BEHAVIORS OF CLINICAL INSTRUCTORS WHICH FACILITATE LEARNING AS PERCEIVED BY JUNIOR LEVEL BACCALAUREATE NURSING STUDENTS

by

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A THESIS

Presented to
The Oregon Health Sciences University
School of Nursing
in partial fulfillment
of the requirements for the degree of

Master of Nursing
June 11, 1982

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ACKNOWLEDGEMENTS

Special thanks to my advisor, Sandy Stone, and to my committee members, Kathy Crabtree and Chris Tanner, whose encouragement and assistance have been vital to the completion of the project.

I would like to acknowledge the assistance and support of Dr. Lorraine Davis in the statistical analysis of this data.

Additionally, I would like to thank Susan Ulrich and Joe Canale for their insightful remarks and continuing support throughout the writing of this thesis. Thanks, also, to Christopher for his many little smiles.

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CHAPTER I

REVIEW OF THE LITERATURE

Introduction

The discussion of the concept of andragogy in education literature has made educators more cognizant of the characteristics and qualities of adult learners (Knowles, 1978). This awareness has led to the development and use of teaching strategies that differ from those based on the more conventional behavioral theories (Skinner, 1968; Gagné, 1965). One of the strategies compatible with andragogy but not emphasized by conventional theories involves the active participation of the student in the evaluation of teacher effectiveness (Gessner, 1956). Other strategies include using the student's previous life experiences as a basis for education and utilizing democratic rather than autocratic methods of instruction (Gessner, 1956).

School philosophies and program objectives for the baccalaureate nurse deal with the student as an adult learner who is entering into a profession. The education program is designed to increase student self-directedness in preparation for professional practice.

The baccalaureate nursing student is educated for involvement in a profession which demands high level interpersonal and technical skills. With the move toward differentiation between associate degree and baccalaureate levels of nursing, graduates of baccalaureate programs must be prepared to assume leadership roles, be effective change agents,

utilize problem solving skills, and educate consumers and colleagues. Nurse educators need to effectively aid students in developing these skills. In order to meet the needs of adult learners, it is important that nurse educators demonstrate the behaviors that adult learners perceive as most facilitative to learning.

The clinical setting is the major area in which the student learns to transfer theory into practice (Jacobson, 1966). Because the nursing student deals with real clients in clinical settings there are elements of risk involved which are not present in classroom settings. It follows then that teacher behaviors which are perceived to facilitate learning in classroom situations are not necessarily identical to those behaviors which are perceived to facilitate learning in the more anxiety provoking clinical setting (O'Shea, 1979).

Few studies have addressed the identification of behaviors of clinical instructors which facilitate learning at the baccalaureate level (O'Shea, 1979; Jacobson, 1966; Mims, 1970; Kiker, 1973). There is increasing emphasis on baccalaureate education for entry into professional nursing, and expectation that the baccalaureate prepared nurse is a leader. The identification of behaviors which facilitate learning can (1) provide a basis for the development of effective teaching strategies based on principles of adult learning, (2) serve as a useful method for evaluation of teacher effectiveness in the clinical area, (3) provide guidelines for curriculum revision, and (4) provide guidelines for inservice instruction (Irby, 1978).

The purpose of this study is to identify behaviors of clinical instructors which are perceived by students to facilitate learning in

a baccalaureate nursing program. In addition, the possible relationship between the identification of facilitative behaviors of clinical instructors and the independent variables of student's age, sex, length of time since high school graduation, and grade point average (GPA) were explored.

Review of the Literature

In order to provide the most effective clinical instruction to nursing students, the instructor must have an understanding of the learning needs of the students and the behaviors which help students to meet their needs. The literature review includes a discussion of adult education and the application of this theory in the clinical instruction of baccalaureate nursing students. This is followed by a summary of studies which have examined characteristics of nursing instructors in classroom and clinical settings in relation to student and/or instructor perceptions. The need for further study of baccalaureate nursing instructor behaviors which facilitate student learning in the clinical area is then discussed.

The Adult Learner

Until the 1960's pedagogy or conventional learning was the major theoretical framework for all of education. Adults and children were considered to have the same responses to instruction and to utilize the same learning processes (Knowles, 1978). Since that time, Knowles developed and described a theory of adult learning--andragogy. A premise for the emergence of andragogy is described as follows:

> . . . as an individual matures his need and capacity to be self directing, to utilize his experience in learning, to identify His own readiness to learn, and to organize his learning around life problems increases steadily from infancy to preadolescence and then increases rapidly during adolescence. (p. 54)

Through statements such as this, Knowles formalized much of Lindeman's (1926) philosophy of learning. Lindeman recognized that all age groups were taught based on conventional learning theory which required that the student adjust to the established curriculum. Because adults enter a learning situation with an established wealth of experiences, he advocated the importance of a democratic rather than authoritarian method of teaching. He felt that a person's "needs and interests, life situations, experience, self concept, and individual differences" needed to be considered by the educator. Knowles (1978) further developed five key assumptions first identified by Lindeman in 1926. These assumptions constitute the foundation of modern adult learning theory. They are as follows:

1. Adults are motivated to learn as they experience needs and interests that learning will satisfy.
2. Adults' orientation to learning is life centered.
3. Experience is the richest resource for adults' learning.
4. Adults have a deep need to be self-directing.
5. Individual differences among people increase with age. (p.31)

According to Knowles (1978), educators of adult learners will best meet the learners' needs if teaching behaviors are patterned on these assumptions.

From a review of literature about nursing education, the baccalaureate nursing student is recognized as an adult learner (Schweer, 1976). This attitude is evident in statements of school philo-

sophies, in the structure of curriculum, and in the performance expectations in the clinical setting (Reed, 1979). Characteristics of adult learners such as increasing self directedness, broadening base of experience, readiness to learn, and a desire to apply what is learned (Knowles, 1978) are often used to describe the baccalaureate nursing student. In the past, the baccalaureate nursing student was part of a very homogeneous group. In recent years, this population has become more diverse and includes not only the white/Anglo-Saxon/Protestant females who enter college immediately following high school but also racial minorities, males, persons who already have earned degrees in other fields, or who have delayed further education for many years, and registered nurses (Reed, 1979). As this student population continues to diversify, more attention needs to be placed on incorporating adult learning principles into the system of education in order to draw upon life experiences to enrich the student's education.

In using the concept of the adult learner, educators need to explore learner characteristics and to build the teaching-learning process on these characteristics. The educator must realize that a responsibility of adult learners is to take an active role in the evaluation of their education (Rogers, 1969; Knowles, 1978; Gessner, 1956). A component of overall evaluation of education includes the evaluation of instructor effectiveness. It is recognized that student evaluation of teachers is a valid method of assessing teacher effectiveness (Butler, 1970; Wallace, 1978) and that students can make sound judgments and offer useful suggestions for improving instruction (Mims, 1970). Involving students in the evaluation process is a method by which the

faculty can demonstrate respect for the students and their opinions (Butler, 1970).

If properly obtained, the student's input can help identify needed change in teaching approaches and course objectives. The evaluation process allows the student to express views which, in some institutions, are considered when evaluating faculty for tenure or promotion (Armington, 1972). Schweer and Gebbie (1976) and Ketefian (1977) advocate the inclusion of input from the teacher him/herself, peers, and administrators in addition to students when evaluating teacher effectiveness. Although often lengthy and involved, this thorough evaluation method can accurately reflect overall qualification for promotion and tenure and is more valuable than faculty evaluations centered on factors such as participation on faculty committees.

Student evaluation is valuable in areas other than promotion. Identification of teacher behaviors that facilitate learning can assist faculty to improve performance and avoid the pitfall of complacency (Greaves, 1979). These behaviors could also serve as a guideline in the education and preparation of nurse educators and in the process of recruiting faculty members. Participation in the evaluation process is also a means by which the student expresses views and can provide a stimulus to effect change (Armington, 1972). Before individual instructor evaluation forms are developed, qualities of instructors which facilitate learning must be identified.

Clinical and Classroom Studies on Teacher Effectiveness

At the present time, the majority of studies of teacher effectiveness have been in classroom settings (Solomon, et al., 1964; Knowles, 1978; Hassenplug, 1965). Those dealing with classroom and clinical settings (Barham, 1965; Butler, 1970; Cotanch, 1980; Kiker, 1973; Jacobson, 1966; Stuebbe, 1980) have included students from associate degree nursing (ADN), diploma, baccalaureate, and graduate programs. The tools utilized in the studies are varied in design. Research has been done using critical incident techniques (Barham, 1965; Jacobson, 1966; Wong, 1978), rank order techniques (Stuebbe, 1980; Rauen, 1974), rating scales (Butler, 1970) and open-ended questionnaires (O'Shea, 1979).

Jacobson (1966) and Barham (1965) were pioneers in the research aimed at nursing student identification of effective and ineffective teacher behaviors. Both researchers utilized the critical incident technique as a means of gathering data. Essentially, the critical incident technique asks the subject to recall and describe in detail an incident that best represents an answer to the question being asked. Lists of ineffective and effective behaviors were identified and grouped according to major categories of behaviors.

Barham's (1965) sample included 178 persons (students, instructors, and program directors) from 13 ADN programs. She extracted 19 behaviors from the critical incidents which had described both effective and ineffective clinical and classroom behaviors. Eighty percent of the behaviors dealt with some aspect of students' feelings about student-faculty relationships. Examples include: "giving students a feeling of importance" and "empathizing with the student." There were no

comparisons made between the behaviors identified by students, instructors, and program directors.

The behaviors that Barham identified are similar to those identified by Jacobson (1966). Jacobson studied 961 undergraduates in five baccalaureate programs. From 1182 critical incidents, she identified a list of 58 effective and ineffective teaching behaviors. From this list she was able to identify six major categories of instructor behavior. These behaviors included: availability to students; apparent general knowledge and professional competence; interpersonal relations; teaching practices (including methods and skills); personal characteristics; and evaluation practices. Results showed that there was no correlation between student-teacher ratio and the number of negative incidents students reported. There was a direct correlation between the number of negative incidents reported and the level of the nursing student (e.g. seniors reported on more of the ineffective behaviors).

Kiker (1973) also found that various levels of students ranked instructor characteristics differently. Her research population consisted of 107 students. These undergraduate nursing students, junior education students, and graduate nursing education students rank-ordered 12 faculty characteristics. The characteristics were divided into three main groupings of essential instructor characteristics. These groupings were professional competence, relationships with students, and personal attributes. In contrast to Barham (1965), Kiker found that personal attributes of the instructor were ranked as least important. There was also a significant difference noted between the rankings of the student groups. Graduate students ranked creativity first while

undergraduates ranked professional qualities as most essential. In view of this, Kiker postulates that individual instructor qualities should be considered when teaching assignments are made.

No conclusions can be drawn based upon the above studies because of the variations in sample populations and in tools utilized in data gathering and inconsistent results. Because aspects of instructor behavior such as role modeling are more applicable in the clinical setting, it is important to study populations that evaluate clinical instructor behaviors independently of classroom instructor behaviors.

Clinical Studies on Teacher Effectiveness

Clinical teaching is a challenging area of education. Schweer and Gebbie (1976) consider it to be,

> . . . the vehicle that provides students with opportunity to translate basic theoretical knowledge into the learning of a variety of intellectual and psychomotor skills needed to provide patient-centered quality nursing care (p. 31).

The clinical instructor has the responsibility of helping the student to transfer knowledge from the classroom to the dynamic and less ideal clinical setting (Wong, 1979). It is because of the uniqueness of a clinical setting that classroom or combination classroom/clinical study results do not automatically apply to clinical situations (Greaves, 1979). The clinical setting, with teacher/student ratios often at a 1:10 ratio offers the instructor a unique opportunity to provide individualized instruction and an ideal opportunity to apply adult learning theory. Without the identification of behaviors which facilitate learning in this unique setting, it is difficult to evaluate the quality of nursing education being provided (McCaffrey, 1978).

O'Shea (1979) discusses effective and ineffective teaching behaviors in the clinical setting. They defined effective teaching behaviors as "those actions, activities, and verbalizations of the clinical instructor which facilitate student learning in the clinical setting," and ineffective teaching behaviors as "those actions, activities, and verbalizations which interfere with student learning in the clinical setting." These authors identified three categories of behaviors when they analyzed lists of facilitative teacher behaviors compiled by 205 junior and senior level students and 24 instructors in a baccalaureate program. The categories were: evaluative behaviors (e.g. feedback); instructive/assistive behaviors (e.g. role modeling); and personal characteristics (e.g. teacher personality). Knowles (1978) views behaviors described in these three categories as components which comprise aspects of adult learning. He places the instructor in a role of supervisor/assistant/resource person as opposed to that of an autocratic leader.

Effective and ineffective behaviors identified by juniors, seniors, and by faculty were compared by O'Shea (1979). An overall analysis of the data revealed the following:

1. Students and faculty agreed that positive feedback facilitates learning,

2. Faculty identified clearly defined objectives as being more important than did students, and

3. Role modeling was of five times greater importance to faculty than students.

One explanation offered for the latter finding is that students may

not have totally understood the concept of "role model." There were no statistical tests of significance done in this study.

Wong (1978) found that first and second year ADN students varied in their perceptions of nursing instructor behaviors which facilitate and those which hinder learning. Her study included a small sample of 14 ADN students. These first and second year students identified instructor behaviors via the critical incident reporting technique. The five categories of behaviors were: professional competence; relationships; personal attributes; teaching methods; and evaluation of practice. Differences in the results were found. First year students focused more on personal attributes and relationships while second year students placed greater importance on professional competency.

Two other studies comparing levels of students in the same program were done by Rauen (1974) and Stuebbe (1980). These studies are the only two found in a nursing literature review in which the same tool was utilized allowing comparisons of findings. Rauen recognized the importance of the clinical instructor in the educational process. She supported the notion of clinical instructors fulfilling the three main roles of person, nurse, and teacher (Barham, 1965; Jacobson, 1966). In order to explore the student's point of view about the nurse educator as a role model, she developed a tool which listed 18 instructor behaviors or characteristics. In this Clinical Instructor Characteristic Ranking Scale (CICRS) behaviors were divided into three groups. Each group contained two characteristics dealing with nurse, person, and teacher behaviors (see Appendix B). Nurse behavior dealt with role modeling and professional competencies in the clinical area (e.g. "demonstrates

how to function in a real nursing situation" and "demonstrates an ability to do nursing skills"). Teacher behavior included aspects such as "suggests helpful resources when I have questions" and "encourages me to think for myself." Behaviors such as "avoids embarrassing me" and "demonstrates kindness during her daily interactions with people" represent person characteristics (Appendix C). There was no identification or discussion of behaviors related to assumptions of adult learning theory in the two studies.

Rauen's (1974) sample consisted of 84 students in three diploma programs. In comparing behaviors which were important to the freshmen and to the senior students, Rauen found,

1. Freshmen ranked the clinical instructors "nurse" characteristics highest,
2. Senior students ranked the "nurse" and "person" characteristics as equally important.

The CICRS was used by Stuebbe (1980) in her study of yet another diploma program population. She obtained data from 29 freshmen, 21 juniors, 18 senior, and 12 instructors. Freshmen ranked nurse qualities highest, seniors ranked person qualities highest, and teachers ranked teacher behaviors highest. Because of the diversity of these study results, it is not possible at this point to generalize results and identify clinical instructor behaviors that students perceive as facilitative of their learning.

Clinical Study of Baccalaureate Nursing Students

In a review of the literature it was found that there has been only one published study done to identify behaviors of clinical instructors which are perceived to facilitate student learning in the baccalaureate setting (O'Shea, 1979). Facilitative behaviors were similar to those identified in combination clinical/classroom studies of baccalaureate settings (Kiker, 1973; Jacobson, 1966). Some studies involved instructor input (O'Shea, 1979; Stuebbe, 1980) but none explored the relationships between student characteristics of sex, age, length of time since high school graduation, and grade point average (GPA), and the identification of instructor behaviors which were perceived as facilitative to student learning.

These independent variables were selected for study by this researcher to describe the homogeneity of the student group and to determine the effect each variable had on the selection of instructor behaviors perceived to be facilitative to learning. Because the enrollment of male students is increasing in nursing programs (Reed, 1979), it is important to identify if differences exist in their perceptions of facilitative behaviors. The variables of age and length of time since high school graduation were selected to support the identification of the baccalaureate student as an adult learner. It was expected that a positive correlation would be found between age and length of time since high school graduation. Studies done in didactic settings have shown that perception of effective teaching may also influence GPA. Since this has not been determined in the clinical setting, the student's GPA (as a measure of scholastic achievement) was selected as a variable.

It was believed that students with higher or lower GPAs might perceive different instructor behaviors as facilitative to learning.

Summary

As an adult learner, the baccalaureate nursing student should play an important role in evaluating instructor and program effectiveness (Ketefian, 1977). In order to accomplish this, instructor behaviors which are perceived to facilitate learning must be identified. An underlying assumption (Wallace, 1978; Mims, 1970) is that student perception is in fact an accurate method of determining which instructor behaviors facilitate learning in the clinical setting. The studies done on clinical instructor behaviors are limited in number (Rauen, 1974; Wong, 1978; Stuebbe, 1980; O'Shea, 1978). Because of varying compositions of samples and methods of assessing facilitative behaviors, the results are not consistent enough to generalize (See Table 1 for summary).

Clinical instruction is an area of prime importance for further study because of the important role that clinical teaching has in the education of baccalaureate students (Schweer, 1976). It is also important to study this population of adult learners because of the increasing focus on the baccalaureate student as progress is made towards the institution of two levels of nursing practice (Polit, 1978; Schweer, 1976). At the present time there has been only one study done that deals directly with clinical instructor behaviors in a baccalaureate setting (O'Shea, 1979).

Purpose of the Study

The purpose of the study was to identify which clinical instructor behaviors facilitate learning as perceived by junior level baccalaureate nursing students.

Research Questions

1. Which behaviors of clinical instructors facilitate learning as perceived by junior level baccalaureate nursing students?
2. Is there any relationship between students' age and the clinical instructor behaviors identified as facilitative to learning?
3. Is there any relationship between students' sex and the clinical instructor behaviors identified as facilitative to learning?
4. Is there any relationship between students' length of time since high school graduation and the clinical instructor behaviors identified as facilitative to learning?
5. Is there any relationship between students' GPA and the clinical instructor behaviors identified as facilitative to learning?

TABLE 1

SUMMARY OF STUDIES RELATED TO EVALUATION OF TEACHER EFFECTIVENESS (1966-1980)[a]

Author, Year	Size and Type of Population Studied	Type of Tool	Characteristics Examined	Results
Jacobson, 1966	All levels of undergraduate students at five baccalaureate programs (N = 961)	Critical incident technique	Studied baccalaureate students to determine what constituted effective and ineffective classroom and clinical behaviors of their nursing instructors.	1. Provided a list of 58 behaviors considered to be effective or ineffective teacher behaviors. 2. The proportion of negative critical incidents was inversely related to an increase in student:faculty ratio. 3. The preparation level of teachers was not related to their effectiveness classification. 4. The education level of students was related to the proportion of negative critical incidents.
Barham, 1965	178 subjects consisting of students, instructors and directors from 13 ADN programs	Critical incident technique	Collected data on what students, instructors, and directors felt were effective and ineffective classroom and clinical teacher behaviors.	1. No comparisons between students', instructors', and directors' opinions were made. 2. Identified the two most critical behaviors as "showing restraint so that own anxiety does not influence the situation" and "explaining for understanding." 3. 80% of all incidents cited some aspect of "feeling or relationship."

[a] Co-authored by Susan Ulrich and Suzanne Canale, 1981.

Author, Year	Size and Type of Population Studied	Type of Tool	Characteristics Examined	Results
Kiker, 1973	107 students (junior education students, junior nursing students and graduate nursing students) in educational tract. Students were from two universities.	Rank order tool listing 12 teacher characteristics	Comparison of teacher characteristics considered most essential by the three groups. There was no division of classroom and clinical behaviors.	1. Education students ranked instructor confidence and encouragement of independent thinking as most essential. 2. Undergraduate nursing students ranked professional competency as most important. 3. Graduate nursing students ranked creativity as first. 4. All students ranked personal attributes as least essential.
Stuebbe, 1980	80 persons (29 freshmen, 21 juniors, 18 seniors, 12 instructors) in a diploma program.	CICRS (Clinical instructor characteristic ranking scale)	Comparison of student and instructor views about the role of nursing instructors	1. Instructors ranked teacher characteristics as most important role. 2. Students ranked nurse characteristics highest. 3. Freshmen students ranked nurse characteristics highest. 4. Seniors ranked person characteristics highest. 5. There was a statistically significant difference in how students and instructors ranked characteristics.
Rauen, 1974	84 diploma nursing students (freshmen and seniors)	CICRS	Specific focus on clinical instructor behaviors which students feel helps them to become the type of nurse they wish to become.	1. Overall, students ranked nurse characteristics as most important. 2. There was no significant difference between rankings by freshmen and seniors. 3. There was a significant difference in the scores of the three categories (person, nurse, and teacher)

Author, Year	Size and Type of Population Studied	Type of Tool	Characteristics Examined	Results
Rauen, 1974, continued				4. There was a significant difference among the subject's scores of identical class levels.
O'Shea, 1979	Juniors and seniors and faculty in a baccalaureate nursing program	Two question questionnaire ("facilitated learning" and "Interferred with learning"	Comparison of effective and ineffective clinical teaching behaviors as described by students and faculty.	1. Faculty cited role modeling to be important five times as often as students did. 2. Behavior noted by all groups to be most facilitative was faculty availability. 3. Found a significant difference in what students and faculty deemed important.
Wong, 1978	14 students in an ADN program (8 first year and 6 second year students)	Critical incident	Purpose was to identify students' perceptions of teacher behaviors which facilitate or hinder students' learning in clinical area and to determine if first and second year ADN students had different perceptions.	1. Found that first year students were particularly sensitive to how the teachers make them feel. 2. Found second year students more concerned with teacher competency.

CHAPTER II

METHODS

Introduction

Baccalaureate nursing students can be identified as adult learners. They are being educated towards involvement in the nursing profession, are required to develop self-directed behaviors and to assume leadership roles. The importance of focus on the student as an individual increases as the student population becomes more heterogeneous. As adult learners, students should be active participants in the evaluation of instructor and program effectiveness. To begin the evaluation process, instructor behaviors perceived to be most facilitative to learning must be identified. A review of the available nursing literature revealed only one study done exclusively on the evaluation of perceived clinical instructor effectiveness at the baccalaureate level (O'Shea, 1978).

This correlational descriptive study was done to identify those behaviors of clinical instructors which are perceived by a sample of baccalaureate nursing students to facilitate learning. The Clinical Instructor Characteristic Ranking Scale (CICRS) developed by Rauen (1974) was chosen for the study because it identified behaviors that supported the assumptions of adult learning theory and had been proven to be valid and reliable. In addition to the identification of perceived behaviors which facilitate learning, the relationship of the independent variables of sex, age, length of time since high school graduation, and grade point average (GPA) was explored.

Setting

The setting for this study was a state supported generic baccalaureate nursing program in the Northwestern United States. The objectives of the baccalaureate program which state that the students become increasingly self-directed, apply educational and practical experience, and demonstrate effective problem solving behaviors are congruent with adult learning principles and make this institution an appropriate setting for the study.

The data were collected in Spring, 1981 from subjects enrolled in junior level nursing courses. The courses had didactic and clinical components which had three and five credits respectively. The students were in clinical settings an average of 14 hours per week (attendance was required). Settings included acute care hospital facilities, ambulatory care facilities, and community agencies. During the clinical experiences, nursing instructors were available to supervise and assist the students with patient care and to aid them in the transfer and application of theory into practice. The faculty spent the majority of their time with students in the acute care settings. A faculty/student ratio of 1:10 was usually maintained. This ratio is conducive to the application of adult learning principles because the instructor had the time and opportunity to get to know students and to assist them in developing behaviors which increase skills in becoming more self-directed.

The following criteria were used to select the sample:

1. Expressed willingness to participate by informed consent (Appendix A).

2. Enrollment in one of the junior level nursing courses.

Characteristics of Subjects

A total of 46 students consented to participate in the study and responded to the questionnaire. The size of the junior level baccalaureate nursing class was 98. At the time the questionnaire was administered during theory classes, there were 76 students present (students are not required to attend the didactic portion of the coursework). Instructors present at the time the questionnaire was administered informed the researcher that attendance of 76 students (78% of the student enrollment) was greater than normal due to the administration of a unit exam that day.

Two of the questionnaires were incomplete and could not be utilized as data for the study. The total number of completed questionnaires available for data analysis was 44. This was 45% of the total number of students in the junior class and 61% of the students present in class the day the questionnaires were distributed.

Sex

Forty-three females and one male participated in the study. From Table 2 it may be seen that the majority of the sample subjects (98%) were female. There were three men in class when the questionnaire was distributed. Based upon this, the rate of respondance was 26% of male enrollment and 34% of males in attendance. The characteristic of sex was included as a variable in order to describe whether the sample was heterogeneous or homogeneous in this regard. Had more males responded

to the questionnaire it could have been determined if a difference existed between males and females in perception of facilitative clinical behaviors.

Age

The independent variable of age was selected to describe the diversity of the group and to see if a relationship exists between age and the behaviors of clinical instructors which are perceived to be facilitative to learning. The majority of the students (59%) were between 20 and 24 years of age. As seen on Table 2, 11 of the 44 students (25%) were in the range of 25 to 29 years of age and seven (16%) were over 29 years of age. The mean age of the sample was 25 years with a range of ages 20 to 40 years.

Length of Time Since High School Graduation

As shown in Table 2, the majority of the students (43%) graduated from high school three and four years prior to the time of the study. The mean length of time since high school graduation was eight years. The range was three to twenty-four years, with the median of six years.

The relationship between length of time since high school graduation and age was determined (see Figure 1). The scattergram shows a positive correlation between these two independent variables. The older the student was, the greater the length of time since high school graduation.

GPA

The independent variable of GPA was included in the study to better describe the sample and to identify relationships between

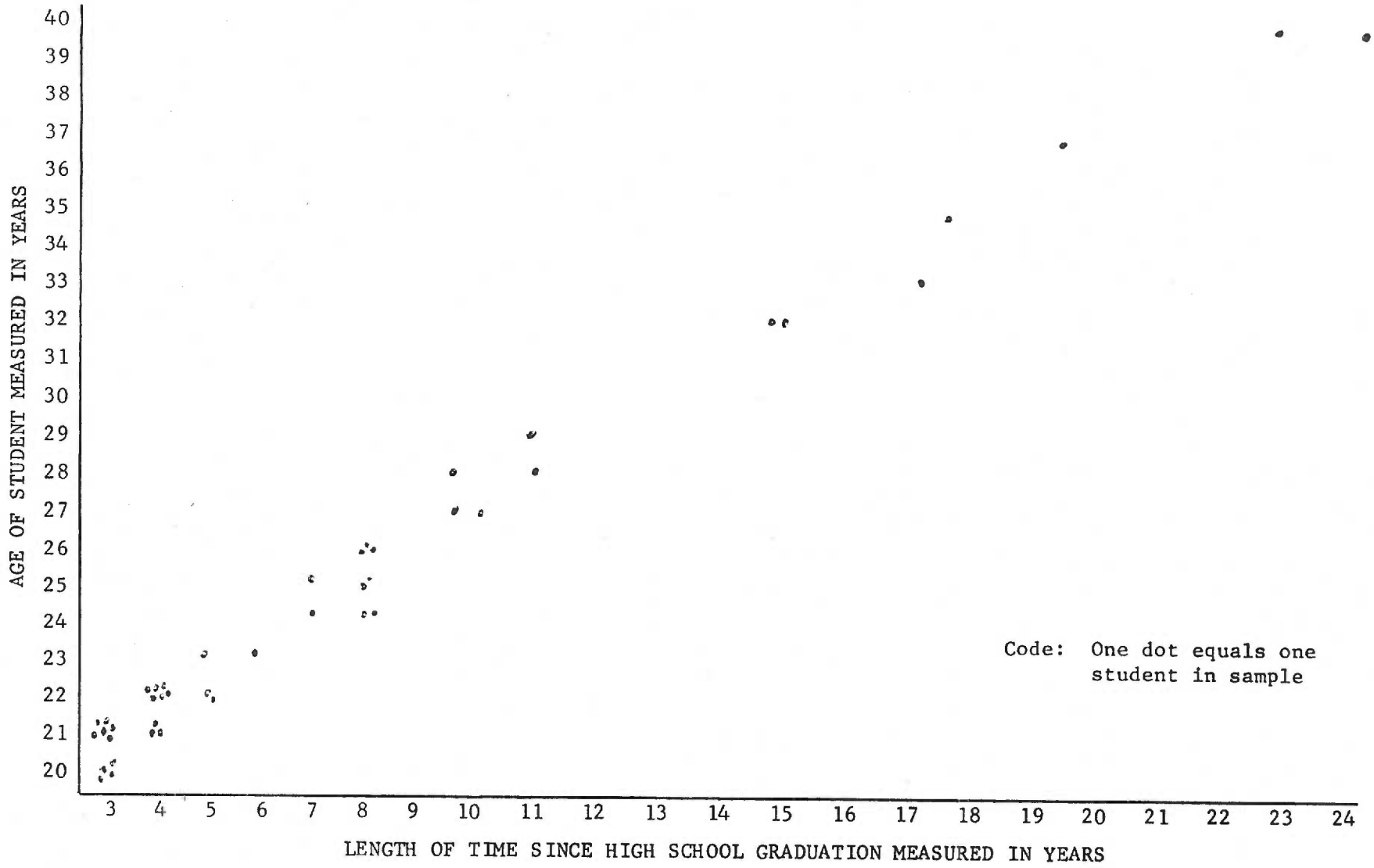

FIGURE 1

Relationship Between Independent Variables of Age and Length of Time Since High School Graduation

scholastic achievement and the clinical instructor behaviors which are perceived to facilitate learning.

The range of GPAs for the 44 students was 2.51 to 3.96. The majority of the students (50%) had GPAs ranging from 3.00 to 3.49. Eleven students (25%) comprised each of the other GPA groupings (2.50 to 2.99, and 3.50 to 3.99) (see Table 2). The mean GPA was 3.28 and the median was 3.34.

TABLE 2

DESCRIPTION OF SAMPLE ON INDEPENDENT VARIABLES OF SEX, AGE, LENGTH OF TIME SINCE HIGH SCHOOL GRADUATION AND GPA

Characteristic	Number of Subjects N = 44	Percent of Total Number
Sex		
Male	1	2%
Female	43	98%
	Total 44	100%
Age		
20-24 years	26	59%
25-29 years	11	25%
> 29 years	7	16%
	Total 44	100%
Length of time since high school graduation		
< 5 years	19	43%
5-9 years	13	30%
> 9 years	12	27%
	Total 44	100%
GPA		
2.50-2.99	11	25%
3.00-3.49	22	50%
3.50-3.99	11	25%
	Total 44	100%

Data Collection Instrument

The Clinical Instructor Characteristic Ranking Scale (CICRS) was used to determine which clinical instructor behaviors the students perceived to be most effective in facilitating learning (see Appendix B). This rank order tool was developed and utilized by Rauen (1974) and again utilized by Stuebbe (1980). The content validity for the placement of the 18 behaviors in the three categories (Nurse, Teacher, Person) of the CICRS was established by a group of 25 experts. Eighty percent agreement on the placement was required. Reliability of the CICRS was established based on the Spearman-Brown prophecy formula. The figured reliability coefficient of 0.75 is considered adequate for group measures. On that basis the CICRS was considered stable and reliable. Stuebbe (1980) did not report data on reliability or validity of the CICRS. No further tests for reliability or validity were included for the present study. The specific categories and behaviors were clearly stated, concise, and well supported by previous research. A description of each category (Nurse, Teacher, Person) and the six behaviors included in each are provided in Appendix C.

A major reason for selection of the CICRS was its inclusion of some behaviors based on Knowles' (1978) adult learner assumptions. The researcher and colleague examined the 18 behaviors to determine which were based on these assumptions. There was 100% agreement in the selection of the behaviors. No previous effort had been made to establish the content validity of these behaviors in relation to adult learning theory.

Four of the 18 behaviors clearly support Knowles' (1978) assumptions of the adult learner. These four behaviors are:

1. Is available for help when I need her/his guidance.
2. Encourages me to think for myself.
3. Suggests helpful resources when I have questions.
4. Encourages me to be "open", thereby respecting my opinions and feelings.

The first three of these behaviors are taken from the teacher category and focus on the self-directed characteristic of the adult learner. Based on this "self-directed" student characteristic, the instructor becomes a learning reference rather than a traditional instructor (Knowles, 1978). The fourth CICRS behavior is taken from the person category. This behavior supports Knowles' (1978) identification of the adult learner as an individual.

The remaining 14 behaviors of the CICRS do not fit directly with assumptions of the adult learner. This is not to assume that they are not important clinical instructor behaviors.

As shown in Appendix B, the CICRS is divided into three groups (A, B, C), each containing six behavior. Students were asked to rank the behaviors in each group, giving the number 6 to the behavior perceived as most important and the number 1 to the behavior perceived as least important. Following this ranking, students were instructed to rank each of the three behaviors perceived as most important (with the number 6) and those perceived as next most important (with the number 5).

The CICRS was scored for each student completing the questionnaire. Each ranked score received a numerical value equal to its ranking (e.g.

a behavior with a rank of 4 received 4 points). Summary rankings of the most important behaviors (6's) and second most important (5's) received additional points. These additional points were scored as follows: 18 points for the number 6 ranked most important (3), 12 points for number 6 ranked 2, and 6 points for the number 6 ranked 1. The second most important behaviors (5's) received 15, 10, and 5 points respectively. The points were totaled for each characteristic as assigned by the total sample. Then the characteristics were ranked by the total number of points, the items receiving the highest number of points considered the most facilitative behavior.

Procedure

In order for the investigator to become familiar with administering the tool, and to determine the clarity of directions and the student's comprehension of the ranking system, the tool was pilot tested. The pilot group consisted of 10 first year Associate Degree nursing students. Fifteen minutes was allowed for questionnaire completion. No expressed or apparent difficulty was evident from the pilot study.

The CICRS was administered to the junior level baccalaureate nursing students during their didactic classes Spring 1981. Consent to participate in the study was indicated by the signed consent form and the completion of the questionnaire. It was made clear by the investigator that this was an optional activity. Students were given 15 minutes to complete the questionnaire. Code numbers were assigned to subjects in order to maintain confidentiality and to assure anonymity.

The independent variables of age, sex, length of time since high school graduation and GPA were obtained from student records. Age and length of time since high school graduation was expressed in years. GPA was calculated for all nursing courses taken at the study institution up to but not including Spring 1981.

Limitations

Limitations of the study are centered around problems of the sample and problems of the tool. The sample lacks generalizability due to the selection bias of those who voluntarily participated, the small size of the sample, and the selection of one study institution. The small number of males (2%) participating in the study indicate that the sample is not representative of the total population.

The use of a rank order tool which contained closed ended statements of behaviors restricted the number and type of possible student responses. Questionnaires, compared to interviews, carry with them the advantage of anonymity, but have the disadvantages of lower response rate, higher possibility of ambiguous choices, and greater possibility of superficial answers. With a rank order tool there is no way to control subjectivity of responses or the fact that perceptions may be based on most recent experiences.

During analysis of the data, it became evident that the small sample size and the structure of the tool made it difficult to isolate specific instructor behaviors which were perceived as most facilitative to learning. The intent of the questionnaire is to determine categories of behavior (Teacher, Nurse, Person) that are most facilitative to learning.

In order to analyze which specific behaviors are most important, the student would have to be asked to rank all 18 behaviors 1 through 18 in order of importance. Ranking that many items is very confusing and difficult. Because of this, the statistical analysis was done using categories of behaviors rather than individual behaviors. As previously discussed, this tool had not been developed based upon the conceptual framework of adult education. The majority of the behaviors did not strongly relate to assumptions of the adult learner.

Analysis of the Data

Consistent with the objectives of the study, analysis of the data was descriptive and correlational in nature. Behaviors which exemplified adult learning principles were discussed. Percentages, measures of central tendency and frequency distributions were utilized to describe the sample.

The Kruskal-Wallis one way analysis of variance was used to statistically analyze the relationship between the independent variables of age, length of time since high school graduation, and grade point average (GPA) and the dependent variable of clinical instructor behaviors perceived by the student to facilitate learning. This method of analysis was chosen because the data consisted of unequal group sizes and ordinal measurements. This method also provides a correction factor for paired ranks. Use of a non-parametric test avoided making the assumption concerning homogeneity of variance and increased the generality of the findings (Seigel, 1956). Use of the Kruskal-Wallis test enables the investigator to determine whether or not the differences in rankings

within categories of behavior (Nurse, Teacher, Person) signified genuine population differences or if they represented chance variations. Significance at the .05 level was determined using the critical values of chi square (Seigel, 1956). It is appropriate to use chi square because there are more than five cases in each group making the distribution of H approximate to chi square (Blalock, 1972).

Because only one male student responded to the questionnaire, the independent variable of sex was not analyzed.

CHAPTER III

RESULTS

Introduction

There has been increasing emphasis on nursing education at the baccalaureate level. A review of the nursing literature revealed numerous studies on the didactic portion of education. Few studies dealt exclusively with evaluation of education in the clinical setting. The clinical setting, with its unique features and high student/teacher ratio offers a good opportunity for the incorporation of adult learning principles. This clinical setting is used to prepare students to become increasingly more self-directed, more adept at problem solving, and more effective in a leadership role. In order to evaluate instruction and provide quality education, it is important that those clinical instructor behaviors which are perceived by students as facilitative to learning be identified.

A total of 44 junior level baccalaureate nursing students from a state supported generic program participated in this correlational-descriptive study. After obtaining informed consent from the students, characteristics of sex, age, length of time since high school graduation, and grade point average (GPA) were gathered from student records. Data were analyzed to determine relationships between the independent variables and the dependent variables of scores on the Clinical

Instructor Characteristic Ranking Scale (CICRS). Those behaviors which were based on adult learning theory were analyzed.

Data describing the behaviors and categories of behaviors which were perceived by students as most facilitative to learning follow. The chapter also describes the relationships between the independent and dependent variables.

Clinical Instructor Behaviors

Each student ranked the clinical instructor behaviors on the CICRS. A summary of the total points given to each behavior and to each category is shown in Appendix E and is discussed below. The distribution of total scores for each category is illustrated in Figure 2.

Nurse Behaviors

As a whole, students perceived this category of behaviors as more facilitative to learning than the teacher and person categories of behaviors. The nurse behaviors received a total of 2098 points which was 37.42% of the total points on the questionnaire. Scores for the six nurse behaviors ranged from 243 to 462 points. The mean was 349.7 points.

The behaviors are listed below in order of total points received.

1. Demonstrates how to function in a real nursing situation.
2. Shows a contagious enthusiasm for giving quality patient care.
3. Demonstrates knowledge of scientific principles relative to patient care.

4. Shows a continued interest in applying improved methods of giving nursing care.

5. Demonstrates ability to use scientific principles relative to patient care.

6. Demonstrates ability to do nursing skills (such as nursing procedures).

None of these behaviors had been identified by the researcher as strongly supporting assumptions of adult learners. According to Rauen (1974), all of the clinical instructor behaviors in the nurse category describe the instructor as a role model.

The behavior "demonstrates how to function in a real nursing situation" ranked highest in the category and in the ranking of the 18 behaviors with percentage scores of 22% and 8.2%, respectively. The behavior, "shows contagious enthusiasm for giving quality patient care" was scored second highest (7.8%) in the ranking of scores for all 18 behaviors.

Teacher Behaviors

Overall, this category of behaviors was ranked second most important of the three categories. The total number of points were 1822 from combined ratings for all subjects (32.5% of 5607). Within this category, the behavior "is available for help when I need her/his guidance" received the most points (24%). Scores for the six behaviors ranged from 183 to 428. The mean was 313.7 points.

The behaviors in the teacher category are listed in order of total points received.

1. Is available for help when I need her/his guidance.
2. Encourages me to think for myself.
3. Rewards my efforts to give quality nursing care.
4. Evaluates my progress in nursing in a fair manner.
5. Suggests helpful resources when I have questions.
6. Gives assignments that help me transfer syllabus concepts to actual patient care.

The behaviors chosen first, second and fifth have been identified as supporting the self-directed characteristic of the adult learner.

Person Behaviors

The person behaviors received a total of 1687 points. This was 30.09% of the total points on the questionnaire. Scores in this category ranged from 228 to 405 points, with a mean of 281.2. The person behavior "shows genuine interest in me as an individual" received the majority of the points (24%) for this category. The behavior based on adult learning assumptions ("encourages me to be 'open', thereby respecting my opinions and feelings") ranked fourth in this category.

The six person behaviors are listed below in order of the total points received.

1. Shows genuine interest in me as an individual.
2. Demonstrates honesty to me and others.
3. Shows empathy to me and others.
4. Encourages me to be "open", thereby respecting my opinions and feelings.

5. Demonstrates kindness during her daily interactions with people.

6. Avoids embarrassing me.

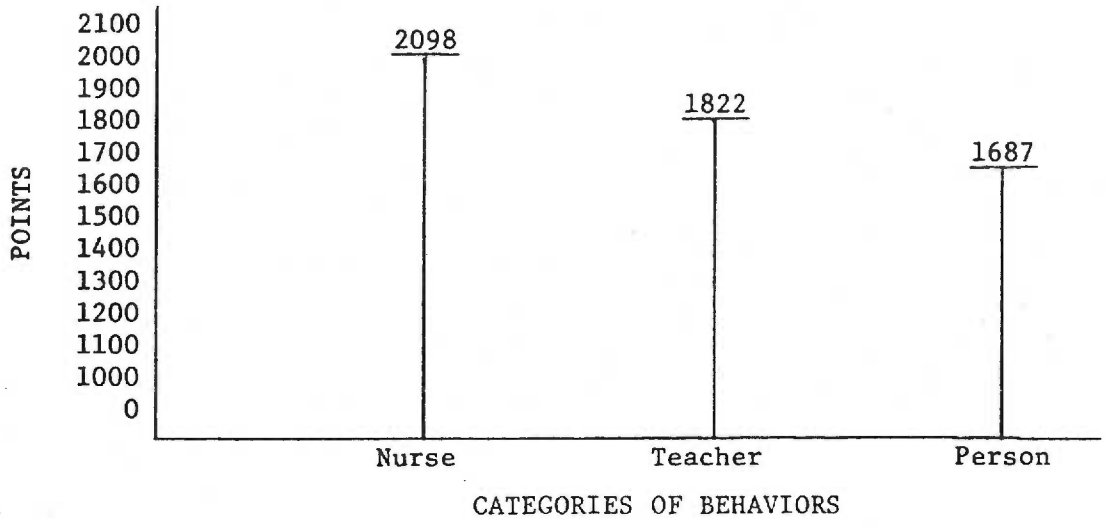

FIGURE 2

Distribution of Total Scores for Each Category of Instructor Behaviors (N = 44)

Most Facilitative Behavior

Using the scoring system, it was possible to identify which of the 18 instructor behaviors each student perceived as most facilitative. Figure 3 displays a frequency for the selection of this behavior.

The behavior chosen most often (by eight students) as that which facilitates learning was "shows genuine interest in me as an individual" from the person category. Seven students identified the nurse behavior of "shows a contagious enthusiasm for giving quality patient care"

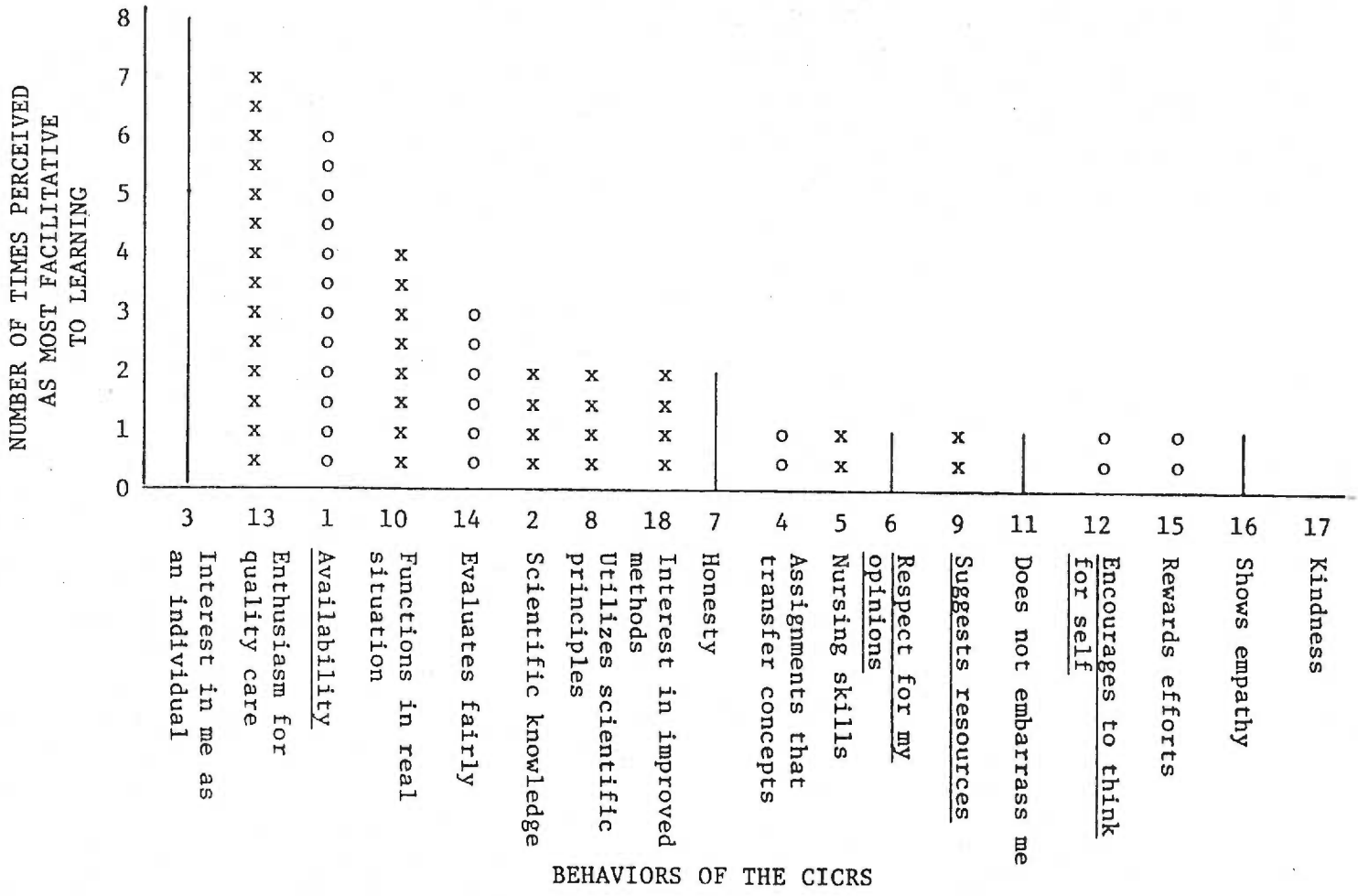

FIGURE 3

Clinical Instructor Behaviors Perceived by Students (N = 44) as Most Facilitative to Learning[a,b]

[a]Key: Nurse behaviors (xxx)
Teacher behaviors (ooo)
Person behaviors (___)

[b]Underlined behaviors are reflective of assumptions of adult learning theory.

as most important. Six students perceived the teacher behavior "is available for help when I need her/his guidance" as the most facilitative of the 18 behaviors. The person behavior "demonstrates kindness during her/his daily interactions with people" was not selected by any student as being the most facilitative to learning. It also had not been selected by the researcher as one of the four behaviors specific to adult learners.

Relationship between Independent and Dependent Variables

The relationship between each independent variable of age, length of time since high school graduation, and GPA and the categories of nurse, teacher, and person behaviors were made based on total points given by the students for all of the behaviors in each category. Data were statistically analyzed utilizing the Kruskal-Wallis formula to show relationship between the independent variables (age, length of time since high school graduation and GPA) and each category (nurse, teacher, person) of instructor behaviors perceived by the sample of junior level baccalaureate nursing students as being most facilitative to learning. All H values are less than the critical value of chi square ($.05 \geq 5.99$) for two degrees of freedom (see Tables 3, 4, 6). Based on this analysis, it must be assumed that differences in age, length of time since high school graduation, and GPA did not affect the identification of behaviors of clinical instructors which are perceived to facilitate learning. The small sample size and low variability of

category totals for each independent variable are factors influencing these findings.

Age

Based on the ranking of total points assigned by students in each of the three age groups (20 to 24 years, 25 to 29 years, and greater than 29 years), it was found that there was not total agreement on the category of instructor behaviors which was perceived as most effective in facilitating learning (see Table 3). The nurse category of instructor behaviors was perceived as most facilitative of learning by those students 20 to 24 years of age and those aged 25 to 29 years. The students aged 30 and older ranked the nurse behaviors as least facilitative and the teacher behaviors as most facilitative. There was a difference of less than 50 points between high and low category scores for the 25 to 29 year group and the greater than 29 year group. Scores for the 20 to 24-year-old students ranged from 926 (person category) to 1058 points (nurse category), showing the greatest diversity of the three age groups.

Length of Time Since High School Graduation

The subjects' length of time since high school graduation was divided into three groups of less than five years, five to nine years, and greater than nine years. The number of students in each was 19, 13 and 12, respectively. All three student groups perceived behaviors in the nurse category as being most facilitative to learning (see

TABLE 3

RELATIONSHIP BETWEEN AGE AND THE CATEGORY OF BEHAVIORS PERCEIVED BY STUDENTS AS MOST FACILITATIVE TO LEARNING[a]

	Age in Years						
	20-24 (N=26)		25-29 (N=11)		29 (N=7)		
Category	Total Points	%	Total Points	%	Total Points	%	H[b]
Nurse	1293	40	364	36	408	32	1.87
Teacher	1058	32	315	31	451	35	1.18
Person	926	28	338	33	414	33	1.42
Totals:	3277	100	1017	100	1273	100	

[b]H significant at or above 5.99, $p \geq .05$, df = 2

Table 4). The difference in points between the category ranked most important and the one ranked least important was 251, 35, and 104 for groups of less than five years, five to nine years, and greater than nine years, respectively. Although the category selection is the same, the students graduating from high school most recently had the greatest range in diversity of points awarded to each category of behaviors.

Grade Point Average (GPA)

GPA was divided into three groups. These groups (2.50 to 2.99, 3.00 to 3.49, and 3.50 to 3.99) consisted of 11, 22, and 11 subjects, respectively. Based on total points for each category, all students perceived nurse characteristics to be the most facilitative of the three categories of instructor behaviors. The differences between high and

TABLE 4

RELATIONSHIP BETWEEN LENGTH OF TIME SINCE HIGH SCHOOL GRADUATION AND THE CATEGORY OF BEHAVIORS PERCEIVED BY STUDENTS AS MOST FACILITATIVE TO LEARNING[a]

	Length of Time in Years Since High School Graduation						
	5 (N=19)		5 to 9 (N=13)		9 (N=12)		
Category	Total Points	%	Total Points	%	Total Points	%	H[b]
Nurse	941	39	557	35	567	37	.68
Teacher	802	33	533	32	493	23	.11
Person	690	28	525	33	463	30	.63
Totals:	2433	100	1604	100	1523	100	

[b]H significant at or above 5.99, $p \geq .05$, df = 2

low total scores for the GPA groupings of 2.50 to 2.99, 3.00 to 3.49, and 3.50 to 3.99 were 170, 40, and 189, respectively (see Table 5). When one looks at this range difference, it is evident that students in the lowest and highest GPA groupings had the greatest diversity of responses.

TABLE 5

RELATIONSHIP BETWEEN GPA AND THE CATEGORY OF BEHAVIORS PERCEIVED BY STUDENTS AS MOST FACILITATIVE TO LEARNING[a]

	GPA						
	2.50 to 2.99 (N=11)		3.00 to 3.49 (N=22)		3.50 to 3.99 (N=11)		
Category	Total Points	%	Total Points	%	Total Points	%	H[b]
Nurse	555	40	961	34	549	40	1.39
Teacher	454	32	921	33	449	33	.13
Person	385	28	933	33	360	27	2.47
Totals:	1394	100	2815	100	1358	100	

[b]H significant at or above 5.99, $p \geq .05$, df = 2

Summary of Results

Forty-four junior level baccalaureate students participated in the study. The sample was 45% of the eligible subjects. Characteristics of the sample (sex, age, length of time since high school graduation, and GPA) were obtained from student records. Ninety-eight percent of the sample was female. Because only one male participated in the study, the independent variable of sex could not be analyzed further. The majority of the students (59%) were between 20 and 24 years of age. The mean GPA was 3.128. The length of time since high school graduation ranged from three to 24 years prior to the study.

Each student identified those clinical instructor behaviors she/he perceived as most facilitative to learning. The CICRS was

a rank order tool utilized to collect this data. For the purpose of analysis, behaviors identified were divided into three categories (nurse, teacher, and person) with six behaviors in each category.

Based on the 18 behaviors, the scores from the total sample indicated the nurse behavior "shows a contagious enthusiasm for giving quality patient care" was perceived as the most facilitative to learning. Of the four behaviors that were representative of adult learning principles, one ("is available for help when I need her/his guidance") was chosen third and the other three were selected once as being most facilitative to learning (see Figure 3). The nurse category received the highest total points (2098).

The three categories were analyzed independently for any relationship with the independent variables. Results showed no significant difference (.05 level) between the independent variables and the identification of facilitative behaviors for any of the categories of behaviors.

Descriptive statistics illustrated that, with the exception of students aged 30 and older, all students, regardless of age, length of time since high school graduation, and GPA viewed the behaviors in the nurse category to be most facilitative to learning.

CHAPTER IV

DISCUSSION

Introduction

This study was done to identify those clinical instructor behaviors perceived by students to facilitate learning. Baccalaureate nursing students were chosen because of the increasing focus on baccalaureate preparation for nurses, the adult learner characteristics of the population, and the limited amount of previous research done on this population.

The baccalaureate nursing student is recognized as an adult learner. It is the responsibility of the student to participate in the evaluation of education. Didactic courses have been evaluated extensively, but few studies have been done in the area of instructor evaluation.

In this study, the 44 subjects responded to the Clinical Instructor Characteristic Ranking Scale (CICRS) rank order questionnaire. Data was obtained concerning which clinical instructor behaviors the students perceived as being most facilitative to learning. Categories of behaviors (nurse, teacher, person) were analyzed descriptively and statistically to identify correlation between responses and independent variables of age, length of time since high school graduation and grade point average (GPA). Behaviors identified as relating to adult education principles (four of the eighteen behaviors on the CICRS) were discussed.

In this chapter, each research question will be discussed in terms of individual behaviors and categories of behaviors. Statistical and practical significance of the findings, the relationship between these findings and those of previous research, and recommendations for further study will be included.

Research Question #1: Which behaviors of clinical instructors facilitate learning as perceived by junior level baccalaureate nursing students?

In terms of individual behaviors (refer to Figure 3), the one selected as most facilitative to learning by the greatest number of students (19%) was the person behavior of "shows genuine interest in me as an individual." This corresponds with Rauen's (1974) findings for freshman subjects in a diploma program. The behavior chosen second as being most facilitative ("shows a contagious enthusiasm for giving quality patient care") was selected by seven students (16%). Because of the questionable placement of this behavior in the nurse rather than person category, it is difficult to determine if the student was responding to nurse qualities or personality characteristics of instructors. The behavior chosen third as being most facilitative to learning ("is available for help when I need her/his guidance") was one of the four which support Knowles' (1978) assumptions of adult learners. This behavior had also been described as most facilitative to learning by baccalaureate students and faculty in O'Shea's (1979) research. Each of the other three behaviors based on adult learning theory ("suggests helpful resources when I have questions," "encourages me to think for

myself," and "encourages me to be 'open', thereby respecting my opinions and feelings"), were chosen only once as being perceived as most facilitative to learning. The person behavior "demonstrates kindness during her/his daily interactions with people" was not selected by any student as being most facilitative to learning. Figure 3 shows a diversity in the students' perception of the most facilitative behavior.

The category of nurse behaviors was viewed as most facilitative (37.42%) by the total sample (see Figure 2). This supports findings by Rauen (1974) and Stuebbe (1980), and Kiker (1973). The researcher did not identify any behaviors within the nurse category as being representative of adult learning assumptions. The category of nurse behaviors is, instead, based on the concept of role modeling (Rauen, 1974).

The four behaviors dealing with adult learning were part of the teacher (three behaviors), and person (one behavior) categories. These categories received total score percentages of 32.5% and 30.02%, respectively. It would seem that role modeling, rather than adult learning theory, is supported by these findings. This conclusion cannot be accepted without also noting each category received relatively equal percentage of points (37.42%, 32.5%, 30.09%) for nurse, teacher, and person categories, respectively. This fairly equal division could indicate that students view all three aspects (nurse, teacher, and person) as being important qualities of clinical instructors. It would seem that this combination of qualities is needed in order to effectively decrease some of the stress of the clinical setting and optimize student learning.

Research Question #2: Is there any relationship between students' age and the clinical instructor behaviors identified as facilitative to learning?

The independent variable of age was included in the study in order to better describe the sample and to identify how students of various ages (20 to 24 years, 25 to 29 years, and greater than 29 years) perceived the facilitative learning behaviors of clinical instructors. The age range (20 to 40 years) describes a sample which is heterogeneous and characteristic of adult learners who have had varying life experiences prior to entering school.

Statistical analysis using the Kruskal-Wallis formula showed that no significant difference existed between the age variable and the identification of behaviors which were perceived by the students as facilitative to learning (see Table 3). From these results, it was concluded that for this population, age had no effect on the particular ranking of behaviors within each category. Table 3 also compares age groupings with total points given to all the behaviors in the nurse, teacher, and person categories.

The students aged 20 to 24 years (N = 26) and 25 to 29 years (N = 11) perceived nurse behaviors as most facilitative to learning. The seven students who were age 30 and older identified teacher behaviors as most facilitative. It could be speculated that the students in the latter group do not respond as well to the teaching strategy of role modeling and that when stressful educational experiences occur in the clinical laboratory students desire from instructors the same type of

behaviors which were helpful in the past. It should be noted, though, that three of the behaviors in the teacher category are identified as being based on adult learning assumptions. In view of this, it could be speculated that although all baccalaureate nursing students have been identified as adult learners, the student aged 30 and older is more representative of an adult learner than the younger baccalaureate student. No previous study dealt directly with this same variable.

Students aged 20 to 24 years had the greatest diversity between total points given to the category viewed as most facilitative (nurse) and the one viewed as least facilitative (person). It might be speculated that these younger students were still in "awe" of the nurse role and mainly focused on the nurse qualities and abilities of the instructors. The older student, with more life experiences (possibly including experience in clinical areas) may be better able to recognize that instructor qualities of teacher and person also have major importance in the clinical learning process. The range of scores for categories in the students aged 25 to 29 and greater than 29 years is much narrower, indicating they viewed all three categories as having close to equal importance.

Research Question #3: Is there any relationship between students' sex and the clinical instructor behaviors identified as facilitative to learning?

The sample was homogeneous with regard to sex (98% female, 2% male). The researcher had expected a higher percentage of males. A more heterogeneous group may have exhibited greater differences

in the identification of behaviors which were perceived to facilitate learning.

Because only one male student responded to the questionnaire, it was believed that further statistical analysis would be of little value.

Research Question #4: Is there any relationship between students' length of time since high school graduation and the clinical instructor behaviors identified as facilitative to learning?

Length of time since high school graduation was divided into three groups (less than 5 years, 5 to 9 years, and greater than 9 years). There were 19 students in the first group, 13 in the second, and 12 in the third. The variable was selected for study in an effort to show that all baccalaureate nursing students were not immediate graduates of high school. A break between high school and nursing school could support the identification of baccalaureate nursing students as adult learners. The range of 3 to 24 years since high school graduation showed a heterogeneous nature to the sample. Those junior level nursing students who had graduated from high school three years prior to the time of this study (25%) had entered college right after high school.

Based on H values obtained (Kruskal-Wallis formula, refer to Table 4), it was shown that variations in length of time since high school graduation made no significant difference in the ranking of behaviors within the categories of nurse, teacher and person.

Comparison of category ranking based on total points for each behavior revealed that all students, regardless of length of time since high school graduation, perceived nurse behaviors to be most facilitative. This finding is consistent with the results of the total sample (see Figure 2). No previous study had been done on the relationship between length of time since high school graduation and behaviors of clinical instructors that were perceived as being facilitative to learning. A scattergram (Figure 1) was included to illustrate the relationship between length of time since high school graduation and age. As expected, a positive correlation existed.

Consistent with findings regarding age and identification of facilitative behaviors, the students who had graduated from high school less than five years ago had the greatest diversity in total scores for the categories. As with age, it may be speculated that these students have a more limited focus on the qualities of the clinical instructors and have limited life experiences because they have entered college immediately or soon after high school.

Research Question #5: Is there any relationship between students' GPA and the clinical instructor behaviors identified as facilitative to learning?

The independent variable of GPA was included to determine if clinical instructor behaviors which were viewed as facilitative to learning varied with regard to the scholastic accomplishment of the student. The GPA seemed the most effective way to measure scholastic standing. The researcher expected that students with higher GPA's would be more

self-directed and would select the behaviors based on adult learning assumptions most frequently. Results showed that, of the nine students selecting behaviors based on adult learning assumptions as most facilitative to learning, three had GPA's between 2.50 and 2.99, four were between 3.00 and 3.49, and only two were between 3.50 and 3.99. Based on these findings, it may be seen that there is no strongly positive or negative correlation between scholastic achievement and the adult learning assumptions.

As seen in Table 5, all students, regardless of GPA, selected nurse behaviors as being most facilitative to learning. These descriptive results support the findings of the total sample. The results are also consistent with those found in relation to length of time since high school graduation. Again, the emphasis seems to be on behaviors related to role modeling rather than adult learning assumptions.

Consistent with results obtained for questions 2 and 4, there was no significant difference between the independent variable of GPA and the rankings of instructor behaviors within each category. There is no previous research with which to compare these findings.

It should be noted that the focus was not on selection of those four behaviors based on adult learning assumptions, but rather on behaviors related to role modeling. This supported findings by Rauen (1974) and Stuebbe (1980) and emphasized the importance of clinical instructors having expertise in the clinical area.

Only one behavior based on adult learning theory was selected often as being facilitative to learning. Because of limitations of the study in relation to the sample size, generalizability of results

and tool selection, one should not view adult learning assumptions as being unimportant. Further research is indicated and is discussed in the following chapter.

CHAPTER V

SUMMARY AND RECOMMENDATIONS

According to Knowles (1978), adults enter into a learning situation with an established wealth of experience and have learning needs that are best met by democratic rather than autocratic teaching methods. Adult learners are considered to be self-directed and to learn most effectively with instructors who are good role models.

The baccalaureate nursing student has been identified as an adult learner based on age, length of time since high school graduation and enrollment in a program which requires the student be self-directed, utilize problem solving skills and display leadership qualities. The clinical setting is the major area in which the student learns to transfer theory into practice. Because of the uniqueness of this setting, and the limited nursing research done on clinical instruction, questions regarding the application of adult learning principles in clinical instruction remain unanswered.

Included in the adult education approach is the active participation of the student in the evaluation of teacher effectiveness (Gessner, 1956). In order to determine if an instructor is effective, those behaviors which are perceived to facilitate learning in the clinical setting must be explored. An underlying assumption here is that student perception is, in fact, an accurate method of determining which instructor behaviors facilitate learning in the clinical setting (Wallace, 1978; Mims, 1970).

The purpose of this descriptive correlational study was to identify which clinical instructor behaviors facilitated learning as perceived by junior level baccalaureate nursing students. The following research questions were addressed:

1. Which behaviors of clinical instructors facilitate learning as perceived by junior level baccalaureate nursing students?
2. Is there any relationship between students' age and the clinical instructor behaviors identified as facilitative to learning?
3. Is there any relationship between students' sex and the clinical instructor behaviors identified as facilitative to learning?
4. Is there any relationship between students' length of time since high school graduation and the clinical instructor behaviors identified as facilitative to learning?
5. Is there any relationship between students' grade point average (GPA) and the clinical instructor behaviors identified as facilitative to learning?

Student perceptions of facilitative behaviors were obtained using the Clinical Instructor Characteristic Ranking Scale (CICRS) developed by Rauen (1974). The 18 behaviors on this tool consist of equal numbers of items in three categories of nurse, teacher, and person.

Questionnaire results and the independent variables (sex, age, length of time since high school graduation, and GPA) were analyzed for the total sample of 44 junior level baccalaureate nursing students. The variable of sex was not analyzed because only one male participated in the study.

The behavior chosen as most facilitative to learning by the greatest number of students (8) was "shows genuine interest in me as an individual." Second most facilitative was the behavior "shows a contagious enthusiasm for giving quality patient care." This behavior was selected by seven students. The behavior chosen by the sample as third most important was "is available for help when I need her/his guidance." O'Shea (1979) found that her sample of baccalaureate students and faculty viewed this behavior as most facilitative to learning. This behavior had been identified by the researcher to be based on Knowles' (1978) assumptions of adult learning. Each of the other three behaviors based on the assumptions were selected once as being perceived as most facilitative to learning.

Using the Kruskal-Wallis formula, no significant difference ($p \geq .05$) was found between the independent variables of age, length of time since high school graduation, and GPA and the dependent variable of behaviors identified within each category of nurse, teacher, and person. Based on these results, it can be assumed that these independent variables had no effect on the perception of clinical instructor behaviors which facilitate learning for this sample. All sample groups excepting those students aged 30 years and older viewed behaviors in the nurse category as most facilitative to learning. This identification of nurse behaviors supports previous nursing research (Rauen, 1974; Stuebbe, 1980; Kiker, 1973).

The following recommendations for further study were a result of the review of nursing literature, and the results of the present investigation. The recommendations are divided into those relating

to sample and variables, tool selection, and extensions of the study.

Sample and Variables

The sample could include sophomore and senior students as well as junior level baccalaureate nursing students in order to determine if year of program affected the identification of facilitative clinical instructor behaviors. If differences existed, schools may be able to better meet student needs by matching those identified behaviors with instructors who best exemplify them.

It would also be interesting to note if differences exist between the perceptions of students and faculty regarding perceptions of facilitative behaviors. It may be that nurse educators are focusing on the development of behaviors that are not seen by students to facilitate learning. Results of this type of study would have implications for nurse educators and schools with programs preparing these educators.

In this research, the variable of sex was excluded from analysis because only one male responded to the questionnaire. Yet, it is believed that sex may be found to affect the perception of facilitative behaviors. The researcher recommends that baccalaureate nursing education programs whose enrollment includes more men be studied in order to determine if there is a difference between males' and females' perception of instructor behaviors facilitative to learning.

As had been expected, there was a positive correlation identified between the students' age and length of time since high school graduation. Further study need not address both these variables. Age is more readily

measured and provides information regarding the homogeneity or heterogeneity of the sample.

This study did not include variables related to previous nursing (e.g., aide, LPN, volunteer) experience and educational background (e.g., degrees in other fields). It may be interesting to determine if these variables affect the student's identification of facilitative instructor behaviors. This information could also be used to support Knowles' (1978) assumption of adult learners regarding previous life experiences.

Tool Selection

If the CICRS were to be used again in its present form, a conceptual framework of role modeling, rather than adult education, would be more appropriate. Of the 18 behaviors, only 4 could be identified as being strongly congruent with Knowles' (1978) assumptions of adult learning.

Although the tool is designed to identify characteristics of a composite of instructors, it may be measuring students' perceptions based on their most previous instructor. If the same tool were utilized, it might be administered at the beginning of the school year when students would not have completed a clinical rotation recently.

There is some question on Rauen's (1974) placement of the behavior, "shows a contagious enthusiasm for giving quality patient care" in the nurse rather than person category. A review of this and placement of other behaviors should be accomplished prior to subsequent use of the tool.

Extensions of the Study

This study, as with previous research, has supported role modeling as important in clinical education.

Before continuing with extensive research on perceived facilitative behaviors of clinical instructors, study should be done to determine if these perceived behaviors do, indeed, actually facilitate learning.

As the baccalaureate nursing programs expand their enrollment of registered nurses (returning to obtain degrees), and the population becomes increasingly heterogeneous, nurse educators need to be sure that instruction meets the needs of the adult learner. Research can be done to identify ways in which Knowles' assumptions of adult learners can be applied directly to nursing education. A tool with four behaviors related to adult education is not sufficient for this. This tool could then be used to further and more accurately explore student learning in the unique clinical setting. It would also be interesting to see how the assumptions of adult learning are applied in didactic settings in nursing education.

As more staff members in clinical settings are working directly with the student nurses, study could describe which of their behaviors students perceive to be most facilitative to learning. Preceptors would then be screened and selected on this basis. The nurse educators could also provide inservices to the preceptors on the development of facilitative behaviors. Comparisons could be made between the behaviors identified by the students for the preceptors or staff nurses and the clinical instructors.

The recommendations for further study are numerous. The nurse educator must acknowledge and respond to the educational needs of students (Reed, 1979). Accepting the assumption of the baccalaureate nursing student as an adult learner, it is the responsibility of the nurse educator to incorporate principles of adult education in clinical instruction. Because of the uniqueness of the clinical setting, and the vital part it has in nursing education, the conceptual framework of adult education may not be as appropriate as that of role modeling. This is not to conclude that the adult learner assumptions are not important considerations in clinical instruction. The need for further research is obvious.

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APPENDICES

APPENDIX A

INFORMED CONSENT

UNIVERSITY OF OREGON HEALTH SCIENCES CENTER
SCHOOL OF NURSING

"Behaviors of clinical instructors which facilitate learning as perceived by junior level baccalaureate nursing students"
by Suzanne Canale, BSN, MS

I, _____, agree to serve as a subject in the study titled "Behaviors of clinical instructors which facilitate learning as perceived by junior level baccalaureate nursing students" by Suzanne Canale, BSN, MS under the supervision of Sandra Stone, BSN, MS.

The purpose of this study is to determine the instructor behaviors which baccalaureate students perceive as facilitative to their learning in the clinical area and to determine if there are any significant differences in the perceptions based on the student's age, sex, length of time since high school graduation, and grade point average.

Participation in the study will include the completion of a fifteen minute questionnaire in my perceptions of what clinical instructor behaviors facilitate my learning. Further data regarding age, sex, and date of high school graduation, and grade point average will be collected from my student records.

While I may not benefit directly from participation in this study, others may be helped by the results of this study. No risks are expected.

All information will be kept confidential. Code numbers will be assigned each subject to preserve anonymity. The information will be destroyed after completion of the project. Data will be reported in aggregate form so that no single individual will be identified with specific answers.

Suzanne Canale has offered to answer any questions about participation in this study and can be reached at 1-747-4501, Ext. 2626 if questions arise. I understand that I may refuse to participate or withdraw from this study at any time without affecting my student standing.

I have read the foregoing and agree to participate in this study as described above.

Date: _____ Signature of subject:

_____

APPENDIX B

CLINICAL INSTRUCTOR CHARACTERISTIC

RANKING SCALE

CLINICAL INSTRUCTOR CHARACTERISTICS RANKING SCALE*

Listed below are three groups of characteristics of a clinical instructor. Each group lists six characteristics. In your opinion, which of the listed characteristics are most important to you to help you become the type of nurse that you wish to become?

In the following three groups, please rank each characteristic, giving the number 6 to the most important characteristic and the number 1 to the least important characteristic to you. The other numbers should be given accordingly with 5 the second most important characteristic and so one. There are 3 groups to rank.

GROUP A

___Is available for help when I need her/his guidance.
___Demonstrates knowledge of scientific principles relative to patient care.
___Shows genuine interest in me as an individual.
___Gives assignments that help me transfer syllabus concepts to actual patient care.
___Demonstrates ability to do nursing skills (such as nursing procedures).
___Encourages me to be "open" thereby respecting my opinions and feelings.

GROUP B

___Demonstrates honesty to me and others.
___Demonstrates ability to use scientific principles relative to patient care.
___Suggests helpful resources when I have questions.
___Demonstrates how to function in a real nursing situation.
___Avoids embarrassing me.
___Encourages me to think for myself.

GROUP C

___Shows a contagious enthusiasm for giving quality patient care.
___Evaluates my progress in nursing in a fair manner.
___Rewards my efforts to give quality nursing care.
___Shows empathy to me and others.
___Demonstrates kindness during her/his daily interactions with people.
___Shows a continued interest in applying improved methods of giving nursing care.

You have 3 number 6's. Please rank the 6's in order of their importance to you, giving rank 3 to the most important.

Rank 3: #6 in Group ___. Rank 2: #6 in Group ___. Rank 1: #6 in Group ___.

Now do the same for the characteristics marked with #5's above.

Rank 3: #5 in Group ___. Rank 2: #5 in Group ___. Rank 1: #5 in Group ___.

GOOD LUCK IN YOUR NURSING CAREER!

*Karen C. Rauen: "The clinical Instructor as Role Model," Journal of Nursing Education 13 (August 1974):36.

APPENDIX C

CATEGORIZATION OF BEHAVIORS

IDENTIFICATION OF INSTRUCTOR BEHAVIORS COMPRISING CATEGORIES OF NURSE, PERSON AND TEACHER[a,c]

Teacher Category

1. Is available for help when I need her/his guidance[b]
4. Gives assignments that help me transfer syllabus concepts to actual patient care
9. Suggests helpful resources when I have questions[b]
12. Encourages me to think for myself[b]
14. Evaluates my progress in nursing in a fair manner
15. Rewards my efforts to give quality nursing care.

Nurse Category

2. Demonstrates knowledge of scientific principles relative to patient care
5. Demonstrates ability to do nursing skills (such as nursing procedures)
8. Demonstrates ability to use scientific principles relative to patient care
10. Demonstrates how to function in a real nursing situation
13. Shows a contagious enthusiasm for giving quality patient care
18. Shows a continued interest in applying improved methods of giving nursing care.

Person Category

3. Shows genuine interest in me as an individual
6. Encourages me to be "open" thereby respecting my opinions and feelings[b]
7. Demonstrates honesty to me and others
11. Avoids embarrassing me
16. Shows empathy to me and others
17. Demonstrates kindness during her daily interactions with people.

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[a]Behaviors and categories from the CICRS (Rauen, 1974). [b]Behaviors consistent with adult learning theory. [c]Behaviors numbered according to order on questionnaire.

APPENDIX D

DATA TABULATION FORM

DATA TABULATION FORM

1. Student code number _____

2. Student age (years) _____

3. Student sex _____

4. Years since high school graduation _____

5. Grade Point Average _____

6. Behavior scores

Teacher behaviors

#	points
1	
4	
9	
12	
14	
15	Total points for teacher behaviors _____

Nurse behaviors

#	points
2	
5	
8	
10	
13	
18	Total points for nurse behaviors _____

Person behaviors

#	points
3	
6	
7	
11	
16	
17	Total points for person behaviors _____

APPENDIX E

RAW DATA

RANKING OF PERCEIVED IMPORTANCE OF CLINICAL INSTRUCTOR BEHAVIORS ACCORDING TO NURSE, TEACHER, PERSON CATEGORIES[a]

Behavior[b]	Total Points	Percent of Category Total	Percent of Questionnaire Total
		Nurse Category	
2	385	18%	6.87%
5	243	12	4.33
8	276	13	4.92
10	462	22	8.24
13	438	21	7.81
18	294	14	5.24
	Total 2,098	Total 100%	Total 37.42%
		Teacher Category	
1	428	24%	7.63%
4	183	10	3.26
9	183	10	3.26
12	353	19	6.30
14	325	18	5.80
15	350	19	6.24
	Total 1,822	Total 100%	Total 32.50%
		Person Category	
3	705	24%	7.22%
6	265	16	4.73
7	280	17	4.99
11	228	13	4.07
16	270	16	4.82
17	239	14	4.26
	Total 1,687	Total 100%	Total 30.09%

[a] $N = 44$

[b] Refer to Appendix C for actual statement of behaviors comprising each category.

AN ABSTRACT OF THE THESIS OF

Suzanne Weyland Canale

for the Master of Nursing

Date of Receiving this Degree: June 11, 1982

Title: BEHAVIORS OF CLINICAL INSTRUCTORS WHICH FACILITATE LEARNING AS PERCEIVED BY JUNIOR LEVEL BACCALAUREATE NURSING STUDENTS

Approved: _____
Sandra Stone, B.S.N., M.S., Thesis Advisor

The baccalaureate nursing student can be identified as an adult learner based on characteristics of age, length of time since high school graduation and enrollment in a program which requires the student be self-directed, utilize problem solving skills and display leadership qualities. The clinical setting is the major area in which the student learns to transfer theory into practice. Assumptions of adult learning were used to examine clinical instructor behaviors perceived by students to facilitate learning.

The purpose of the study was to identify which clinical instructor behaviors facilitate learning as perceived by junior level baccalaureate nursing students. Research questions examined the relationship between the independent variables (sex, age, length of time since high school graduation, and grade point average) and the students' selection of these behaviors.

Forty-four junior students from a state supported generic baccalaureate nursing program participated in the study. The majority (98%) of the students were female. The Clinical Instructor Characteristic Ranking Scale (Rauen, 1974) was used to measure the dependent variable

of clinical instructor behaviors perceived by the student to be most facilitative to learning. The structured questionnaire consisted of 18 behaviors. These behaviors were representative of three categories of behaviors (nurse, teacher, and person). This tool was selected because the behaviors were clearly stated, concise, and well supported by previous research. Four of the 18 behaviors clearly supported Knowles' (1978) assumptions of the adult learner. Independent variables of student sex, age, length of time since high school graduation and grade point average (GPA) were obtained from student records. Characteristics of the sample were described on percentages and frequency distributions. The research questions were statistically analyzed using the Kruskal-Wallis formula ($p = \geq .05$). Results showed that there was no statistical difference between the variables of age, length of time since high school, and GPA and the selection of behaviors perceived by the student as being facilitative to learning. Because only one male responded to the questionnaire, this variable was not analyzed. Descriptively, most students viewed behaviors in the nurse category as most facilitative to learning. This supported previous research. The behavior "shows genuine interest in me as an individual" was chosen most often (8 of 44 times) as most facilitative to learning.

Major findings of the study are listed below:

1. No significant difference existed between independent variables of age, length of time since high school graduation and grade point average and the behaviors perceived to facilitate learning.

2. Common student perceptions of clinical instructor behaviors which facilitate learning were found to exist despite wide diversity in age and length of time since high school graduation.