cohen's (1981) model. Presented with a forced-choice format, respondents were to rank each of the randomly ordered responses from number 1 being "most descriptive" through number 4 being "least descriptive" of them. Four subscale scores were derived by summing an individual's rankings of the stage responses. Because subjects ranked each response, the scale was treated as consisting of 100 separate items.

Prior to use in this study, the instrument underwent two major revisions, using concurrent data from two content validity procedures and two pilot studies. With the second pilot study, the subscale reliability coefficients were above .50. On the second content validity procedure, three subject experts agreed that all items retained for the scale were representative of the proposed stages.

In the present study, a cross-validation design (with randomly split halves of the total sample, stratified by the eight clinical nursing courses) was employed to further refine the scale. Based on the item analysis from the validation subsample, items were deleted from the scale, and the reliability and validity of the revised scale were assessed with the cross-validation subsample. To reduce possible bias introduced by deletion of items with the validation subsample, the statistical hypotheses were tested only with the cross-validation subsample.

Instrument scoring for the hypotheses tests reflected the revision in the instrument, so that subjects' rankings for the remaining 20 items representing a given stage were summed for each of the subscales. The possible subscale score range was 20 to 80, with the lowest subscale score representing the predominant developmental stage.

**Hypothesis 1:** The first research hypothesis was that baccalaureate nursing students at different levels of enrollment in the educational program in nursing will evidence different stages of development in the process of professional socialization. This hypothesis was tested in the null form by comparing the PS3 subscale scores of groups of subjects at each of the eight levels of enrollment, using one-way analysis of variance and Scheffe's post hoc tests.

From the data presented in the Table, it can be seen that the only significant difference among groups of subjects' scores was found on the Stage I subscale, where Group 0 had a significantly lower score than did Group 7. With students who had completed no clinical nursing courses having significantly lower Stage I scores than students who had completed seven clinical nursing courses, it was concluded that beginning students were more dependent than were graduating students.

**Hypothesis 2:** The second research hypothesis was that there is a positive relationship between the stages of professional socialization and level of enrollment in the educational program such that baccalaureate nursing students evidence progression through the developmental stages as time of enrollment increases. The hypothesized relationships between level of enrollment and the developmental stages were as follows:

A. Students beginning the nursing major will evidence the unilateral dependence stage.

B. As students progress through the program, they will first evidence the negative/independence stage, followed by the dependence/mutuality stage.

C. Students nearing completion of the program will evidence the interdependence stage of professional socialization.

For all groups of subjects, the lowest score was on the Stage IV subscale. With the lowest score indicating the predominant developmental stage, it was found that all subjects evidenced the stage of interdependence. Because there was no overall relationship between the stages of professional socialization and level of enrollment in the educational program, it was concluded that baccalaureate nursing students did not evidence progression through the developmental stages as time of enrollment increased. Thus the findings of the study did not support the Cohen model of the professional socialization process.

**Hypothesis 3:** The third research hypothesis was that there is a positive relationship between maturity as measured by age and the stages of professional socialization such that, independent of their level of enrollment, older students evidence higher stages of socialization than do younger students. This hypothesis was tested in the null form for each subscale using analysis of covariance.

It was found that neither age nor level of enrollment was

**Description of the Sample**

After being informed of the purpose of the study both verbally and in writing, subjects participated voluntarily and anonymously. The total sample consisted of 422 subjects, representing 81% of the population of students enrolled in clinical nursing courses at the University of Alabama School of Nursing. The stratified random sample in the cross-validation group consisted of 214 subjects. Using chi-square goodness-of-fit tests, no significant differences between the cross-validation subsample and the total sample were found on any of the demographic variables. A typical subject was a white female who had never been married, who had no previous or concurrent work experience in a nursing-related field, and who did not have an immediate family member who was a nurse. The age of subjects in the cross-validation subsample ranged from 19 to 58 years, with a mean of 23.8 years and a median and modal age of 22 years.

**Findings and Conclusions**

Using reliability data from the validation subsample, the five situations with the lowest item-to-scale correlations were statistically deleted from the PS3. With only the remaining 80 items being scored, the Cronbach's coefficient alpha values for the cross-validation subsample were found to be .556 for Stage I, .718 for Stage II, .455 for Stage III, and .730 for Stage IV.
**TABLE 1**

Means, Standard Deviations, *F*-values, and Significance Levels for Comparisons of PS3 Subscale Scores Across Groups by Number of Completed Clinical Nursing Courses
(Cross-validation Subsample, *n* = 214)

<table>
<thead>
<tr>
<th>Groups by Number of Completed Clinical Nursing Courses</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
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<tbody>
<tr>
<td><em>n</em> = 32</td>
<td>47.9</td>
<td>48.9</td>
<td>49.8</td>
<td>51.1</td>
<td>52.5</td>
<td>49.7</td>
<td>50.0</td>
<td>55.6</td>
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<tr>
<td><em>n</em> = 30</td>
<td>(5.5)</td>
<td>(4.8)</td>
<td>(6.0)</td>
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<td>(6.5)</td>
<td>(7.8)</td>
<td>(4.8)</td>
<td>(4.6)</td>
</tr>
<tr>
<td><em>n</em> = 25</td>
<td>63.7</td>
<td>62.1</td>
<td>61.2</td>
<td>63.2</td>
<td>59.8</td>
<td>62.1</td>
<td>62.8</td>
<td>50.6</td>
</tr>
<tr>
<td><em>n</em> = 22</td>
<td>(8.4)</td>
<td>(6.9)</td>
<td>(10.1)</td>
<td>(4.5)</td>
<td>(9.5)</td>
<td>(8.8)</td>
<td>(4.2)</td>
<td>(5.6)</td>
</tr>
<tr>
<td><em>n</em> = 20</td>
<td>50.3</td>
<td>50.5</td>
<td>48.2</td>
<td>49.8</td>
<td>50.6</td>
<td>48.3</td>
<td>51.1</td>
<td>48.0</td>
</tr>
<tr>
<td><em>n</em> = 22</td>
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<td>(6.5)</td>
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<td>(5.8)</td>
<td>(5.7)</td>
<td>(4.7)</td>
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<td>39.9</td>
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<tr>
<td><em>n</em> = 30</td>
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<td>(5.0)</td>
<td>(9.2)</td>
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<td>(7.5)</td>
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<td>(6.5)</td>
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Note. The possible subscale score range was 20 to 80, with the lowest subscale score indicating the predominant developmental stage.

*a* Dependent-groups *t*-tests for differences in the subscale scores within each group: For Groups 0 and 7, all subscale scores were significantly different. For Groups 1, 2, 3, 4, 5, and 6, the Stage I and Stage III subscale scores were not significantly different.

*b* Scheffe’s post hoc test: Group 0 had a significantly lower mean Stage I subscale score than did Group 7.

-significantly related to the Stage II or Stage III subscale scores. However, there were significant relationships between the covariate of age and the Stage I and Stage IV subscale scores such that older students were less dependent (eta = .39, *p* = .000), and more highly interdependent (eta = .23, *p* = .004) than were younger students. Maturity apparently did enhance the professional socialization process among the students in this sample.

_Hypotheses 4 through 8_: Research hypotheses 4 through 8 proposed that there are significant differences in the developmental stages of professional socialization (a) among students of different races, (b) between groups of male and female students, (c) among students with different marital statuses, (d) between students with and without previous work experience in nursing-related fields, and (e) between students who do and do not have an immediate family member who is a nurse. All of these hypotheses were tested in the null form for each subscale using oneway analysis of variance, and all of the null hypotheses were retained. There were no significant differences in the PS3 subscale scores among groups of students with differences on the variables of race, gender, marital status, previous work experience in nursing-related fields, or presence of an immediate family member who was a nurse. It was concluded that these variables did not affect the professional socialization process.

_Hypothesis 9_: The last research hypothesis was that there is a relationship between concurrent work experience in nursing-related fields and the stages of professional socialization such that students with concurrent work experience evidence higher stages of socialization than do those students with no concurrent work experience. Again, oneway analysis of variance was used to test a null hypothesis for each subscale score.

For the Stage I, Stage II, and Stage III subscales, there were no significant differences between groups of students with and without concurrent work experience. However, the 81 students with concurrent work experience in nursing-related fields had significantly (*F* = 4.581, *df* = 1.212, *p* = .0335) lower Stage IV subscale scores (*X* = 36.4, *SD* = 6.8) than did the 133 students without that experience (*X* = 38.5, *SD* = 7.2). It was concluded that students with concurrent work experience were more highly interdependent than were students without concurrent work experience. Apparently concurrent work experience, but not previous work experience, enhanced the socialization process in this sample.

**Discussion**

Using a minimum reliability standard of .50 for an instrument designed for group comparisons (Helmstader, 1964), the internal consistencies of the Stage II and Stage...
IV subscales were considered to be acceptable, with alpha values above .70. However, the reliability coefficient of .56 was minimally adequate for the Stage I subscale, and the value of .46 was inadequate for the Stage III subscale. Because an instrument with low reliability is capable of detecting only very large differences among subjects, the probability of committing a Type II error is increased (Ferguson, 1966). Thus it was to be expected that only large differences on the Stage I and particularly the Stage III subscales would be statistically significant.

Because all groups of subjects had the lowest score on the Stage IV subscale and the highest score on the Stage II subscale, it is possible that a positive response bias may have affected the reliability of both subscales. Subjects might have been hesitant to rate the negative responses of Stage II as most like them and more willing to rate the more socially desirable responses of Stage IV as most like them. These response biases may have operated to increase the internal consistencies of the Stage II and Stage IV subscales, but to decrease the validity of the total scale.

Empirical information on the validity of the instrument was obtained through factor analyses, using the cross-validation design. All of the factor analyses were interpretable in terms of certain underlying concepts, but those concepts (with two exceptions for the cross-validation subsample) were not consistent with the four stages of Cohen's model. Thus the hypothesis related to the construct validity of the PS3 as a measure of four stages of socialization was rejected.

The findings of the study did not support the Cohen (1981) model because students in this sample did not evidence progression through the proposed developmental stages. Thus the validity of the Cohen model is questionable. Yet, because the conclusion that all groups of students achieved the interdependence stage of development is in conflict with current theory related to socialization and with previous research, the validity of the instrument used in this study also is questionable.

First, in terms of the validity of the model, it must be concluded that the PS3 had acceptable evidence of content validity. Because three subject experts including the author of the model agreed that the items measured the stages of the Cohen model, there was a priori evidence that the instrument was a valid measure of the proposed stages. Yet construct validity of the instrument as a measure of four stages of the socialization process was not demonstrated through factor analysis. If the model is not valid, the instrument could not be expected to demonstrate high reliability nor to yield a factor structure consistent with the four stages.

On the other hand, with the preponderance of theoretical and research evidence in support of the model, the validity of the instrument is questionable; certainly the reliability of the PS3 is questionable. It is not theoretically defensible that beginning students had integrated the professional role into their self-concepts and thus achieved the interdependence stage of development. It is more likely that response bias operated to invalidate the measurements in this study.

Recommendations

The question of the validity of Cohen's model versus the validity of the PS3 is conjectural, largely because in the social sciences, one study cannot validate or invalidate theory (Blalock, 1982). The primary recommendation from this research is that Cohen's model be further tested, using other research measurements or a revised version of the PS3. The model also needs to be tested with other populations of nursing students.

It is recommended that the PS3 be revised, followed by additional content validity assessments. Distinctions between the Stage I and Stage III items need to be clarified. Additionally, the suspected problem of social desirability needs to be offset by reducing the negative overtones of the Stage II items and by making the Stage IV items appear less desirable. The factor analyses could be used as the foundation for additional situations for a revised scale.

One of the major limitations of the study was related to the cross-sectional design, because it had to be assumed that the groups of students were comparable on such factors as personality traits and levels of motivation. In future research, measurements of students' personality traits and levels of motivation could be obtained to ascertain the relationship of such factors to the professional socialization process. Other measures of the socialization process, including direct observations of students' behaviors, could be used to assess the validity of the Cohen model. Ultimately, a longitudinal study to test the model is recommended.

With evidence that transmission of the professional culture of nursing is currently inadequate (Cohen, 1981; Jacox, 1978; Kramer et al., 1972; Lysaught, 1981; Styles, 1982), further research related to professional socialization is imperative. Through additional research, it may be possible to expand or revise Cohen's model or to generate other theoretical explanations for the process underlying professional role development. Given a greater understanding of the process whereby the professional culture is internalized, it may be possible to increase the effectiveness and consistency of the professional socialization process and to advance the professionalization of nursing.

References


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