

PERIOPERATIVE NURSES' ATTITUDES TOWARD
CONTINUING EDUCATION

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the Graduate School:

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The primary purpose of this study was to determine perioperative nurses' attitudes toward continuing education and selected demographic variables. A researcher-developed Likert-type questionnaire was prepared and administered to 81 perioperative nurses. A total of 79 questionnaires were returned completed. The Small Continuing Education Attitude Inventory (SCEAI) was administered by the Operating Room Education Department during two inservice times in an auditorium classroom setting. The first part of the questionnaire related to the demographic variable, length of service at the facility as a registered nurse (RN) and operating room certification status. The second part was a 30-item attitude scale related to perioperative nurses and continuing education. The hypothesis was analyzed by using the t-test at an .05 level of significance. The findings for the study showed no differences in attitudes toward continuing education of certified nurse in the operating

room (CNORs) and non-certified nurse in the operating room (non-CNORs) .

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CHAPTER I

THE PROBLEM AND ITS BACKGROUND

Perioperative nurses are required to attend inservice education programs. Theories of attitude development and measurement indicate that, although there are many ways to change attitudes, one of the most expedient ways is through formal education and continuing education.

In nursing studies, the evidence that continuing education does not influence practice is stronger than that indicating a positive relationship (Signe, Skot, Cooper, 1983). However, perioperative nurses are faced with continual changes in the operating room, such as surgical methods and new equipment. As surgical procedures change, perioperative nursing must change as well. Continuing education may play a large part in whether or not these changes will be utilized in the clinical setting. According to Popiel (1973), since learning has been regarded as a behavioral change which continues over time, then behavioral change in the nurse becomes the desired goal of continuing education programs in nursing.

Statement of the Problem

Is there a difference in the attitude toward continuing education between certified nurses in the operating room (CNOR) and non-certified nurses?

Purpose of the Study

The purposes of this study were: (a) to determine the attitude toward continuing education by certified nurses in the operating room, (b) to determine the attitude toward continuing education by the non-certified nurse in the operating room, and (c) to determine if there is a difference in the attitude toward continuing education between the certified nurse and the non-certified nurse in the operating room.

Hypothesis

The hypothesis investigated in this study was:

There is no statistically significant difference in the attitude toward continuing education between the certified nurse in the operating room and the non-certified nurse in the operating room, as measured by the Small Continuing Education Attitude Instrument (SCEAI).

Definition of Terms

The following definitions were used in this study:

1. Attitude. A favorable or unfavorable feeling or emotion toward a fact or state.
2. Clinical application. Nursing activities that are performed in the intraoperative phase of the patient's surgical experience.
3. Certified Nurse in the Operating Room (CNOR). Perioperative nurse who has obtained national certification from the Association of Operating Room Nurses.
4. Continuing Education. Any education course or program which focuses on the enhancement of the cognitive, affective, or psychomotor foundation in the health professions.
5. Inservice Education. That part of continued learning that the agency offers to increase the employees' skills, knowledge, and attitude in relation to specific aspects of the role expectations. It is one form of continuing education.
6. Non-Certified Nurse in the Operating Room (non-CNOR). Perioperative nurse who has not obtained national certification from the Association of Operating Room Nurses.

7. Perioperative Nurse. The registered nurse who specializes in perioperative nursing and nursing activities in the preoperative, intraoperative, and postoperative phases of the patient's surgical experience.

Assumptions

The assumptions of this study were as follows:

(a) continuing education is a professional nurse responsibility, (b) the attitudes toward continuing education can be measured, and (c) CNORs and non-CNORs will answer the survey form to the best of their ability.

Limitations

The limitations of this study were as follows:

A sample of convenience was used and generalizability may have been impacted. Registered nurses in the sample were from only one hospital.

Significance of the Study

This study is significant for perioperative educators involved in planning and presenting continuing education programs. Selected published materials in the nursing literature dated from 1960 to the present time were reviewed to determine the extent of the research done regarding characteristics of nurses who attend continuing education activities compared with the characteristics of

those nurses who do not attend continuing education activities. This review of the literature revealed that very little has been published differentiating between continuing education in nursing attenders and non-attenders.

As health care delivery in hospitals become more complex, the need for continuous skill training also increased. A broad view of continuing education is essential for the future of the nursing profession. This perception relates to the nature and depth of content as well as to the range of learning activities recognized as continuing education. Traditionally and logically, continuing education in nursing has emphasized nursing practice. (Cooper, 1983, p. 442)

Understanding certified and non-certified perioperative nurses' attitudes toward CE may assist the nurse educators in developing inservice and CE programs. Ultimately, continuing education (a) may improve professional competence, (b) may improve patient care, (c) may improve doctor and patient confidence in nursing care, (d) may improve patient care by decreasing anesthesia and operating room time, and (e) may improve nursing efficiency and decrease operating room cost.

CHAPTER II

REVIEW OF THE LITERATURE

This chapter focuses on the definition of attitudes and continuing education. Attitudes influence an individual's behavior. Subsequently, continuing education is influenced both directly through actions and indirectly through lifestyles by behaviors.

Definition of Attitude

Theorists appear to agree that an attitude is not a basic irreducible element within the personality, but represents a cluster or syndrome of two or more interrelated elements. According to Rokeach (1969), "an attitude is a relatively enduring organization of beliefs around an object or situation predisposing one to respond in some preferential manner" (p. 112). An attitude as related to human individuals was defined by Allport (1935) as a "mental or neutral state of readiness, organized through experience, exerting a directive or dynamic influence upon the individual's response to all objects and situations with which it is related" (p. 180).

In the years that have passed since Allport's definition, there has been considerable progress in research in the study of attitudes, and some of the major issues have been classified and reformulated. Berelson and Steiner (1964) placed opinions, attitudes, and beliefs together. Opinions, according to these authors, are sometimes called impressions or guesses, attitudes are sometimes called views or convictions, and beliefs are sometimes called values or sentiments.

Fishbein (1967) asserted that whenever a new concept is learned, an attitude toward that concept is acquired simultaneously. Once a concept has been learned, a new stimuli may be associated with it, and the mediating evaluative reactions elicited by these new stimuli will also become conditioned to the concept and change the attitude toward it.

Ajzen and Fishbein (1980) define attitude as a person's positive or negative evaluation of a psychological object, in this case a given behavior. Attitude toward the behavior is determined by behavioral beliefs. According to Ajzen and Fishbein's (1980) theory of reasoned action (TRA), the immediate determinant of a person's behavior is the person's intention to perform, or not to perform, that behavior. The person's intention is,

in turn, a function of two factors: the person's attitude toward the behavior and perceived social influence.

Attitude can be changed by changing one or more of a person's existing beliefs about behavioral outcomes and changing the person's evaluation of the importance of the behavioral outcomes (Ajzen & Fishbein, 1980).

Opinions are the verbal expression of attitudes. The ways of looking at things and persons, forms of readiness, approaching and withdrawing behavior, feelings of right and wrong, like and dislike for objects or values differ from emotions although they are related to them. They may be fused in the working concept of attitude.

Each belief within an attitude organization is conceived to have three components: (a) a cognitive component, because it represents a person's knowledge, held with varying degrees of certainty, about what is true or false, good or bad, desirable or undesirable; (b) an affective component, because under suitable conditions the belief is capable of arousing affect of varying intensity centering around the object of the belief, around other objects (individuals or groups), taking a positive or negative position with respect to the object or belief, or around the belief itself; and (c) a behavioral component, because the belief, being a response predisposition of

varying threshold, must lead to some action when it is suitably activated.

The concept of attitude has been central to social psychology and personality theory because it has been generally regarded as important to the determination and prediction of behavior. The concept of attitude has become central to nursing because it has become important in attitude-behavior consistency in the delivery of health care.

Attitude Measurement

Several different paper and pencil techniques have been developed to measure attitudes. Of these techniques, four have been fairly highly refined and have been used most extensively. According to Zimbardo and Ebbesen (1970), these major techniques are: (a) Thurstone's method of equal appearing intervals, (b) Likert's method of summated ratings, (c) Guttman's scalogram, and (d) Osgood's semantic differential. The first major technique of attitude measurement was developed by Thurstone in 1929. In his study of attitudes toward religion, he assumed that statements of opinions could be obtained about a particular issue and could order them according to a dimension of expressed favorableness-unfavorableness towards the issue. When using this scale, the intervals

between the statements are equal. The drawback of the Thurstone scale is that its construction is very time consuming.

The Likert scale is made up of a series of opinion statements about some issue. A person's attitude is measured by asking him or her to indicate the extent of his or her agreement or disagreement with each item. This is done by having the person rate each item on a 5-point scale of response (strongly agree, agree, undecided, disagree, and strongly disagree). Likert's scale does not assume equal intervals between scale values, it can provide information on the ordering of people's attitudes, but does not indicate how close or how far apart different attitudes might be.

The Guttman scalogram is based on the assumption that a single trait can be measured by a set of statements which are ordered along a continuum of difficulty of acceptance. The statements range from the least difficult to accept to the most difficult to accept. A person's attitude is then measured by having him or her check all the statements on the scale which are acceptable to him or her.

Osgood has studied attitudes by focusing on the meaning that people give to a word or concept. His

procedure is to have people judge a particular concept on a set of semantic scales. These scales are defined by verbal opposites with a midpoint of neutrality, and are usually composed of seven discriminate steps. Osgood's research has indicated there are three dominant, independent dimensions which people use in judging concepts. He refers to these dimensions as the evaluative factor (e.g., good-bad), the potency factor (e.g., strong-weak), and the activity factor (e.g., active-passive). Although this method can provide a lot of information about a concept, it is not exactly clear how the concept's meaning for a person is related to opinion statements he or she would make about it (Zimbardo & Ebbesen, 1970).

In interpreting the results of attitude scales, it is important to keep in mind that these are verbal expressions of feelings and opinions that individuals are willing to report. Good rapport with the respondents and a sincere belief on their part that frank responses are in their best interest will help produce valid responses (Grunlund, 1985).

Continuing Education

The purpose of continuing education in nursing is to build upon varied educational and experiential bases for the enhancement of

practice, education, administration, research, or theory development toward the goal of maintaining and improving the health of the public. Program content for continuing education consists of concepts, principles, research, or theories related to nursing that build on previously acquired knowledge, skills, and attitudes. The structure and content of this lifelong learning process is flexible, has immediate or future application, and promotes professional development and advances the career goals of registered nurses. (American Nurses' Association, 1984, p. 3)

Mandatory continuing education for relicensure has prompted nurses to attend continuing education (CE) programs. Most health care institutions provide CE for their staff, which are generally low in cost and viewed as a retention benefit. This type of CE is generally referred to as inservice education.

The American Nurses' Association (ANA) believes that:

- Continuing education in nursing is essential as a means of maintaining and increasing competence.
- Continuing education is necessary for the personal and professional growth of the nurse.
- Continuing education, as a process, should be based on the use of theories and principles for adult learning throughout its planning, implementation, and evaluation.
- A variety of qualified continuing education providers is necessary to meet the diverse needs of the nursing population. (American Nurses' Association, 1990, pp. 2-3)

The ANA requires formal programs be developed and implemented according to their guidelines. The Texas Nurses Association and the Texas Board of Nurse Examiners

(TBNE) follow these guidelines and standards for CE program development. As of September 1, 1993, all registered nurses with an active Texas license are required to earn 20 contact hours of continuing education every 2 years. A contact hour equals 50 minutes of a clock hour. Ten contact hours must be approved Type I programs. The remaining 10 may be Type I or Type II programs.

All Type I programs must comply with these criteria to be acceptable. The program shall be at least 1 contact hour (50 consecutive minutes). Objectives shall be written and be the basis for content, learning, experiences, teaching methodologies, and evaluation. The target audience shall be identified. There shall be evidence of program planning based on the needs of the potential audience. The content shall be relevant to nursing practice and/or health care and provide for the professional growth of the licensee. The instructor's expertise in the content area shall be documented. Teaching methods shall be appropriate to achieve the program objectives. Participants shall complete a written evaluation of the program. Records shall be kept by the provider and the provider shall furnish each participant a record of attendance which specifies the title, date, and location of the program; and the number of contact hours; and provider number, grades, and organization granting approval, if appropriate. (TBNE, 1993, pp. 1-2)

Type II refers to those CE activities which meet the Board's requirements but which have not undergone a review process by an organization recognized by the Board. Type II programs may be offered in the same format as Type I.

However, Type II credit may also be obtained through activities such as self-directed study (authorship, program development/presentation, initial specialty certification, and auditing of academic courses) (TBNE, 1993).

Continuing education has become a recognized means for preventing professional obsolescence. Participation for nurses is viewed as a requirement for maintaining professional currency in nursing practice. According to (Hornback 1971),

society, employers, and educators agree on expectations for the professional practitioner as one who needs to be a continuing learner. Although not the only means of demonstrating continued competence, participation in continuing education in nursing activities is one method for nurses to acquire new knowledge or skills and/or to update their current knowledge or skills. (p. 10)

The required use of continuing education as a means to document continuing professional competence has become a prominent issue among nurses, the public, and legislatures. A review of the literature indicated the existence of some variables that seem to influence CE participation. Kristjanson and Scanlon (1989) categorized these as:

- Clientele analysis--although demographic "predictors" were conflicting, relationships between CE participation and age, perceived needs, full-time work status, and the commitment

of nurses and their institutional decision-makers have been identified.

- Relevance of educational topics and format--most nurses preferred content areas related to clinical practice. Significant differences are evident in content and format preferences according to specific personal and professional attributes.

- Motivational factors--current employment status, formal education beyond the basic nursing program, and participation in other learning activities were predictive of greater CE participation.

- Deterrents--these are identified as cost, lack of time, inconvenient scheduling, lack of knowledge about programs, and job/home responsibilities. Ultimately, the goal of nursing continuing education is the improvement of health-care through change in the behavior or practice of nurses. Participants in continuing education programs are expected to acquire new knowledge and to develop new skills which will be retained and translated into improved health-care.

(p. 120)

Experts have reported that nurses have many reasons for pursuing CE. In 22 states and territories, nurses must document CE as a requirement for relicensure (Wise, 1992). In states without mandatory CE, nurses' motives for CE resemble those of other adults. Houle (1961) and Boshier (1977) indicate that adults engage in continuing learning for the following reasons: to acquire certification or job information, to meet and interact with others, to escape from boredom, or to experience the joy of learning. Urbano, Jahns, and Urbano (1988) indicated that nurses seek CE to increase job competence, to meet employers' expectations, to qualify for

professional advancement, or to prepare for community service. In one study, nurses reported that personal satisfaction, joy of learning, increased technical skills and increased self-assurance were the most important benefits of CE (Turner, 1991).

Nurses' Continuing Education Attitudes

Generally, it is believed a nurse's basic educational preparation for practice becomes obsolete within 10 years due to rapid scientific and technological advancements. To maintain up-to-date practice, knowledge, and skill, each nurse must commit to a program of lifelong learning. Continuing education (CE) programs for nurses often result in improved quality of patient care and personal and professional growth of participants. Continuing education programs are expected to produce a variety of outcomes including new knowledge, skills, values, and attitudes that influence areas related to practice.

Experts have reported that nurses have many reasons for pursuing continuing education. Nurses seek CE to increase job competence, to meet employer's expectations, to qualify for professional advancement, or to acquire certification.

Certification procedures in nursing accomplish two ends. Some certification programs endorse the nurse's competence to perform specialized, expanded functions that are beyond the abilities of other nurses. Certification is awarded on the basis of education, credentials, performance on tests, and documentation of practice competence. Essentially, such certification legitimatizes specialty practice in nursing in a way that licensure, which certifies minimum practice competence upon entry into the profession, does not. Other certification programs--most notably that sponsored by the American Nurses' Association--certify the nurse for excellent practice. Such certification endorses the nurse as having attained a level of practice competence beyond the minimum required for licensure. Both types of certification represent nursing's desire to demonstrate to the public a measure of self-regulation, and both serve to provide the public with some means by which it can identify nurses with specific abilities and proven practice competence (Dunkley, 1974).

Perioperative Nurses' Attitudes Toward Certification

The National Certification Board: Perioperative Nursing, Inc. (NCB:PNI) defines certification as "the

documented validation of the professional achievement of identified standards of practice by an individual registered nurse providing care for patients before, during, and after surgery" (NCB:PNI, 1991). The NCB:PNI is the national certifying body for the perioperative nursing specialty. The NCB:PNI identifies the tasks and nursing care responsibilities that are typical of perioperative nursing practice. This information is presented in the "Job Analysis" document published by NCB:PNI. This document defines the perioperative nursing specialty and is in the knowledge base for testing for certification in preoperative nursing (CNOR).

The CNOR credential is earned by testing the knowledge level of participants through a written examination. Perioperative nurses are required to have at least two years of operating room nursing experience before they can apply for the examination.

In a study conducted by Allen and Girard (1992), the primary motivating factors for perioperative nurses who tested for the CNOR certification in 1989 were fulfillment of a personal goal and the desire to validate their professional achievement. They also reported that the process of preparing for the certification examination subjectively improves the job performance of some nurses.

It is assumed that certified nurses will apply the specialty standards in their daily practice and thereby will provide the public with safe and competent patient care.

The arguments against mandatory continuing education are many. The argument most frequently postulated against mandatory continuing education is that mandated or forced learning does not necessarily result in the utilization of knowledge nor increased competence (Cooper, 1973). Cooper believes that compulsory requirements downgrade the personal responsibility of the individual to determine one's own needs and fails to consider individual differences. She notes that mandatory continuing education may foster negative attitudes towards learning, resulting in less learning that would otherwise occur. Stevens (1973) states, "mere body presence at a learning experience is no guarantee that the nurse will absorb new knowledge, let alone that she will apply it" (p. 26).

Summary

Presented in this chapter were definitions of attitude and different attitude measurements. A description of four measurements by Thurstone, Likert, Guttman, and Osgood were discussed. Literature on factors influencing continuing education for nurses, their

attitudes toward certification, and the pros and cons toward mandatory continuing education were reviewed.

CHAPTER III

METHODOLOGY

This study was conducted to investigate the attitudes of perioperative nurses toward continuing education. This descriptive study used an attitude inventory.

Population and Sample

The population of this study included CNOR and non-CNOR perioperative registered nurses in one urban hospital in Texas. The distribution of the sample was CNOR (16) and non-CNOR (63) RNs who have been at the selected facility for six months or more.

Protection of Human Subjects

Permission to conduct this study was obtained from the Director of Education (see Appendix A). No names were requested on the inventory and all information was reported as group data. Completion and return of survey indicated consent to participate in study. Confidentiality of respondents was protected.

Instrument

An investigator-developed, two-part, Likert-type inventory was used to measure the attitudes toward continuing education of the perioperative nurse (see Appendix B). The first part of the questionnaire related to the demographic variable, length of service at the facility as an RN, and CNOR status. The second part was a 30-item Likert-type attitude scale related to perioperative nurses' attitudes toward continuing education.

Validity and Reliability

Content validity was determined by asking a panel of nine perioperative CNOR nurse educators and two CNOR managers to evaluate the instrument in terms of clarity and appropriateness. An evaluation questionnaire (see Appendix C) was given to these field experts. All questionnaires were completed and returned.

Based on these expert recommendations, statement 1, "The primary purpose of CE for nurses is to learn new skills," was changed to read "The primary purpose of CE for nurses is to learn new skills and knowledge." Statement 4, "Use of knowledge from CE programs is applied to the clinical setting," was changed to read "I apply new knowledge from CE programs to the clinical setting."

Statement 5, "CE improves the competency of the nurse," was changed to read "CE improves the competency of the nurse if applied to the clinical setting." Statement 6, "CE improves the quality of patient care," was changed to read "CE improves the quality of patient care if applied to the clinical setting." Statement 14, "CE is not seen as consistent with the general values of the unit," was changed to read "CE is not seen as consistent with the general values of the unit (specific surgical service)." Statement 15, "Supervisors on the unit negatively influence the use of CE knowledge in the clinical setting," was changed to read "Supervisors in my specific service negatively influence the use of CE knowledge in the clinical setting." Statement 23, "Changes in nursing skills are evident after attendance at CE programs," was changed to read "Changes in nursing skills and knowledge are evident after attendance at CE programs." The modified version of the Small Continuing Education Instrument is shown in Appendix B.

Reliability of the instrument was established in this study by use of the Cronbach's alpha. The instrument was determined to be reliable with $r = .9108$.

Scoring

The Likert-type responses were strongly agree, agree, neutral, disagree, and strongly disagree. The values for the favorable and unfavorable item responses follow:

	Favorable Items	Unfavorable Items
1. <u>Strongly agree</u>	5	1
2. <u>Agree</u>	4	2
3. <u>Neutral</u>	3	3
4. <u>Disagree</u>	2	4
5. <u>Strongly disagree</u>	1	5

Thus, reverse scoring for the unfavorable statements was used. A summative score for each subject was used, and the score range was 100-20.

Data Collection

The inventory was administered during two regularly scheduled inservice meetings, Wednesday 7:30 A.M. and 2:30 P.M. for the Monday through Friday staff, and on Saturday for the weekend staff. The questionnaire was administered in a large auditorium with writing desks by the Operating Room Education Department staff. The nurses were given an explanation of the procedure to follow. Directions were read and a time for questions was allowed before the subjects began. Each nurse had 1 hour to complete the

questionnaire, and he or she returned it by placing it in a large brown envelope in no specific order.

Treatment of the Data

Descriptive data were used (frequency, percentages, mean) for each item of the survey. The hypothesis was analyzed by using the t-test. A .05 level of significance was used. An ex post facto reliability coefficient using Cronbach alpha was utilized.

CHAPTER IV

FINDINGS OF THE STUDY

Presented in this chapter are descriptions of the participants, including the demographic data for CNOR status and length of service at the test facility. Results of the null hypothesis are discussed along with other findings from the study.

Description of Participants

One hundred questionnaires were given to the Operating Room Education Department, which distributed them to the operating room nurses. Eighty-one questionnaires were returned, but only 79 were completed.

The demographic data form consisted of items related to operating room certified nurses (CNOR) 16 (20%), and non-operating room certified nurses (non-CNOR) 63 (80%). Length of service at the test facility averaged 0-5 years 35 (44%), 6-10 years 21 (27%), and 10 or more years 23 (29%).

Analysis of the Data by Hypothesis

One hypothesis was posed in this study: "There is no statistically significant difference in the attitude

toward continuing education between the certified nurse in the operating room and the non-certified nurse in the operating room, as measured by the Small Continuing Education Attitude Instrument (SCEAI)." The result of this statistical test was that there was no significant difference between CNOR and non-CNOR attitudes toward continuing education. Therefore, the null hypothesis of no difference is accepted. Table 1 shows the results of the t -test.

Table 1

Statistical Analysis of Test of Hypothesis

Variable	Frequency	Mean	Standard deviation	t value
CNOR	16	116.87	12.94	1.22
non-CNOR	63	111.84	15.19	

Other Findings

An item analysis of each question on the attitude instrument was developed to show the frequencies and percentages of how each question was answered by the CNORs and non-CNORs on Table 2 and Table 3. Of particular interest are the following items. Item 1: "The primary

purpose of CE for nurses is to learn new skills and knowledge." Both groups answered favorably, CNORs 15 (83.7%) and non-CNORs 67 (90.5%). Item 12: "I attend CE only for my relicensure requirements." Both groups answered unfavorably, CNORs 10 (62.5%) and non-CNORs 67 (90.5%). Item 22: "CE relates to improved patient care." Both groups answered favorably, CNORs 16 (100%) and non-CNORs 52 (82.6%). Item 26: "When I attend CE programs outside the hospital, I do not share my knowledge with my colleagues." Both groups answered unfavorably, CNORs 14 (87.5%) and non-CNORs 52 (82.5%). Refer to Tables 2 and 3 for data related to other items.

Table 2

Frequency and Percentages of Scores by Item

CNOR Items	SA		A		U		D		SD	
	f	%	f	%	f	%	f	%	f	%
1.	7	43.7	8	50	0	0.0	0	0.0	1	6.2
2.	7	43.7	9	56.2	0	0.0	0	0.0	0	0.0
3.	0	0.0	4	25.0	3	18.8	6	37.5	3	18.8
4.	5	31.3	9	56.2	1	6.2	1	6.2	0	0.0
5.	6	37.5	10	62.5	0	0.0	0	0.0	0	0.0
6.	6	37.5	9	56.2	1	6.2	0	0.0	0	0.0
7.	2	13.3	5	33.3	2	13.3	2	40.0	0	0.0
8.	4	25.0	6	37.5	2	12.5	3	18.8	1	6.2
9.	0	0.0	2	12.5	1	6.2	8	50.0	5	31.3
10.	9	56.2	6	37.5	0	0.0	0	0.0	1	6.2
11.	0	0.0	2	12.5	0	0.0	8	50.0	6	37.5
12.	1	6.2	5	31.3	0	0.0	4	25.0	6	37.5
13.	4	25.0	6	37.5	3	18.8	3	18.8	0	0.0
14.	1	6.2	2	12.5	5	31.3	7	43.7	1	6.2
15.	1	6.2	1	6.2	0	0.0	8	50.0	6	37.5
16.	2	12.5	12	75.0	0	0.0	2	12.5	0	0.0
17.	1	6.2	2	12.5	2	12.5	6	37.5	5	31.3

(table continues)

CNOR Items	SA		A		U		D		SD	
	f	%	f	%	f	%	f	%	f	%
18.	3	18.8	12	75.0	0	0.0	0	0.0	1	6.2
19.	5	31.3	7	43.7	1	6.2	2	12.5	1	6.2
20.	3	18.8	8	50.0	3	18.8	2	12.5	0	0.0
21.	0	0.0	1	6.2	0	0.0	10	62.5	5	31.3
22.	4	25.0	12	25.0	0	0.0	0	0.0	0	0.0
23.	2	12.5	7	43.7	6	37.5	1	6.2	0	0.0
24.	1	6.2	2	12.5	1	6.2	8	50.0	4	25.0
25.	0	0.0	2	12.5	1	6.2	9	56.2	4	25.0
26.	0	0.0	2	12.5	0	0.0	8	50.0	6	37.5
27.	0	0.0	2	12.5	1	6.2	8	50.0	5	31.3
28.	0	0.0	1	6.2	1	6.2	9	56.2	5	31.3
29.	0	0.0	1	6.2	1	6.2	10	62.5	4	25.0
30.	3	18.8	4	25.0	3	18.8	4	25.0	2	12.5

Note. SA = Strongly Agree; A = Agree; U = Undecided; D = Disagree;
SD = Strongly Disagree.

Table 3

Frequency and Percentages of Scores by Item

Non- CNOR Items	SA		A		U		D		SD	
	f	%	f	%	f	%	f	%	f	%
1.	23	36.5	34	54.0	1	1.6	5	7.9	0	0.0
2.	24	38.1	29	46.0	6	9.5	4	6.3	0	0.0
3.	0	0.0	15	23.8	15	23.8	29	46.0	4	6.3
4.	11	17.5	42	66.7	5	7.9	5	7.9	0	0.0
5.	24	38.7	30	48.4	5	8.1	3	4.8	0	0.0
6.	23	37.1	32	51.6	3	4.8	4	6.5	0	0.0
7.	10	15.9	13	20.6	14	22.5	21	33.3	5	7.9
8.	10	15.9	25	39.7	11	17.5	15	23.8	2	3.2
9.	1	1.6	1	1.6	2	3.2	40	63.5	19	30.2
10.	15	24.6	33	54.1	3	4.9	9	14.8	1	1.6
11.	0	0.0	6	9.5	1	1.6	37	58.7	19	30.2
12.	8	12.7	12	19.0	1	1.6	31	49.2	11	17.5
13.	4	6.5	31	50.0	17	27.4	10	16.1	0	0.0
14.	2	3.2	13	20.6	13	20.6	30	47.6	5	7.9
15.	0	0.0	4	6.5	8	12.9	36	58.1	14	22.6
16.	7	11.1	38	60.3	5	7.9	13	20.6	0	0.0
17.	0	0.0	4	6.3	10	15.9	36	57.1	13	20.6
18.	8	12.7	45	71.4	4	6.3	4	6.3	0	0.0
19.	8	12.7	35	55.6	11	17.5	8	12.7	1	1.6
20.	7	11.1	30	47.6	16	25.4	9	14.3	1	1.6

(table continues)

Non- CNOR Items	SA		A		U		D		SD	
	f	%	f	%	f	%	f	%	f	%
21.	2	3.2	10	15.9	2	3.2	40	63.5	9	14.3
22.	11	17.5	41	65.1	6	9.5	5	7.9	0	0.0
23.	6	9.7	22	35.5	23	37.1	10	16.1	1	1.6
24.	2	3.2	7	11.1	12	19.10	30	47.6	12	19.0
25.	1	1.6	7	11.1	8	12.7	33	52.4	14	22.2
26.	0	0.0	5	7.9	6	9.5	40	63.5	12	19.0
27.	0	0.0	5	7.9	12	19.0	35	55.6	11	17.5
28.	0	0.0	2	3.2	9	14.3	37	58.7	15	23.8
29.	1	1.6	4	6.3	11	17.5	34	54.0	13	20.6
30.	7	11.1	25	39.7	12	19.0	16	25.4	3	4.8

Note. SA = Strongly Agree, A = Agree, U = Undecided, D = Disagree,
SD = Strongly Disagree.

As indicated previously, the demographics for the length of service were categorized into five groups on the questionnaire (0-5 months), (6 months-1 year), (1-5 years), (6-10 years), and (10 or more years). Due to the numbers being too small to compute for the first three groups, they were combined into one group (0-5 years). The level of significance was set a $p < .05$, therefore the p value was not significant as shown in Table 4.

Table 4

Analysis of Variance Table for Means

Source	SS	df	MS	F	p
Years	301.2097	2	150.6049	0.69	0.5023
Error	16474.5118	76	216.7699		

Summary of Findings

In this chapter, the findings of the questionnaire regarding perioperative nurses' attitudes toward continuing education and the demographic variables were presented. The Small Continuing Education Attitude Instrument (SCEAI) was used to collect data from 79 perioperative nurses. The selected demographic variables were CNORs 16 (20%) and non-CNORs 63 (80%), length of service at the test facility was 0-5 years 35 (44%), 6-10 years 21 (27%), and 10 or more years 23 (29%). The null hypothesis was accepted. The findings showed no significant difference in the attitudes of CNORs and non-CNORs.

CHAPTER V

SUMMARY, CONCLUSIONS, DISCUSSION, AND RECOMMENDATIONS

Presented in this chapter is a summary of the study and a discussion of the findings related to the study of perioperative nurses' attitudes toward continuing education. Conclusions based on the findings and recommendations for further study comprise the first part of this chapter.

Summary

The problem of this study was to determine if there was a difference in CNORs' and non-CNORs' attitudes toward continuing education. A two-part, Likert-type inventory was utilized for the collection of data. It was administered during two regularly scheduled inservice meetings to 81 perioperative nurses with 79 returned completed. The first part of the instrument contained questions related to selected demographic variables, and the second part was an attitude scale related to perioperative continuing education. The demographic data collected from the questionnaire were reported through

descriptive statistics. Inferential statistics were used to test the null hypothesis which was accepted.

Conclusions

The primary conclusions of this study were that certified and non-certified operating room nurses' attitudes are similar toward continuing education. Secondary conclusions were length of service also showed no significant difference in their attitudes toward continuing education. The item analysis on Tables 2 and 3 revealed that the CNOR and non-CNOR answered the majority favorable and non-favorable items in a similiar manner.

Discussion

The results of this study cannot be generalized because the sample numbers were small. Having nurses from only one hospital may indicate some bias on the outcome of the study, such as the same value systems and methodology toward patient care. Re-evaluation of statistical strategy using a stratified proportional sampling instead of a t -test may have been more appropriate for this study, due to the disproportion of the group numbers. When using the t -test there should be a minimum of 25 subjects per group. Instrument development may have been improved by using item analysis for better placement of favorable and

unfavorable item statements in the instrument. Low group numbers may have been due to nurses' vacation times and varied days off from work, not because of an unwillingness to participate in the study.

Continuing education is mandatory in Texas for relicensure and may influence what types of CE courses nurses attend. The non-CNOR needs 20 contact hours every two years for license renewal. The CNOR needs those 20 hours and an additional 130 hours to maintain certification. The CNOR group of 16 nurses appears to have no significant professional impact over the non-CNOR group. Being a CNOR is not an indicator for quality patient care, it depends on the individual nurse and whether or not she or he is certified. Many believe certification demonstrates competence in nursing practice. Some proponents of certification, however, admit and emphasize that there are no assurances and that no research demonstrates that certified nurses perform better than non-certified nurses (Nielsen, 1989).

Recommendations

From this study, the following recommendations for further study were made:

1. Because very little research has been conducted to investigate perioperative nurses' attitudes toward

continuing education, it would be advantageous to replicate the study using a larger population of CNORs and non-CNORs.

2. Replicate the study using more health care facilities and facilities of different sizes.

3. Determine if the CNORs and non-CNORs have a similar cognitive base for clinical knowledge and skill.

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APPENDIX A

Permission to Conduct Study

TEXAS WOMAN'S UNIVERSITY
DEPARTMENT OF HEALTH STUDIES
AGENCY PERMISSION FOR CONDUCTING SURVEY

The Baylor University Medical Center Surgical Services

GRANTS TO

Becky Small

a student enrolled in the master's degree program in Health Studies at Texas Woman's University, the privilege of its facilities/data in order to study the following problem:

Perioperative Nurses' Attitudes Toward Continuing Education

The conditions mutually agreed upon are as follows:

1. The agency (may) (may not) be identified in the final report.
2. The names of consultative or administrative personnel in the agency (may) (may not) be identified in the final report.
3. The agency (wants) (does not want) a conference with the student when the report is completed.
4. Other _____

DATE: 3/15/93

Becky Small
Signature of Student

Barbara J. Cunniff, EdS, MBA, CNOR
Signature of Agency
Director, Education
Baylor University Medical Center
Barbara J. Cunniff
Thesis Committee Chairman

APPENDIX B

Instrument

Dear Colleague:

Continuing education is a functioning reality for nurses, especially now that it is mandatory in Texas. It has become necessary for nursing and nurses to evaluate its effectiveness in order to make decisions about its value to the profession, and to the public we serve. Your input is especially vital to the study. Due to your unique skills as perioperative nurses, I am asking you to answer this brief questionnaire.

This research topic involves your attitude toward inservices or continuing education programs. You are assured your responses will be treated in strict confidence, as the findings of this questionnaire will represent responses from the group of participants rather than from individuals. Your return of the completed questionnaire will indicate your willingness to participate in this study.

Please do not put your name on the questionnaire. If you have any questions please ask them before you start. After completion of the questionnaire please place it in the brown envelope located in the back of the room. Please do not discuss your responses in the presence of investigator. The final results of this study will be available through the OR Education Department.

Thank you for your cooperation.



Becky Small RN, CNOR

PERIOPERATIVE NURSES' ATTITUDE TOWARD CONTINUING EDUCATION

Please check the appropriate response.

Length of service at this facility as an RN.

0-5 mon. ____.
6 mon.-1yr. ____.
1-5 yrs. ____.
6-10 yrs. ____.
10 or more yrs. ____.

Are you a CNOR? yes ____ no ____.

Directions: Each of the following statements deals with the perioperative nurses' attitude toward continuing education. Circle the number which best expresses your degree of agreement or disagreement with the statement. There is no right or wrong answer. The possible choices are: Strongly Agree(SA), Agree(A), Undecided(U), Disagree(D), and Strongly Disagree(SD).

Note: For the purpose of this study the word continuing education (CE) will represent continuing education programs as well as weekly inservices.

Example:

SA A U D SD

1. This questionnaire is
printed on white paper.

(5) 4 3 2 1

SA A U D SD

1. The primary purpose of CE
for nurses is to learn new skills
and knowledge.

5 4 3 2 1

2. Improvement in patient care
justifies CE.

5 4 3 2 1

	SA	A	U	D	SD
3. Use of knowledge from CE programs is not a priority due to time constraints and lack of reinforcement.	5	4	3	2	1
4. I apply new knowledge from CE programs to the clinical setting.	5	4	3	2	1
5. CE improves the competency of the nurse if applied to the clinical setting.	5	4	3	2	1
6. CE improves the quality of patient care if applied to the clinical setting.	5	4	3	2	1
7. CE provided at the hospital is more relevant to perioperative nursing practice, than programs sponsored by outside sources.	5	4	3	2	1
8. The nurse is most likely to learn about new equipment through CE.	5	4	3	2	1
9. I do not apply CE knowledge to the clinical setting.	5	4	3	2	1
10. I attend CE for professional development.	5	4	3	2	1
11. I apply CE knowledge to the clinical setting only if I am told to do so.	5	4	3	2	1
12. I attend CE only for my relicensure requirements.	5	4	3	2	1
13. I encourage my peers to apply CE knowledge to the clinical setting.	5	4	3	2	1
14. CE is not seen as consistent with the general values of the unit (specific surgical service).	5	4	3	2	1
15. Supervisors in my specific service negatively influence the use of CE knowledge in the clinical setting.	5	4	3	2	1

	SA	A	U	D	SD
16. When I attend CE programs outside the hospital I generally share my knowledge with my colleagues.	5	4	3	2	1
17. Peers on my unit negatively influence the use of CE knowledge in the clinical setting.	5	4	3	2	1
18. Opportunities to use CE knowledge do exist and are used to improve the quality of patient care in the OR.	5	4	3	2	1
19. CE knowledge is recognized as important by supervisors.	5	4	3	2	1
20. CE knowledge is recognized as important by my peers.	5	4	3	2	1
21. I only apply CE knowledge to the clinical setting when learning to use new equipment.	5	4	3	2	1
22. CE relates to improved patient care.	5	4	3	2	1
23. Changes in nursing skills and knowledge are evident after attendance at CE programs.	5	4	3	2	1
24. CE does not improve the competency of the nurse.	5	4	3	2	1
25. CE does not improve the quality of patient care.	5	4	3	2	1
26. When I attend CE programs outside the hospital I do not share my knowledge with my colleagues.	5	4	3	2	1
27. CE knowledge is not recognized as important by my supervisors.	5	4	3	2	1
28. CE does not relate to improved patient care.	5	4	3	2	1

SA A U D SD

29. I am never encouraged to
apply CE knowledge to
the clinical setting.

5 4 3 2 1

30. There is not enough time
between cases to plan nursing
interventions from CE programs.

5 4 3 2 1

APPENDIX C

Evaluation Questionnaire

Dear Colleague:

My name is Becky Small and I am a graduate student at Texas Woman's University completing my Masters degree in Health Studies. I am currently developing a research project entitled "Perioperative Nurses Attitudes Toward Continuing Education." The content of the research instrument I have developed needs to be validated by perioperative nurse experts.

Please evaluate this questionnaire by completing the content validity tool to determine if each question is applicable in the instrument.

Thank you for your cooperation.

A handwritten signature in black ink that reads "Becky Small RN, CNOR". The signature is written in a cursive, flowing style.

Becky Small RN, CNOR

PERIOPERATIVE NURSES' ATTITUDE TOWARD CONTINUING EDUCATION

Please check the appropriate response.

Length of service at this facility as an RN.

0-5 mon. ____.
6 mon.-1yr. ____.
1-5 yrs. ____.
6-10 yrs. ____.
10 or more yrs. ____.

Are you a CNOR? yes ____ no ____.

Directions: Each of the following statements deals with the perioperative nurses' attitude toward continuing education. Circle the number which most expresses your degree of agreement or disagreement with the statement. Please answer the question by indicating whether it should be deleted, left as is, or changed. If the question should be changed, please describe how it should be changed. The possible choices are: Strongly Agree(SA)5, Agree(A)4, Undecided(U)3, Disagree(DA)2, and Strongly Disagree(SD)1.

Note: For the purpose of this study the word continuing education (CE) will represent continuing education programs as well as weekly inservices.

Example:

	SA	A	U	DA	SD
1. This questionnaire is printed on white paper.	(5)	4	3	2	1

	SA	A	U	D	SD
1. The primary purpose of CE for nurses is to learn new skills.	5	4	3	2	1

____ delete
____ leave as is
____ change. Indicate change: _____

	SA	A	U	D	SD
2. Improvement in patient care justifies CE.	5	4	3	2	1

☐ delete

☐ leave as is

☐ change. Indicate change: _____

3. Use of knowledge from CE programs is not a priority due to time constraints, and lack of reinforcement.

5	4	3	2	1
---	---	---	---	---

☐ delete

☐ leave as is

☐ change. Indicate change: _____

4. Use of knowledge from CE programs is applied to the clinical setting.

5	4	3	2	1
---	---	---	---	---

☐ delete

☐ leave as is

☐ change. Indicate change: _____

5. CE improves the competency of the nurse.

5	4	3	2	1
---	---	---	---	---

☐ delete

☐ leave as is

☐ change. Indicate change: _____

6. CE improves the quality of patient care.

5	4	3	2	1
---	---	---	---	---

☐ delete

☐ leave as is

☐ change. Indicate change: _____

- | | SA | A | U | D | SD |
|--|----|---|---|---|----|
| 7. CE provided at the hospital is more relevant to perioperative nursing practice, than programs sponsored by outside sources. | 5 | 4 | 3 | 2 | 1 |
| <input type="checkbox"/> delete
<input type="checkbox"/> leave as is
<input type="checkbox"/> change. Indicate change: _____ | | | | | |
| <hr/> | | | | | |
| 8. The nurse is most likely to learn about new equipment through CE. | 5 | 4 | 3 | 2 | 1 |
| <input type="checkbox"/> delete
<input type="checkbox"/> leave as is
<input type="checkbox"/> change. Indicate change: _____ | | | | | |
| <hr/> | | | | | |
| 9. I do not apply CE knowledge to the clinical setting. | 5 | 4 | 3 | 2 | 1 |
| <input type="checkbox"/> delete
<input type="checkbox"/> leave as is
<input type="checkbox"/> change. Indicate change: _____ | | | | | |
| <hr/> | | | | | |
| 10. I attend CE for professional development. | 5 | 4 | 3 | 2 | 1 |
| <input type="checkbox"/> delete
<input type="checkbox"/> leave as is
<input type="checkbox"/> change. Indicate change: _____ | | | | | |
| <hr/> | | | | | |
| 11. I apply CE knowledge to the clinical setting only if I am told to do so. | 5 | 4 | 3 | 2 | 1 |
| <input type="checkbox"/> delete
<input type="checkbox"/> leave as is
<input type="checkbox"/> change. Indicate change: _____ | | | | | |
| <hr/> | | | | | |

SA A U D SD

12. I attend CE only for my relicensure requirements.

5 4 3 2 1

☐ delete

☐ leave as is

☐ change. Indicate change: _____

13. I encourage my peers to apply CE knowledge to the clinical setting.

5 4 3 2 1

☐ delete

☐ leave as is

☐ change. Indicate change: _____

14. CE is not seen as consistent with the general values of the unit.

5 4 3 2 1

☐ delete

☐ leave as is

☐ change. Indicate change: _____

15. Supervisors on the unit negatively influence the use of CE knowledge in the clinical setting.

5 4 3 2 1

☐ delete

☐ leave as is

☐ change. Indicate change: _____

16. When I attend CE programs outside the hospital I generally share my knowledge with my colleagues.

5 4 3 2 1

☐ delete

☐ leave as is

☐ change. Indicate change: _____

- | | SA | A | U | D | SD |
|--|----|---|---|---|----|
|--|----|---|---|---|----|
17. Peers on my unit negatively influence the use of CE knowledge in the clinical setting. 5 4 3 2 1
- ___ delete
___ leave as is
___ change. Indicate change: _____
-
18. Opportunities to use CE knowledge do exist and are used to improve the quality of patient care in the OR. 5 4 3 2 1
- ___ delete
___ leave as is
___ change. Indicate change: _____
-
19. CE knowledge is recognized as important by supervisors. 5 4 3 2 1
- ___ delete
___ leave as is
___ change. Indicate change: _____
-
20. CE knowledge is recognized as important by my peers. 5 4 3 2 1
- ___ delete
___ leave as is
___ change. Indicate change: _____
-
21. I only apply CE knowledge to the clinical setting when learning to use new equipment. 5 4 3 2 1
- ___ delete
___ leave as is
___ change. Indicate change: _____
-

SA A U D SA

22. CE relates to improved patient care. 5 4 3 2 1

☐ delete

☐ leave as is

☐ change. Indicate change: _____

23. Changes in nursing skills are evident
after attendance at CE programs. 5 4 3 2 1

☐ delete

☐ leave as is

☐ change. Indicate change: _____

24. CE does not improve the competency
of the nurse. 5 4 3 2 1

☐ delete

☐ leave as is

☐ change. Indicate change: _____

25. CE does not improve the quality of
patient care. 5 4 3 2 1

☐ delete

☐ leave as is

☐ change. Undicate change: _____

26. When I attend CE programs outside
the hospital I do not share my
knowledge with my colleagues. 5 4 3 2 1

☐ delete

☐ leave as is

☐ change. Indicate change: _____

SA A U D SD

27. CE knowledge is not recognized as important by my supervisors.

5 4 3 2 1

☐ delete

☐ leave as is

☐ change. Indicate change: _____

28. CE does not relate to improved patient care.

5 4 3 2 1

☐ delete

☐ leave as is

☐ change. Indicate change: _____

29. I am never encouraged to apply CE knowledge to the clinical setting.

5 4 3 2 1

☐ delete

☐ leave as is

☐ change. Indicate change: _____

30. There is not enough time between cases to plan nursing interventions from CE programs.

5 4 3 2 1

☐ delete

☐ leave as is

☐ change. Indicate change: _____
