THE EXPRESSED OPINIONS OF EIGHTY-SIX OPERATING ROOM NURSES CONCERNING SELECTED ASPECTS OF THEIR NURSING PRACTICE

by

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INTRODUCTION

Introduction to the Problem

"Good communication is necessary for understanding and for cooperation and unified action. . . . The very best quality of patient-centered care is the primary goal of each hospital and nurse." (19) "To provide continuous and effective nursing care to the patient there must be mutal understanding and cooperation among all units." (23) Without communication and understanding, the quality of nursing care cannot be upgraded, continuity of patient care is not maintained, and team nursing is not practiced. At present, emphasis is placed on interrelationships of the members of the health team, continuity of patient care, the patient and his total needs, and the value of not being task oriented. If there is isolation of one department or area of nursing, will there be a resultant professional isolation of the practitioners, a breakdown in interdepartmental communication, a misunderstanding among professional colleagues, and/or disruption of continuity of patient care?

The operating room department and its personnel are an integral part of the hospital scheme; yet, at present, the relationship

of the operating room department to the remainder of the hospital is a source of concern. The operating suite as a department is physically isolated from all departments within a hospital. The physical isolation may also be accompanied by professional isolation of the operating room nurse. The bacterial barrier resulting in physical isolation could also become a communication barrier. The operating room nurses' personal contact with their professional colleagues is limited. This could prevent full development of the professional nurse. She could become frustrated, dissatisfied in her work. She could become rather "one-sided" and "short-sighted" in her work without the stimulation of her professional colleagues. Certainly, she is then not a fully contributing member of the health team. The unhappy, dissatisfied nurse cannot very readily meet the total nursing needs of her patients. If this is accepted as being true, and it is possible that one whole department could be staffed with dissatisfied nurses, then it follows that at least one department in the hospital is not a part of that team work which is necessary to provide good nursing care.

Statement of the Problem

There are those who question the performance of patient-centered nursing care by the operating room nurse. (5, 28) This is not the only question to arise. Additional questions involve defining

the specific duties of the operating room nurse, inclusion of operating room nursing courses in the curricula of schools of nursing, and the position of the operating room nurse in the organizations of the nursing profession. Perhaps some individuals do not understand the activities or the changing role of the operating room nurse. This would seem to hint at a misunderstanding of the operating room nurse by other members of the nursing profession, and possibly by the operating room nurse herself. Also being generated is a feeling of conflict between the operating room nurse and others in the nursing profession.

A search of the literature reveals only a small amount of research concerning the operating room nurse and her problems. That which is available centers mainly on the technical aspects of nursing. Although such knowledge is necessary for safe patient care, this is not sufficient for the operating room nurse striving to contribute to total nursing care and to meet her own personal and professional needs. Available research indicates a growing knowlege of nurse-patient communication, but little regarding interdepartmental communication within the hospital or nurse-nurse communication. The literature contains much related to patient care, particularly continuity of patient care. Professional magazines, text books, and research reports abound with statements indicating what the nurse should do and how she is expected to feel. The question is, does

the nurse believe in, and agree with, what she is being taught? Specifically, does the operating room nurse believe and agree with what is being written and the principles being taught?

Purposes of the Study

This is a descriptive study undertaken for the purpose of identifying the feelings and practices, or problems, of the operating room nurse regarding:

1. The position of the operating room nurse as a member of the health team.
2. Interdepartmental communication and cooperation within the hospital and involving the operating room department.
3. Interdepartmental communication and cooperation between individual nurses.
4. The organization and planning of nursing care within the hospital.
5. Continuity of nursing care.
6. Responsibilities of the operating room nurse for keeping her professional knowledge and practice abreast of the advancements in her profession.

It is recognized that the responses reflect only the stated beliefs of operating room nurses concerning their practice.

> Descriptive studies that are undertaken solely to throw some light on an area or to generate hypotheses for later investigation in an explanatory study are sometimes called exploratory studies. Such studies are never considered as final products, but rather as one step in a total research program that might eventually yield explanatory references. (1)

As such, this study follows a non-experimental design and neither proves nor disproves any hypotheses.

Limitations

This study includes only the information obtained through the use of a survey form distributed to the target population. The findings subsequently reflect the sensitivity, reliability, and validity of this measuring instrument. Further limitations are as follows:

1. Data were collected from nurses employed in the operating room departments of six major hospitals in the Portland, Oregon, metropolitan area.
2. No attempt was made to validate the statements of these respondents.
3. The results of this study can be applied only to the target population at the time of data collection in the stated hospitals. Generalization to other groups can only be inferred since this target population is relatively small in relation to the number of nurses employed in all such hospital situations. It is also a statistical principle that

generalization can not be made beyond the immediate target population when this population is not known to be representative of the total population.

No attempt was made to control the selection of nurses responding to the survey form as opposed to those nurses from the target population who did not respond to the survey form.

Assumptions

For the purposes of this study it was assumed that:

1. Each nurse in the sample population was licensed to practice in the State of Oregon on the date of data collection.
2. There were no unusual factors operating within the setting at the time of data collection which would exert an unusual influence upon the individuals responding.
3. The sample nurse population was not significantly different from the total nurse population in this situation. In other words, those nurses who responded to the survey form would not in any way respond differently than those nurses who did not choose to respond. It was further assumed that those nurses participating in the study would respond conscientiously and discriminatingly to the best of their ability.

Significance of the Problem

> Nursing is in a state of evolution. The pressure of striving for recognition as a profession combined with the changes in duties, responsibilities, and changes in the attitudes of nurses themselves, have caused conflicts between nurses and auxiliary workers and a sense of frustration within the nurses themselves. Tradition has defined the practice of nursing as the direct personal care of the sick. (19)

A large amount of nursing research has been directed toward personal care of the sick. Much of this research has been indirectly concerned with care of the sick in that it has evolved around the nurse. There now are theories of who the nurse is, what she is, what her duties are, what her relationship to the physician is, and more. Individuals in the nursing profession are now asking for more research directly concerned with the patient--who he is, what his needs are, what behavior he exhibits, and why.

The professional literature indicates that operating room nurses are being challenged to show their contribution to nursing, to prove they are engaged in providing patient-centered nursing care. There is, however, a near absence of published scientific studies concerning the operating room nurse. It would appear that such studies aiding the operating room nurse and the nursing profession in evaluating and achieving an understanding of the problems and practice of professional nurses in the operating suite, and the personal and professional opinions and needs of the operating room

nurse, may very well make a contribution toward the improvement of patient care.

This study seeks to make a contribution toward the achievement of this understanding by identifying and analyzing some feelings of operating room nurses toward their practice and toward some of the ideas currently being espoused for their practice.

Steps of the Study

The steps in the development of this study were as follows:

1. A general survey of nursing literature was made to determine what has been written for or about the operating room nurse. Related research in this area was sought.
2. Numerous unstructured discussions with operating room nurses were undertaken for the purpose of ascertaining their feelings concerning operating room nursing as related to the nursing profession. Most of these nurses indicated a feeling of need to express themselves, need to be heard, need to be understood.
3. The purpose and scope of the study were formulated.
4. The limitations and assumptions were determined.
5. The survey form was constructed incorporating some of the feelings expressed as a result of the aforementioned discussions, plus statements of principles found in the

literature.

6. A pilot study was conducted utilizing the registered nurses employed in the operating room departments of two small Portland area hospitals. The purpose of the pilot study was to determine the reliability of the statements utilized in the survey form.
7. The final structure of the survey form was determined. The statements were arranged in such a manner as to facilitate statistical manipulation of the data to be received.
8. A letter of introduction was sent to the operating room supervisor of each of six major hospitals in the Portland metropolitan area. This letter stated the purpose of the study, along with what was needed, and also bore the signature of the thesis adviser. A sample of this letter is included in Appendix A.
9. Each operating room supervisor indicated by mail her willingness to participate in the study.
10. By telephone, mutually agreeable dates were arranged for the delivery of survey forms to each operating room department.
11. The survey forms remained in each operating room department for one week before collection.
12. The data were tabulated and interpreted.

13. The findings were summarized; conclusions were drawn and recommendations were made for further study.

Overview of the Study

This study is presented in four chapters. Chapter I presents an introduction to the broad problem, defines the purposes of the study and describes the procedure plan. Chapter II presents a review of the related literature. Chapter III describes the study with analysis and interpretation of the data received. Chapter IV presents a summary of the study, the conclusions, and recommendations for further study.

CHAPTER II

REVIEW OF RELATED LITERATURE

Introduction

The literature was searched for articles and research reports concerning the operating room nurse and the area of operating room nursing. It was found that there is a near absence of reports of research in this area of nursing. Available, published reports included such topics as sterilization of materials, air flow in the operating room department, contents of surgical packs and instrument trays, disposable drapes, and efficient and effective procedures. Two unpublished master's theses at the University of Oregon School of Nursing delve into the preparation of operating room nurses in schools of nursing. Neither of these pertains to the problems, feelings, or practices of the registered nurse employed in the operating room department. The search for related research reports was then broadened to include topics of interpersonal and interdepartmental communication, and interpersonal relations within the hospital. Each of these included the patient and patient problems in some manner.

There are innumerable articles concerning the problems and

practices of the operating room nurse and the operating room department. Individuals prominent in this area of nursing have seen fit to share their views and proffer solutions. It is hoped that as the quality and quantity of these articles increase, more will be included in all publications of the nursing profession; and that there will be additional research undertaken concerning the operating room department and its staff.

Physical Isolation

In efforts to prevent the introduction of bacteria into the operating room department, restrictions are placed upon the operating room nurse. She dresses in specially provided clothing, street clothing never being allowed in the operating room department; and her movements to areas outside the operating suite are kept to a minimum. Should the operating room nurse leave her work area, her clothing makes her readily identifiable and associated with the operating room department. She is usually keenly aware of this. Operating room nurses in every hospital are in a minority in relation to all others. The operating room nurse outside her department is among strangers, individuals who do not know her and do not give her the recognition she may feel she deserves. Here seems to be the beginning of professional isolation, frustration, and lack of understanding for the operating room nurse.

Professional Isolation

At least one existing nursing organization appears to be contributing toward the professional isolation of the operating room nurse. "The Association of Operating Room Nurses (AORN) is an incorporated national organization of registered professional nurses drawn together by their mutual interest in the speciality of nursing in the operating room." (20) Those eligible for active membership include:

> . . . any registered professional nurse actively engaged in operating room nursing, either full or part time. Associate membership may be obtained if a registered professional nurse possesses special skills and knowledge in the field of operating room nursing; or if a professional operating room nurse is actively engaged in nursing but by reasons of employment variables, is temporarily working in an allied field of nursing; or if one is inactive in nursing who was an operating room nurse immediately prior to becoming inactive. (20)

This seems to make it quite clear that nurses from other fields of nursing can not be members, thus reducing the person-to-person relationships of operating room nurses with their professional colleagues. According to The AORN Story, the most important service of AORN is that it has become " . . . a means for the exchange of ideas and better methods of nursing practice within the operating room." (20) This is a fine purpose, no doubt; but does it not promote professional isolation of the operating room nurse?

The AORN was developed from a conference group within the American Nurses' Association (ANA). At the 1956 ANA convention, the House of Delegates voted to revise the constitution and bylaws to include, as one of the functions of the sections, the authority to organize conference groups with members of two or more sections. The operating room nurses voted to form the Operating Room Nurses Conference Group, May, 1956. By February, 1957, the operating room nurses decided that their special needs were not being met through the ANA section meetings and decided to form an independent national organization for themselves. They formally made the break with their professional colleagues.

Eight years later, 1965, the AORN Board of Directors published a statement of standards for the administrative and clinical practice in the operating room. This statement and the AORN objectives may be interpreted as a step toward closer relationships between operating room nurses and nurses from other fields. AORN objectives 4, 5, and 6 as listed in The AORN Story are stated as follows:

> 4) To promote and encourage effective communications and interpersonal relations, 5) To promote increased interest and participation of nurses in professional organizations, 6) To maintain cooperative relationships with other professional organizations and allied groups. (20)

This would seem to indicate a recognition of professional

interdependence in nursing and the need for cooperation and understanding. The literature does not give an accurate account of what efforts have been made, if any, and the success of these efforts in attaining these objectives. It becomes apparent, in reading the literature, that professional organizations may have achieved a recognition of professional interdependence. Recognition of this interdependence has not been shown by the individual nurse practitioner, such as the operating room nurse. Such questions arise as: Have the operating room nurses themselves come to recognize and acknowledge the need for cooperation and understanding among all nurses? Is it not possible that the operating room nurse really wants to be set apart from other members of her profession, not to be considered an integral part of the health team, to leave cooperation to everyone else?

Present literature indicates that other fields of nursing and other nurses still do not understand or accept the operating room nurse and her work. Edna Prickett has written:

> Perhaps because of the specialized type of work performed in the operating room, there has been a tendency to think of it as an isolated area, remote and distinct from the rest of the hospital and to consider operating room nursing, in some instances, as independent of other nursing services. (23)

This could be interpreted as being an indication of the professional isolation of the operating room nurse. Myrtle Irene Brown, in

"Dynamic Change Through Research", has stated:

> There are two major categories of activity in the operating suite which are the legitimate domain of the nurse practitioner: 1) Providing for the safe care of the patient who is in a phase of the operative process, and 2) Assisting the physician at the operating table. (4)

According to Vernita Cantlin:

> No department offering nursing service can function without the professional nurse, but this is especially true in the operating room with its rigid demands that can be met only by those persons with professional standards and education. The operating room is the most hazardous area, with the greatest potential for legal liability, and the most demanding of professional and ethical performance, because the patient cannot think for himself; a small mistake or a moment's carelessness could be fatal. At no other time of hospitalization is a person so completely and utterly dependent on others for his life. And those others must be more than "adequately" prepared. And yet there are those who say that operating room nursing is not "patient-centered". They assume, presumably, that only the conscious patient can be the recipient of such care. (5)

Cantlin seems to be saying that many nurses misunderstand the operating room nurse so much, and know so little about her, that they are rejecting her on the basis that she does not give patient-centered nursing care when in fact she does.

Breakdown in Communication

Keith Davis, in Human Relations in Business, has interpreted communication as being: "The process of passing information and

understanding from one person to another. Communication always involves two people, a sender and a receiver." (9) One person alone can not communicate. This study explores such questions as: If the operating room nurse is professionally isolated, is she prevented from communicating with other nurses? Is she in the situation of being a sender without a receiver, or vice versa? Do operating room nurses feel that this is the situation, without regard to what is the actual situation?

Davis also states that effective communication involves both information and understanding. It has been established from current literature that other fields of nursing do not possess understanding of, and accurate information about, the operating room nurse. Keith Davis continues:

> A fact often overlooked is that communication is also a responsibility of every . . . employee. No matter what a man's job is, he must communicate with others, sometimes more, sometimes less, and he must be able to judge when, where, and how to communicate in many instances. Communications are a responsibility of every person in an organization. (9)

In relation to the statements of Keith Davis:

> The responsibilities of the operating room nurse are varied and complex and include administrative aspects as well as the need for promoting smooth interpersonal relationships. (2)

So, it appears that in spite of her isolation, the operating room nurse can not totally blame her communication problems on other

nurses, and other fields of nursing. She must make an effort to understand herself, to explain herself, to present her practice of nursing to the nursing profession demonstrating what her work actually is, what she believes it should be, and showing that she really is performing patient-centered nursing care, if this is what she does. This would seem to be in agreement with the AORN objectives previously stated.

Disruption of Patient Care

"Communication is not an end in itself, but is the process by which ends are accomplished." (10) In the case of nursing, the end is to provide care for the patient. At the present, a frequently espoused concept of nursing care is "continuity of patient care". This is defined as: ". . . a continuum which begins with admission, extends through the operative period and postoperative and rehabilitative care until the patient's return to his home environment in a better condition than when he was admitted." (13)

> In a hospital, all employees make up a team whose sole aim is to care for the patient. If people are to work together as a team, they must know what they are doing. In most instances the difficulty starts with a breakdown in communication. Disagreements occur, work is not done properly, cooperation ceases, harsh words are spoken, feelings are hurt, and people become angry with each other. Certainly it is the patient who suffers because of this lack of understanding and cooperation, which really begins with a breakdown in communication. (18)

Harold Korolenko has written on communication:

> There is persuasive evidence to support the principle that successful group productivity depends on the ability of the members to exchange ideas freely and clearly, and to feel involved in the decisions and interaction among group members. The operating room nurse and the floor nurse need to understand how their activities fit into the total team effort of patient care. (17)

If the existing situation in the hospitals is one of professional isolation for the operating room nurse, and minimal effective communication, then the needed understanding is difficult to achieve. The aforementioned AORN objectives indicate a desire to achieve this understanding, but do not indicate how it might be accomplished, or if the operating room nurse wishes it to be accomplished. A publication of Edna Prickett supports the previous quotation:

> The patient admitted to the surgical nursing unit is the same person who receives nursing service in the operating room and the same person returned (directly or via recovery room) to the surgical unit for postoperative care. The activities of nursing service in the operating room must therefore be integrated and coordinated with those of other nursing service units, in order to achieve the over-all objective of the nursing department. To provide continuous and effective nursing care to the patient, there must be mutual understanding and cooperation among all units. (23)

But, do operating room nurses as a group believe or practice this? Miss Prickett, unlike some authors, offers some suggestions for accomplishing the necessary understanding and cooperation:

> The operating room supervisor should strive to improve internursing relationships by: 1) Regular conferences for discussing common problems and working out solutions to them, 2) In-service programs, 3) Active participation on nursing committees by operating room personnel, 4) Her willingness to act as consultant to other departments in her special knowledge and experience may be helpful in solving the problem. (23)

Whether or not these suggestions are being implemented is not known. Relating these quotations to the definition of continuity of patient care used in this study, it might be construed that Prickett is indicating what is necessary to achieve continuity of patient care in actual practice. She would also seem to be saying that with professional isolation and minimal communication from one department within a hospital, there can not be continuity of patient care. Prickett's listing of measures to improve internursing relationships also indicates items for inclusion in the data collection of the researcher.

Summary

Numerous authors have indicated that there is a relationship between professional isolation, inadequate communication, and disruption of continuity of patient care or at least reduced effectiveness of nursing care. The literature would seem to support efforts by members of the nursing profession to ascertain the opinions of operating room nurses with regard to their acceptance and practice

of the aforementioned principles of communication, understanding, and cooperation in relation to the provision of optimal patient care.

CHAPTER III

REPORT OF THE STUDY

Purpose of the Study

This study was undertaken for the purpose of obtaining information from registered nurses employed in the operating suite in order to determine their stated opinions with respect to some currently espoused ideas or aspects of nursing care in relation to their practices as professional nurses in the operating suite.

Those aspects of nursing care identified for use in this study were:

1. The position of the operating room nurse as a member of the health team
2. Interdepartmental communication and cooperation within the hospital setting
3. Interdepartmental communication and cooperation at the individual nurse level
4. The organized plan of nursing care in the general hospital
5. Continuity of nursing care
6. The responsibility of the operating room nurse in maintaining up-to-date knowledge of patient care.

This study, being of descriptive character, included no hypotheses to be tested.

Design of the Study

This is a descriptive study of nonexperimental design. It may be typed as cross-sectional in that it dips into the study setting at a given point in time after the study design is completed, and obtains data on events occurring at that time. (1) The nonexperimental design is advantageous to this study in that the number of study subjects can be much larger than in an experimental study, increasing the representative character of the research. (1) At the same time, it poses a disadvantage in that there can not be close control or manipulation of variables.

The selection of respondents to the survey form was not accomplished by a process of randomization. Actually, these respondents were chosen through a process of self selection. "Although it might be said that a random process is operating in this selection, nevertheless an organismic variable may be present." (1) There may be a correlation between the type of individual responding and the type of data received. In an effort at control, the target population was limited to individuals with specific characteristics. They were registered nurses, licensed to practice nursing in the state of Oregon, and employed in the operating room department at the time

and place of data collection. In addition, the target population was chosen from several hospital settings in order that there might be cancelling out of variables operating within and specific to any one hospital.

Procedure for Solution

The survey form was constructed with numerous statements being derived from the review of related literature. Other statements were arrived at through an effort operationally to define certain aspects of the broad problem. As noted in the literature, certain practices appear to result in the isolation of the operating room nurse. Since this study is concerned with the operating room nurse and her practice, it is plausible that responses to statements of practice might indicate the presence of such isolation. For this study the criteria of isolation of operating room nurses, as found in the literature, were accepted as:

1. The operating room nurse does not participate ininservice education programs for total hospital nursing staff.
2. The operating room nurse is not included in the planning and organization of nursing care.
3. The operating room nurse is not an active member of the hospital nursing committees.
4. The operating room nurse does not, as an individual

nurse, routinely become acquainted with or work with the staff members of other departments.

5. The operating room nurse does not serve as a consultant or work closely with other departments in the sharing of knowledge.
6. The operating suite is not consistently governed by the rules and objectives of the nursing service.

Breakdown in communication was defined in terms of:

1. Lack of face-to-face contact with personnel of other departments.
2. Lack of responsibility on the part of the operating room nurse for communication with other departments or individual staff of those departments.
3. A feeling on the part of the operating room nurse that staff nurses from other departments do not consider her as part of the nursing staff or are not knowledgeable of her work.
4. A feeling on the part of the operating room nurse that inter-departmental communication is not necessary.

The following components were chosen as being indicative of continuity of patient care:

1. The operating room nurse recognizes interdepartmental cooperation and mutal understanding as being necessary.
2. The operating room nurse recognizes the patient's care

as being one continuous treatment.

3. The operating room nurse recognizes that continuity of patient care is necessary to optimal patient care.
4. The operating room nurse believes herself to be a contributing member of the health team.
5. The operating room nurse feels that pre-operative patient visits help in improving nursing care.
6. The operating room nurse routinely makes pre-operative patient visits.

It is recognized that there are certain weaknesses inherent in this survey form. Those aspects of nursing care utilized by no means cover the entire realm of problems noted in the literature concerning the area of operating room nursing. Neither are all statements exhaustive nor mutually exclusive. The structure of the survey form also contributes to weakness in that the respondents must respond by forced choice. For Part I of the survey form, dealing with practices of the operating room nurse, the responses available were:

A if the stated activity is done

B if the stated activity is done, but you wish it were not

C if the stated activity is not done

D if the stated activity is not done, but you wish it were

E if the stated activity is not a suitable practice.

For Part II of the survey form, dealing with belief in current ideas, the responses available were:

A if you believe in the statement given

B if you believe in the statement given, but wish you did not

C if you do not believe in the statement given

D if you do not believe in the statement given, but wish you did

E if the statement given is very unsuited to hospital nursing care.

These do not allow for a fully true expression of opinions. It must be recognized that a rather wide range of feeling may be elicited in response to a survey form of this nature. In an effort at least partially to compensate for these weaknesses, several individuals reviewed the statements and the final format of the survey form. Among these individuals were those knowledgeable in the field of research and in the work of the operating room nurse. The other weaknesses were a function of the nature of the study. Only a problem of rather narrow scope can be effectively dealt with by a small scale study.

The first small pilot study was done in two small hospitals in the Portland area. The purpose of this pilot study was to determine reliability of the survey form. In each hospital, the survey forms were administered by the operating room supervisor. Those nurses responding met the characteristics of the nurses in the proposed

target pouplation. The survey form was administered to each nurse twice, with a time lapse between each administration. On this test-retest basis it was determined the respondents produced the same answers for 92.6 percent of the statements. For no single statement was there consistent disagreement. It was therefore determined the respondents understood each statement and possessed definite opinions or knowledge in relation to each statement. Neither the respondents utilized nor the data obtained in the pilot study have been included in this report.

After the first pilot study, the survey form was reorganized to facilitate increased statistical manipulation of the data. A two-part data collecting tool was formulated. A sample of the survey form as revised is included in Appendix B. Part I of the survey form contained two types of statements; what activities were specifically being carried out by the operating room nurse in her place of employment, and what activities the nurse felt should be done. Part II asked for her degree of belief in some currently expressed ideas for the operating suite.

Eight groups of statements were derived from the six aspects of nursing care identified in Chapters I and II. The purpose was to avoid double statements of communication and cooperation, and to produce statements most nearly exhaustive and mutually exclusive. These groups were as follows:

A. Working together as a health team.

B. Organization and planning of nursing care in the hospital.

C. Continuity of patient care.

D. Interdepartmental communication for continuity of patient care.

E. Interdepartmental communication of individual staff members.

F. Interdepartmental cooperation for continuity of patient care.

G. Results of continuity of patient care.

H. The activities and needs of the nurse to stay abreast of the rapidly increasing knowledge in her profession.

The statements were further divided into three categories:

1. Specific activities being performed.

2. Specific activities which should be performed.

3. Belief in stated ideas.

The data are presented according to these three categories in Tables 3, 4, and 5. This resulted in 24 subdivisions of the statements. Two statements were paired in each subdivision. Some of these statements were taken from the related literature, and other statements were derived from the previously listed operational definitions. In some instances, the statements were taken directly from published articles. The statements were paired according to relationships

indicated in the literature and the operational definitions. Related literature and the operational definitions were again used as a criteria for assigning each pair of questions to a subdivision. Table 1 shows the pairing of the statements and the subdivisions to which they were assigned.

Table 1. Assignment of Statements by Pairs.

Group	Specific Activity Performed	Activity Should be Performed	Belief in Concept or Objective
	Number of Statements		
(1)	(2)	(3)	(4)
A. Working together as a health team	3, 21	6, 29	36, 46
B. Organization and planning of nursing care in the hospital	2, 9	7, 17	33, 40
C. Continuity of patient care	30, 25	13, 14	42, 45
D. Interdepartmental communication for continuity of patient care	5, 19	22, 32	34, 38
E. Interdepartmental communication of individual staff members	10, 11	4, 24	41, 44
F. Interdepartmental cooperation for continuity of patient care	1, 26	23, 31	37, 39
G. Results of continuity of patient care	16, 18	20, 27	35, 47
H. The activities and needs of the nurse to stay abreast of the rapidly increasing knowlege in her profession	8, 12	15, 28	43, 48

In some instances, the differentiation between specific activities which were being performed and those which should be

performed was made somewhat arbitrarily. It was the judgment of the investigator and those knowledgeable individuals reviewing the survey form that those statements placed in this category more nearly approached the ideal situation. These statements generally involved broader concepts or principles in nursing. They were felt to be indicative of underlying knowledge, thought, and understanding.

The 32 statements of Part I were distributed as follows:

A. Working together as a health team--Statements 3, 6, 21, 29.

B. Organization and planning of nursing care in the hospital--Statements 2, 7, 9, 17.

C. Continuity of patient care--Statements 13, 14, 25, 30.

D. Interdepartmental communication for continuity of patient care--Statements 5, 19, 22, 32.

E. Communication at the individual staff level--Statements 4, 10, 11, 24.

F. Interdepartmental cooperation for continuity of patient care Statements 1, 23, 26, 31.

G. Results of continuity of patient care--Statements 16, 18, 20, 27.

H. Maintaining current knowledge of nursing--Statements 8, 12, 15, 28.

There was a deliberate attempt to list these statements in random

order. For example, all statements for any one group were not listed together. It was meant that this should encourage each respondent to consider carefully each statement and not answer it according to a previously answered statement.

Part II contained 16 statements. Again, they were in random order. They were grouped as follows:

A. Working together as a health team--Statements 36, 46.

B. Organization and planning of nursing care in the hospital--Statements 33, 40.

C. Continuity of patient care--Statements 42, 45.

D. Interdepartmental communication for continuity of patient care--Statements 34, 38.

E. Communication at the individual staff level--Statements 41, 44.

F. Interdepartmental cooperation for continuity of patient care--Statements 37, 39.

G. Results of continuity of patient care--Statements 37, 39.

H. Maintaining current knowledge of nursing--Statements 43, 48.

A second pilot study was performed using the survey form in the final format. Three completed survey forms were chosen at random from each of six hospitals (N=18). The data obtained were tabulated and statistical tests performed. The Kendall Coefficient

of Concordance, or W, was computed. A significant value of W was obtained, $p < .001$. According to Siegel, this may be interpreted that these nurses are each applying essentially the same standard in responding to statements of the survey form. They would all seem to agree in whatever criteria they are using in responding to the statements. The Fisher Exact Probability Test was computed for each pair of statements using a 2 x 2 contingency table, and a table of critical values of D (or C) in the Fisher test. The purpose of this was to determine if the responses to each question in the pair could be considered to have come from the same population of respondents. The test was found to be not significant for each pair of statements; therefore, the responses to each statement within a pair were considered to be in agreement or from the same population.

In addition, the Spearman Rank-Order Correlation, or Spearman rho, test was computed. The purpose of this was to determine if the nurses' stated beliefs correlated with their statements of specific activities being performed in the operating suite, and with activities they stated should be performed in the operating suite. A correlation value was also computed for activities being performed and activities which should be performed in the operating suite. In each case, the correlation computed was not significant at the $p=.05$ level. There was no agreement between these three categories of questions. As a result of this pilot study it was determined that the

survey form could be utilized and the data could be statistically manipulated to arrive at conclusions based on the data received.

The primary souce of data was the information obtained by the survey form. The sample population was comprised of 86 registered nurses employed in the operating suites of six major hospitals in the Portland, Oregon, metropolitan area. The individual names of the sample population and the participating hospitals were kept anonymous. No attempt was made to elicit background information for those individuals comprising either the target or the sample population; in fact, complete anonymity was assured each respondent. Opportunity was provided for the respondent to mail the completed survey form to the researcher rather than return it to her supervisor. The group of respondents was comprised of registered nurses, presently practicing their professions in the operating suite. No supervisors, administrative, or auxiliary personnel were asked to respond.

Those hospitals chosen to participate in this study represent a cross-section of the major hospitals in the Portland area. Four of the hospitals receive their financial backing from churches; the other two are tax supported. The four church supported hospitals represent three religious faiths--Episcopalian, Lutheran, and Catholic. Of the two tax supported hospitals, one receives its support from county funds, the other from state funds, federal grants

notwithstanding. These six hospitals are from four distinctly different geographical locations in the city. In one of these hospitals the operating suite is organized under hospital administration. In the remaining five it is organized under the department of nursing service.

In each hospital the operating room supervisor was contacted by letter with an invitation to participate in this study. In no instance was the researcher asked to correspond with a higher hospital authority. By mail, each supervisor indicated permission for the researcher to involve the nurses of the operating room department in this study. All supervisors were given a survey form for each of their staff nurses. Each supervisor used one week's time or less to administer these survey forms to the staff nurses. Since the survey forms were not administered by the researcher, it can only be assumed that the nurses responding did so of free choice; and that this choice does not in any way affect the data received.

Tabulation of the Data

There was no attempt made to include an equal number of participants from each hospital. It was anticipated that approximately 50 to 65 percent of the nurses in each hospital operating room department would respond. In actuality, the number of nurses responding ranged from 33 percent at one hospital to 100 percent for

another hospital. It should be noted that the hospital with 100 percent response had the smallest staff of operating room nurses and required the shortest period of time (five days) in which to respond. Table 2 shows the approximate number of nurses employed in each operating room department and the percentage of nurses responding to the survey form.

Table 2. Number of Operating Room Nurses Employed in Six Hospitals, and Number and Percent Responding

Hospital	Number Employed	Number Responding	Percent Responding
(1)	(2)	(3)	(4)
A	35	12	33
B	32	26	81
C	30	20	67
D	22	11	50
E	15	7	50
F	11	11	100
Mean	24.2	11.1	63.5

One question arising from the purposes of the study was: What are some of the specific activities of the operating room nurse? Does she think these activities should be or should not be performed? Part I of the survey form contained statements which were designed to elicit answers to these questions. The answers were based upon the choice of one response from a continuum of five possible responses for each statement. This was a forced choice for the respondent. In the final tabulation, the total numerical score for each

possible response was an indication of the number of nurses who chose that possible response. The higher the numerical score, the greater the number of nurses who chose that response. It should be noted that not all respondents responded to every one of the statements in the survey form. The data in this form can be dealt with only in terms of frequencies and percentages and must be interpreted only in terms of tendencies. Some of the tendencies seen are discussed here.

Ninety-four percent of the nurses responding indicated that the operating room nurse offers reassurance and support to the patient entering the operating suite. Fifty-five percent said they did not make pre-operative visits to the patient. Thirteen percent felt this was not a suitable practice. This is in contrast to the fact that the literature indicates pre-operative visits should be a part of the reassurance and support which the patient needs. In addition, 53 percent said they believed pre-operative visits to be helpful. This seemed to indicate the operating room nurse is possibly not accomplishing those things in which she says she believes.

Seventy-two percent of the respondents indicated that the operating room nurse does not enjoy greater prestige than other staff nurses, and only 30 percent indicated that other staff nurses feel the operating room nurse does not give patient-centered nursing care.

Seventy-nine percent of the respondents indicated the operating suite has written objectives consistent with nursing service in other departments. A 71 percent majority indicated the nurses of the

operating suite are guided by these objectives.

Sixty-two percent stated the operating room nurse does not read only those professional articles related to operating room nursing. In relation to this, 32 percent indicated that the operating room nurse needs more than full time employment only to stay abreast of the advances in her profession. Forty-four percent, or nearly one half the respondents, stated that full time employment alone is not a suitable practice.

Of those nurses responding, 55 percent indicated operating room nurses do not participate in the planning and coordination of hospital nursing care. Of that 55 percent, 21 percent indicated a wish for the operating room nurse to so participate. Coinciding with this were 62 percent indicating operating room nurses are not members of the hospital nursing committees. Seventeen percent of these nurses indicated a wish for operating room nurses to be included in these committees. Twenty-two percent of the nurses responded with the statement that operating room nurses are members of the hospital nursing committees.

Eighty-nine percent of the sample population answered that each operating room nurse is responsible for teaching, with no qualifications as to who or what she is to teach. Forty percent indicated that the physician is responsible for teaching about the patient, with no distinction as to who the physician is to teach.

Thirty percent responded that the operating room nurse does not remain in her department at all times, and 43 percent that she does not become acquainted with nurses of other departments. A matching 43 percent stated they wish the operating room nurse would become acquainted with nurses of other departments. Table 3 shows the percentage of nurses choosing each possible response for each statement in the category of specific activities being performed.

Table 3. Percentage Distribution of Responses of 86 Nurses to Statements Regarding Activities Performed

Statement Number (1)	Percent Choosing Response A (2)	Percent Choosing Response B (3)	Percent Choosing Response C (4)	Percent Choosing Response D (5)	Percent Choosing Response E (6)
1	94	0	0	5	0
3	30	14	23	7	10
4	89	0	4	6	1
5	34	0	29	27	10
6	79	0	5	8	0
7	28	0	2	14	4
10	37	8	40	6	7
11	8	1	43	43	5
12	17	6	62	5	8
14	40	1	13	25	14
15	9	8	32	2	44
20	71	2	13	1	9
21	2	4	72	2	15
24	22	0	45	17	8
26	14	1	55	17	13
31	35	0	27	35	1

In Table 3 it becomes apparent that there was no one statement to which every nurse gave the same response. Also to be noted are

those individuals who chose response E, or unsuitable practice. There was a range of 0-44 percent, with a mean of 9.3 percent. Although this does not represent a large number of respondents, the amount of objection to currently accepted practices freely substantiated from the literature is surprising.

Additional questions to be considered were: What are some of the activities or functions which the operating room nurse should be performing in her practice of nursing? Is she performing these? Statements designed to elicit this information were also included in Part I of the survey form. They were scored and treated in the same manner as the previously discussed statements.

Seventy-four percent of the sample population stated all departments work cooperatively to make the services of the entire hospital available to the patient, yet 77 percent stated the treatment of the patient is divided into separate units.

Thirty-six percent indicated nurses from all departments participate in planning the program of inservice education, while 41 percent stated operating room nurses participate in this planning.

Responses totaling 73 percent indicated channels of interdepartmental authority and communication were established, and 55 percent indicated those channels established for the operating suite and its staff are identical to those established for other nursing service departments.

Forty-six percent of the respondents stated the plan of nursing care within the hospital is coordinated to enable every nurse to give patient-centered care. In support of this, 79 percent indicated the operating room nurse gives patient-centered nursing care.

A rather large majority of the responding nurses, 70 percent, indicated the operating room nurse investigates and develops new ideas and techniques, yet only 38 percent indicated the operating room nurse participates in hospital studies or research projects affecting nursing care. It is not known if the respondents included this study when answering such a question.

Eighty percent of the respondents agreed that the patient should be the focal point of all hospital activities and, in fact, is. In agreement with this 75 percent concurred that all hospital departments and their employees make up a team whose sole aim is to care for the patient.

Forty-six percent of the nurses responded that the operating room nurse serves as consultant to other hospital departments, but 40 percent stated the operating room nurse does not take part in teaching hospital inservice education courses.

Seventy-nine percent of the sample population indicated the operating room nurse should attend educational activities during working hours, and that this is done. In conjunction with this, representation of the operating room nurses at interdepartmental

meetings for purposes of discussing points of mutual concern or interest is supported by 86 percent of the sample population. Table 4 shows the percentage of nurses choosing each possible response for each statement in the category of activities which should be performed.

Table 4. Percentage Distribution of Responses of 86 Nurses to Statements Regarding Activities Which Should be Performed.

Statement Number (1)	Percent Choosing Response A (2)	Percent Choosing Response B (3)	Percent Choosing Response C (4)	Percent Choosing Response D (5)	Percent Choosing Response E (6)
2	48	0	5	30	1
8	68	0	2	12	3
9	31	0	27	25	2
13	64	0	3	17	1
16	40	0	19	23	4
17	35	0	19	28	1
18	33	1	26	21	2
19	47	1	22	7	8
22	63	0	6	13	2
23	69	1	7	6	0
25	68	0	5	9	1
27	64	0	4	14	1
28	77	0	0	8	0
29	25	0	34	19	2
30	66	5	9	3	3
32	74	0	2	8	0

In Table 4 it becomes apparent that there is a contrast between the data received for each type of statement in Part I of the survey form. Responses A and D were chosen most frequently for statements concerning activities which should be performed. The

number of objections, choice of response E, was also considerably less. Apparently most of the respondents either perform all the stated activities, or wish they were performed.

Another purpose of the study involved determining whether or not the respondents believed certain ideas about, or aspects of, hospital nursing. These principles were chosen at random from current professional nursing literature. Part II of the survey form contained those statements for which the respondents indicated their belief or non-belief. These statements were responded to in the same manner as those statements comprising Part I. The data were tabulated in the same manner as before. The data are again discussed in the same manner as previously utilized. The percentage of the sample population responding that they believed in any one of the given statements ranged from 53 to 100 percent with the mean value being 88.4 percent. The range of percentage of those stating they did not believe in any one statement was 0 through 33 percent, the mean value being 6.4 percent. There was only one item, number 38, in which there was unanimity of response. The extreme values were stated in response to statement number 37--"Preoperative visits by the operating room nurse reduce patient anxiety." Fifty-three percent of the sample population believed this was so, chose response A. Thirty-three percent responded they did not believe it to be so, response G. Table 5 lists the percentage

distribution of nurses choosing each possible response to each statement in Part II of the survey form.

Table 5. Percentage Distribution of Responses of 86 Nurses to Statements Regarding Currently Expressed Ideas in Nursing.

Statement Number (1)	Percent Choosing Response A (2)	Percent Choosing Response B (3)	Percent Choosing Response C (4)	Percent Choosing Response D (5)	Percent Choosing Response E (6)
33	97	0	2	1	0
34	99	0	0	1	0
35	99	0	0	1	0
36	95	0	3	1	0
37	53	1	33	6	5
38	100	0	0	0	0
39	91	0	2	4	0
40	74	1	13	9	0
41	73	4	20	2	1
42	86	1	2	8	0
43	93	1	4	2	0
44	76	0	14	4	6
45	86	2	8	1	1
46	99	0	1	0	0
47	97	0	0	2	0
48	97	1	1	1	0

Statistical Manipulation of the Data

The raw data were numerically computed, converted to percents, and presented in tables. Statistical processes were then applied to the data to determine the significance of the findings.

> Associated with every statistical test is a model and a measurement requirement; the test is valid under certain conditions and the model and the

> measurement requirements specify these conditions. Often we have to assume the conditions are met. Thus the conditions of the statistical model of the test are often called the "assumptions" of the test. Those assumptions which are elements of the parametric statistical model are as follows:
>
> 1. The observations must be chosen by random sampling.
> 2. The observations must be drawn from normally distributed populations.
> 3. These populations must have the same variance.
> 4. The variables involved must have been measured in at least an interval scale.
>
> These assumptions or conditions are ordinarily not tested in the course of the performance of a statistical analysis. (24)

It is known that the population of this study does not fit the above assumptions; therefore, non-parametric statistical tests must be used. Non-parametric statistical tests do not specify assumptions about the parameters of the population from which the sample was drawn.

"For some non-parametric techniques which require ordinal measurement, the requirement is that there be a continuum underlying the observed scores. Actual scores may fall into discrete categories." (25) This requirement is met by the data in this study. The answers are in discrete categories A through E. The underlying continuum extends from the extreme "it is not done", to the extreme "it is done", with allowance for intermediate degrees of these extremes. With ordinal measurement, non-parametric statistical tests should be used.

The statistical test, Kendall's Coefficient of Concordance, a non-parametric measure of correlation, was computed. Kendall's Coefficient of Concordance, or W, expresses the degree of association among more than two sets of ranking of objects or individuals. In the case of this study, the rankings were of objects. This test fits the data collected. It was computed for Part I and Part II of the survey form. The formula

$$W = \frac{12 \Sigma D^2}{(m^2)(N)(N^2-1)}$$

was used. For Part I, W was shown to equal .057, the significance of this value of W was tested using the formula $\chi^2 = k(N-1)W$. The computed value of Chi square was 151.96; this value is significant at the level of $p < .001$. "A high or significant value of W may be interpreted as meaning that the observers or judges are applying essentially the same standard in ranking the objects under study." (25) W does not indicate that the judges' ratings or scores are correct but only that the judges are consistent with each other in their judgments. In other words, each of the 86 nurses responding to this survey form did so utilizing the same standard as each of the other nurses. What this standard was, or whether or not it was a valid or "correct" standard cannot be determined.

The computations for Part II showed W = .29. Once again the formula was used to test the significance of W. With Chi

square = 361.20 the value of W is significant at the level of $p < .001$. This follows the same interpretation as that given for W of Part I. For Part II the agreement among the respondents appears to be much stronger than for Part I.

> If the value of Chi square as computed from this formula equals or exceeds that shown in tabled critical values for Chi square for a particular level of significance and a particular value of df = N-1, then the null hypothesis that the rankings are unrelated may be rejected at that level of significance. (25)
>
> The statistic most appropriate for describing the central tendency of scores in an ordinal scale is the median. The median is not affected with the changes of any scores which are above or below it, as long as the number of scores above and below remain the same. (25)
>
> The median test is a procedure for testing whether two independent groups differ in central tendencies. Most precisely, the median test will give information as to whether it is likely that two independent groups (not necessarily of the same size) have been drawn from populations with the same median. (25)

It is assumed that if the null hypothesis is true, the two groups are random samples from the same population.

In the rationale for the median test, Siegel states, "When $n_1 + n_2$ is less than 20, use Fisher test". Here "n" refers to the number of measurements in one of the two groups being tested. For this study $n_1 + n_2 = 10$ so the Fisher test was used.

The Fisher Exact Probability Test is used when every subject

in both groups, in this case A, B, C, D, and E, obtains one of two possible scores; the two possible scores utilized were: (1) Above the combined median; and (2) Equal to or below the combined median of the two groups. The scores are represented by frequencies in a 2 x 2 Contingency table. Critical values of D (or C) in the Fisher Test are tabled. This table was utilized. The level of significance for each pair of questions was greater than .05. In no case could the null hypothesis be rejected. On the basis of the results of the Fisher Test the responses to each statement and all pairs of statements were determined to be from the same population. Therefore, none of the pairs of questions was discarded because of being unrelated or having unrelated responses.

A third non-parametric statistical test was computed from the data received. This was the Spearman Rank-Order Correlation Coefficient, or Spearman rho, designated as r_s. The purpose of this test was to determine what relationship, if any, existed between any two of the three categories: (1) Specific activities being performed, (2) Specific activities which should be performed, (3) Belief in stated concepts or objectives. The Spearman rho test is similar to Kendall's W used earlier. It is different in that it is for correlation between just two ranks and is particularly suited to situations where the number of cases is small. For this test in this study N = 8, there being eight pairs of statements in each of the above listed

categories. When computing the Spearman rho test, one value must be given to each item included in the test. This is to facilitate ranking of the items. For this computation, the total value of, or score of, response A in each pair of statements was utilized. This was chosen because the purpose here was to establish relationship between the nurses' stated beliefs and the activities or functions performed. In addition, the total score for each question could not be used because it equals the number of nurses responding to the statement, which is assumed to be the same for each statement. The following formula was used:

$$r_s = 1 - \frac{6\Sigma D^2}{N^3 - N}$$

The correlation computed for categories 1 and 3 as previously listed was $r_s = .09$; according to tabled critical values of r_s, this value is not significant.

Rho is a product moment correlation coefficient for ranked data. For all practical purposes it may be interpreted the same as Pearson r. A small value of rho and its lack of significance indicates there is no correlation or relationship between the data received in these two categories of statement. Rho was computed a second time to determine the relationship between statement categories 2 and 3 as previously listed. For this computation $r_s = -.26$. According to tabled values, this also was not significant. For a

third time Spearman rho was computed, this time for categories 1 and 2 as previously listed. This value for $r_s = -.1$. One more time, non-significance was ascertained.

The total lack of significance between the three categories may in and of itself be significant. It may indicate that the survey form utilized was inadequate. This would seem to be very likely. It may also indicate that there really is no correlation between what operating room nurses state they believe and what they state their practices are. In any event, it must be remembered that a correlation in no way gives information about cause. Discovery of even perfect correlation does not tell why two sets of ranks are related, or in this case, lack of correlation does not tell why they are not related.

Interpretation and Summary of Data

Since the same individuals responded to each statement in the survey form, comparison of individual respondents would be improper, if not impossible, treatment of the data. Those comparisons made are between the statements themselves. The Kendall's Coefficient of Concordance, or W, might be thought of as comparing individuals since it is defined as being a test to determine the overall relationship among ratings of judges. In all actuality, in this study, it was used to determine the agreement between the five possible responses to each question. It was determined that there was a high

degree of agreement.

The Fisher Exact Probability Test was very definitely a comparison between statements. Each statement was compared to that statement with which it was paired. The comparison was in terms of the median response for each question. The conclusion was that the median response for all statements and all pairs of statements came from the same population of respondents.

The Spearman rho test was also a comparison of statements; to be more exact, it was a comparison of the rankings of responses to three categories of statements in this study. It was found that the data showed no relationship between any two categories. To phrase this in another manner, there was no relationship shown between the statements of the survey form as they were categorized for this research study. Perfect negative or positive correlations could be obtained by manipulating the placement of the pairs of statements within the subdivisions. After this manipulation the statements seemed no longer to bear any logical relationship to each other, or to the new group of statements in which they were placed. As a result, each statement was allowed to remain in its original category.

The overall conclusions with relation to the survey form and statistical manipulations of the data received are that: All statements were responded to by the same nurses using the same

standard for response; no statement was paired with a statement to which it was not related, and that those categories of statements arrived at logically bore no relationship to each other.

Perusal of the raw data seemed to indicate several interesting tendencies or relationships. None of these was statistically proven but each seemed worthy of some notice and thought. Comparison of the responses to some statements is noted, with speculation made as to the possible meaning, perhaps for the purpose of aiding future study or supporting current professional literature.

Vernita Cantlin is quite emphatic in her claim that the registered nurse in the operating room does perform patient-centered nursing care. In response to this survey form, 94 percent, a very large majority, of the sample population state the registered nurse in the operating room offers reassurance and emotional support to the patient entering the operating room. The literature very definitely supports this as being a part of patient-centered nursing care. Cantlin states, "There are those who say operating room nursing is not patient-centered". Forty-four percent of the respondents stated that nurses from other departments feel as though the operating room nurse does not give patient-centered nursing care. An additional seven percent stated that patient-centered care was not given, but that they wish it were. These percentages might be construed to support a claim that operating room nurses do not wish to

be seen as giving patient-centered nursing care, or that operating room nurses are not concerned about their image among other professional nurses. Increased support for Cantlin and lack of support for those claims just mentioned could be indicated by the 79 percent response to the statement, "The registered nurse in the operating room suite gives patient-centered nursing care".

The questions concerning preoperative patient visits elicited some speculatively interesting data. Fifty-five percent of the respondents indicated they do not make preoperative visits. Only 17 percent said they wish this was done. Related literature states that this activity is one of the more modern and more ideal components of patient-centered nursing care, and a part of offering reassurance and emotional support to the patient. Apparently operating room nurses, or at least the respondents, do not make preoperative visits and do not understand these visits to be a part of patient-centered nursing care. Thirteen percent stated that this was not a suitable practice. This comes from a group of nurses, 94 percent of whom indicated that they gave reassurance and emotional support to the patient. Fifty-four percent of the participants, only a little more than one half, indicated that they believed preoperative visits by the operating room nurse reduced patient anxiety. The response in this study do not seem to give either clear support or non-support of the contention that the operating room nurse does not give

patient-centered nursing care.

Edna Prickett has stated " . . . there has been a tendency . . . to consider operating room nursing . . . as independent of other nursing services". This does not seem to be supported by the responses in this study. Seventy-nine percent of these nurses indicated that the operating suite has written objectives which are consistent with those of nursing service in other departments. Seventy-one percent indicated that operating room nurses function under the same personnel policies as nurses from other departments. Slightly over one-half of the nurses indicated that the channels of authority and communication between nursing service administration and the operating room staff nurses are identical with those of other nursing service departments. These are in agreement with the nurses' stated beliefs in statements 34, 35, and 38. Ninety-nine percent stated they believed successful teamwork depends upon the ability of the members to exchange ideas freely and clearly. One hundred percent indicated their belief that interdepartmental communication is necessary for continuity of nursing care. According to the criteria of isolation established on pages 24 and 25 these operating room nurses apparently do not view themselves as being independent of other nursing services and do not believe they can be or should be. This could be construed to indicate the nurses of this study recognize professional interdependence in nursing and a need for

cooperation and understanding. If this were so, it could then be assumed these nurses are in harmony with the Association of Operating Room Nurses' objectives quoted in Chapter II. It might further be speculated that if the operating room nurse is professionally isolated, she has at least begun to solve this problem.

Continuity of patient care was defined as: "... a continuum which begins with admission, extends through the preoperative period and postoperative and rehabilitative care until the patient's return to his home environment in a better condition than when he was admitted." (13) In relation to this, 88 percent of the respondents indicated unqualified belief in both statements 42 and 45. Seventy-seven percent stated that a patient's treatment is divided into separate units. This discrepancy could be interpreted as due to: (1) A lack of understanding of the concept continuity of patient care, or (2) the activities of the nurse not necessarily being in agreement with her belief. Statements 5 and 31 were designed to elicit information concerning two components of continuity of nursing care, namely interdepartmental communication and cooperation. Only 34 percent of the participants indicated operating room nurses communicate to other departments the information gained in surgery concerning the patient. Thirty-five percent, again approximately one-third, indicated that the personnel from the patient wards reciprocate with information concerning the individual patient. Once

again, there seems to be a conflict between the stated beliefs of these nurses and their practices. Reference is made to the responses to items 34, 35, and 38 in particular. It should be noted that 97 percent of the respondents stated their belief in the need for mutual understanding and cooperation to provide continuous and effective nursing care.

Sixty-three percent indicated their belief that lack of face-to-face relationships between departments contributes to the breakdown of communications. Sixty-six percent also indicated a belief that communication with other personnel and departments is the responsibility of every nurse. The very small, seven percent, response that nurses from all departments become acquainted with each other appears to indicate another discrepancy between stated beliefs of these operating room nurses and their actual practices. One can only surmise the reason for these discrepancies. Statistical manipulation of the data showed no correlation between these statements or answers to these statements.

The respondents indicate a belief in the ideas currently being stated in the professional literature for nursing and specifically for operating room nurses. In fact, their statements of belief approach unanimity. There are many indications that these nurses are not necessarily practicing their beliefs. No conclusions can be drawn about the cause of this. It is concluded that operating room nurses

are not totally professionally isolated although interdepartmental communication and cooperation appear to be somewhat inadequate according to the responses to the survey form. There is evidence of some disruption of continuity of patient care although this cannot be related to inadequate communication. It is more apparent that this disruption is due to lack of understanding of some of the basic premises of continuity of patient care. This may very well be due to an inadequacy of communication. Without adequate communication and without the exchange of knowledge, development of understanding is quite difficult, if not impossible.

CHAPTER IV

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Purposes of the Study

This is a descriptive study undertaken for the purpose of identifying the feelings and practices, or problems, of the operating room nurse regarding:

1. The position of the operating room nurse as a member of the health team.
2. Interdepartmental communication and cooperation within the hospital and involving the operating room department.
3. Interdepartmental communication and cooperation between individual nurses.
4. The organization and planning of nursing care within the hospital.
5. Continuity of nursing care.
6. Responsibilities of the operating room nurse for keeping her professional knowledge and practice abreast of the advancements in her profession.

This study, being of descriptive character, attempted to prove no hypothesis.

Summary

After delineation of the study and search of the literature, data were collected using a survey form distributed to the operating room nurses of each of six hospitals. Statistical analyses of the data were done; and a discussion of tendencies and comparison of responses to statements from the raw data were presented.

Findings

The findings of this study are primarily related to the survey form and its use. The following findings resulted from this study:

1. The nurses responding to the survey form understood the statements and utilized the same standards in making their responses.
2. The statements of the survey form were accurately paired. In other words, they were related to each other in the group in which they were placed.
3. Although the items within each pair of statements were related, it was not possible to place these pairs in both logical and statistically significant categories.
4. No relationship could be determined between the stated beliefs of the nurses and their stated practices in their profession.

Conclusions

On the basis of information obtained from 86 nurses responding to a survey form, no widespread generalizations can be made. Several general conclusions were inferred. These conclusions are limited to the data obtained from this study.

1. The professional nurse staff of the operating room is not as professionally isolated as the literature implies.
2. There is inadequate interdepartmental communication involving the operating room department.
3. The operating room nurses view themselves as providing patient-centered nursing care.
4. Those nurses possess inadequate knowledge and understanding of continuity of patient care as defined for this study.
5. The statistical analyses appear to indicate hypotheses which could arise for use in future research.

These conclusions can not be carried beyond the nurses of this population or the situations in which they are employed. The raw data appear to bear direct relationship to the identified aspects of nursing care, and the questions arising from the review of related literature. Not all the conclusions based upon the raw data have been statistically proven.

This research study has in actuality proven to be a pilot study, with the data obtained giving as much proven information about the survey form as about the sample population.

Recommendations for Further Studies

1. A similar study be done involving more hospitals and a larger number of nurses in an effort to apply the generalizations more extensively.
2. A similar study be done utilizing a revised survey form which facilitates increased statistical manipulation of the data.
3. A similar study be done utilizing the staff nurses of surgical wards for the purpose of determining their interpretation of the role and responsibilities of the operating room nurse in providing patient care.

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APPENDIX A

COVER LETTER

3728 N. E. 113th Ave.
Portland, Oregon 97220
Feb. 21, 1968

Operating Room Supervisor
(Name of Hospital)
(Address of Hospital)
Portland, Oregon

Dear Supervisor:

In partial fulfillment of requirements for a Master of Science degree at the University of Oregon School of Nursing, I am undertaking a study concerning operating room nurses. You and your staff are invited to participate. It will involve individual completion of a simple questionnaire which will require about 15 minutes. A self-addressed post card is enclosed for your convenience in indicating your willingness to assist with the study. I will contact you by telephone to arrange a mutually satisfactory date for bring the questionnaires to your hospital.

Upon completion of the study, copies of the report will be placed in the library at the University of Oregon Medical School.

Yours sincerely,

Olivia Lehmer, R. N.

Olivia Lehmer is a regularly enrolled graduate student at the University of Oregon School of Nursing. Any assistance you can offer Mrs. Lehmer will be greatly appreciated.

Lucile Gregerson
Thesis Adviser

A postcard with the following information was included in the previous letter:

_____ yes, I wish to assist in your study.

_____ no, I do not wish to assist in your study.

(signed)_____
operating room supervisor

APPENDIX B

Survey Form

Survey form

A study is being made about operating room nurses and their practice. Your assistance will be appreciated. For each statement please check the one answer most appropriate to your situation.

PART I

The purpose of this section is to identify certain activities or functions in providing nursing care in the hospital.

Check column A if the stated activity is done.
Check column B if the stated activity is done, but you wish it were not.
Check column C if the stated activity is not done.
Check column D if the stated activity is not done, but you wish it were.
Check column E if the stated activity is not a suitable practice.

	A	B	C	D	E
1. A registered nurse in the operating room offers reassurance and emotional support to the patient entering the operating room.					
2. The plan of nursing care within the hospital is coordinated to enable every nurse to give patient-centered care.					
3. Nurses from other departments feel the operating room nurse does not give patient-centered nursing care.					
4. Each operating room nurse is responsible for teaching.					
5. The operating room nurse communicates to other departments the information gained in surgery concerning the patient.					
6. The operating suite has written objectives consistent with those of nursing service in other departments.					
7. Operating room nurses participate in the planning and coordination of hospital nursing care.					
8. Operating room nurses attend workshops or other educational activities during working hours.					

	A	B	C	D	E
	Is done	Rather not done	Is not done	Wish it were done	Not suitable
9. Nurses from all departments participate in planning the program of inservice education.					
10. The operating room nurse remains within her department at all times, including meal breaks.					
11. Nurses from all departments become acquainted with each other.					
12. The operating room nurse reads those articles related only to the operating room nurse.					
13. In the hospital, all departments and their employees make up a team whose sole aim is to care for the patient.					
14. The doctor is responsible for teaching about the patient.					
15. The operating room nurse needs full time employment only to keep up with the advances in her profession.					
16. Nurses from the operating suite serve as consultants regarding sterilization and infection control in other hospital departments.					
17. Operating room nurses are represented in the planning of the inservice education program.					
18. Operating room nurses participate in hospital studies or research projects affecting nursing care.					
19. Channels of authority and communication between nursing service administration and operating room staff nurses are identical with those of other nursing service departments.					
20. Operating room nurses function under the same personnel policies as nurses from other departments.					
21. The staff nurse in the operating suite is granted more prestige than the staff nurse in other hospital departments.					

	A	B	C	D	E
	Is done	Rather not done	Is not done	Wish it were done	Not suitable
22. Channels of authority and communication between departments are established.					
23. The patient is made the focal point of all hospital activities.					
24. An operating room nurse is a member of each nursing committee.					
25. The registered nurse in the operating suite gives patient-centered nursing care.					
26. Operating room nurses make preoperative visits to patients.					
27. All departments work cooperatively to make the services of the entire hospital available to the patient.					
28. The operating room nurse investigates and develops new ideas and techniques.					
29. Operating room nurses take part in the teaching of the hospital inservice education courses.					
30. A patient's treatment is divided into separate units, such as surgery, x-ray, physical therapy, and medical treatment.					
31. The floor provides the operating room nurses with information concerning the individual patient.					
32. A representative of the operating suite attends regularly held interdepartmental meetings to discuss problems of mutual concern.					

PART II

The purpose of this section is to determine the feelings of practicing operating room nurses toward some of the currently expressed ideas in nursing.

Check column A if you believe in the statement given.
Check column B if you believe in the statement given, but wish you did not.
Check column C if you do not believe in the statement given.
Check column D if you do not believe in the statement given, but wish you did.
Check column E if the statement given is very unsuited to hospital nursing care.

		A	B	C	D	E
33.	If people are to work together as a team, they must know what they are to do and how their work fits with what others are doing.					
34.	Successful teamwork depends upon the ability of the members to exchange ideas freely and clearly.					
35.	Interdepartmental cooperation is necessary for continuity of nursing care.					
36.	In order that a patient's treatment have maximum effect, the entire staff must work as a team.					
37.	Preoperative visits by the operating room nurse reduce patient anxiety.					
38.	Interdepartmental communication is necessary for interdepartmental cooperation.					
39.	Continuity of patient care leads to increased patient comfort and shorter length of hospitalization.					
40.	All categories of nursing personnel are included in the organization and planning of nursing care in the hospital.					
41.	Lack of face-to-face relationships between departments contributes to the breakdown of communications.					
42.	The patient's care, from admission to discharge, is one continuous treatment.					

	A	B	C	D	E
	Believe	Wish did not believe	Do not believe	Wish did believe	Not suitable
43. To stay abreast of changes in nursing, professional nurses should attend appropriate educational programs, even during working hours.					
44. Communication with other personnel and departments is the responsibility of every nurse.					
45. The preoperative and postoperative aspects of the patient's care cannot be separated from the surgical procedure.					
46. The operating room nurse is a vital member of a health team caring for the surgical patient.					
47. To provide continuous and effective nursing care to the patient, there must be mutual understanding and cooperation.					
48. A professional nurse should regularly read a variety of nursing literature.					

Thank you very much for your help.

Olivia Lehmer

Olivia Lehmer, R. N.

APPENDIX C

Raw Data

Survey Form

A study is being made about operating room nurses and their practice. Your assistance will be appreciated. For each statement please check the one answer most appropriate to your situation.

PART I

The purpose of this section is to identify certain activities or functions in providing nursing care in the hospital.

Check column A if the stated activity is done.
Check column B if the stated activity is done, but you wish it were not.
Check column C if the stated activity is not done.
Check column D if the stated activity is not done, but you wish it were.
Check column E if the stated activity is not a suitable practice.

		A	B	C	D	E
1.	A registered nurse in the operating room offers reassurance and emotional support to the patient entering the operating room.	81	-	-	4	-
2.	The plan of nursing care within the hospital is coordinated to enable every nurse to give patient-centered care.	48	-	5	30	1
3.	Nurses from other departments feel the operating room nurse does not give patient-centered nursing care.	26	12	20	6	9
4.	Each operating room nurse is responsible for teaching.	77	-	3	5	1
5.	The operating room nurse communicates to other departments the information gained in surgery concerning the patient.	29	-	25	23	9
6.	The operating suite has written objectives consistent with those of nursing service in other departments.	68	-	4	7	-
7.	Operating room nurses participate in the planning and coordination of hospital nursing care.	24	2	29	18	6
8.	Operating room nurses attend workshops or other educational activities during working hours.	68	-	2	12	3

	A Is done	B Rather not done	C Is not done	D Wish it were done	E Not suitable
9. Nurses from all departments participate in planning the program for inservice education.	31	-	27	25	2
10. The operating room nurse remains within her department at all times, including meal breaks.	32	7	34	5	6
11. Nurses from all departments become acquainted with each other.	7	1	37	37	4
12. The operating room nurse reads those articles related only to the operating room nurse.	15	5	53	4	7
13. In the hospital, all departments and their employees make up a team whose sole aim is to care for the patient.	64	-	3	17	1
14. The doctor is responsible for teaching about the patient.	34	1	11	22	12
15. The operating room nurse needs full time employment only to keep up with the advances in her profession.	8	7	37	2	38
16. Nurses from the operating suite serve as consultants regarding sterilization and infection control in other hospital departments.	40	-	19	23	4
17. Operating room nurses are represented in the planning of the inservice education program.	35	-	19	28	1
18. Operating room nurses participate in hospital studies or research projects affecting nursing care.	33	1	26	21	2
19. Channels of authority and communication between nursing service administration and operating room staff nurses are identical with those of other nursing service departments.	47	1	22	7	8
20. Operating room nurses function under the same personnel policies as nurses from other departments.	61	2	11	1	8
21. The staff nurse in the operating suite is granted more prestige than the staff nurse in other hospital departments.	2	3	62	2	13

	A Is done	B Rather not done	C Is not done	D Wish it were done	E Not suitable
22. Channels of authority and communication between departments are established.	63	-	6	13	2
23. The patient is made the focal point of all hospital activities.	69	1	7	6	-
24. An operating room nurse is a member of each nursing committee.	19	-	39	15	7
25. The registered nurse in the operating suite gives patient-centered nursing care.	68	-	5	9	1
26. Operating room nurses make preoperative visits to patients.	12	1	47	15	11
27. All departments work cooperatively to make the services of the entire hospital available to the patient.	64	-	4	14	1
28. The operating room nurse investigates and develops new ideas and techniques.	77	-	-	8	-
29. Operating room nurses take part in the teaching of the hospital inservice education courses.	25	-	34	19	2
30. A patient's treatment is divided into separate units, such as surgery, x-ray, physical therapy and medical treatment.	66	5	9	3	3
31. The floor provides the operating room nurses with information concerning the individual patient.	30	-	23	30	1
32. A representative of the operating suite attends regularly held interdepartmental meetings to discuss problems of mutual concern.	74	-	2	8	-

PART II

The purpose of this section is to determine the feelings of practicing operating room nurses toward some of the currently expressed ideas in nursing.

Check column A if you believe in the statement given.
Check column B if you believe in the statement given, but you wish you did not.
Check column C if you do not believe in the statement given.
Check column D if you do not believe in the statement given, but wish you did.
Check column E if the statement given is very unsuited to hospital nursing care.

	A	B	C	D	E
33. If people are to work together as a team, they must know what they are to do and how their work fits with what others are doing.	83	-	2	1	-
34. Successful teamwork depends upon the ability of the members to exchange ideas freely and clearly.	85	-	-	1	-
35. Interdepartmental cooperation is necessary for continuity of nursing care.	85	-	-	1	-
36. In order that a patient's treatment have maximum effect, the entire staff must work as a team.	82	-	2	1	-
37. Preoperative visits by the operating room nurse reduce patient anxiety.	46	1	28	5	4
38. Interdepartmental communication is necessary for interdepartmental cooperation.	86	-	-	-	-
39. Continuity of patient care leads to increased patient comfort and shorter length of hospitalization.	78	-	2	3	-
40. All categories of nursing personnel are included in the organization and planning of nursing care in the hospital.	64	1	11	8	-
41. Lack of face-to-face relationships between departments contributes to the breakdown of communications.	63	3	17	2	1
42. The patient's care, from admission to discharge, is one continuous treatment.	74	1	2	7	-

	A	B	C	D	E
	Believe	Wish did not believe	Do not believe	Wish did believe	Not suitable
43. To stay abreast of changes in nursing, professional nurses should attend appropriate educational programs, even during working hours.	80	1	3	2	-
44. Communication with other personnel and departments is the responsibility of every nurse.	66	-	12	3	5
45. The preoperative and postoperative aspects of the patient's care cannot be separated from the surgical procedure.	74	2	7	1	1
46. The operating room nurse is a vital member of a health team caring for the surgical patient.	85	-	1	-	-
47. To provide continuous and effective nursing care to the patient, there must be mutual understanding and cooperation.	83	-	-	2	-
48. A professional nurse should regularly read a variety of nursing literature.	83	1	1	1	-

Thank you very much for your help.

Olivia Lehmer

Olivia Lehmer, R. N.

APPENDIX D

Abridged Table of Critical Values of χ^2

df \ p	.05	.02	.01
1	3.84	5.41	6.64
2	5.99	7.82	9.21
3	7.82	9.84	11.34
4	9.49	11.67	13.28
5	11.07	13.39	15.09
6	12.59	15.03	16.81
7	14.07	16.62	18.47
8	15.51	18.17	20.09
9	16.92	19.68	21.67
10	18.31	21.16	23.21
15	24.99	28.26	30.58
20	31.41	35.02	37.57
25	37.65	41.57	44.31
30	43.77	47.96	50.89

APPENDIX E

Abridged Table of Critical Values of Spearman Rank-Order Correlation
Two-tailed

	Level of Significance, P				
N	.20	.10	.05	.02	.01
4	-	1.00	-	-	-
5	.80	.90	-	1.00	-
6	.66	.83	.89	.94	1.00
7	.57	.71	.79	.89	.93
8	.52	.64	.74	.83	.88
9	.48	.60	.68	.78	.83
10	.45	.56	.65	.73	.79

N is the number of pairs

Typed by Barbara Glenn

AN ABSTRACT OF THE THESIS OF

OLIVIA BOSWELL LEHMER

for the MASTER OF SCIENCE IN NURSING

Date of receiving this degree: June 6, 1968

Title: THE EXPRESSED OPINIONS OF EIGHTY-SIX OPERATING ROOM NURSES CONCERNING SELECTED ASPECTS OF THEIR NURSING PRACTICE

Approved: [redacted]

Lucile Gregerson, Associate Professor in Charge of Thesis

ABSTRACT

Purposes of the Study

This is a descriptive study undertaken for the purpose of identifying the feelings and practices, or problems, of the operating room nurse regarding:

1. The position of the operating room nurse as a member of the health team.
2. Interdepartmental communication and cooperation within the hospital and involving the operating room department.
3. Interdepartmental communication and cooperation between individual nurses.
4. The organization and planning of nursing care within the hospital.
5. Continuity of nursing care.
6. Responsibilities of the operating room nurse for keeping her professional knowledge and practice abreast of the advancements in her profession.

This study, being of descriptive character, attempted to prove no hypothesis.

Findings

The findings of this study are primarily related to the survey form and its use. The following findings resulted from this study:

1. The nurses responding to the survey form understood the statements and utilized the same standards in making their responses.
2. The statements of the survey form were accurately paired. In other words, they were related to each other in the group in which they were placed.
3. Although the items within each pair of statements were related, it was not possible to place these pairs in both logical and statistically significant categories.
4. No relationship could be determined between the stated beliefs of the nurses and their stated practices in their profession.

Conclusions

On the basis of information obtained from 86 nurses responding to a survey form, no widespread generalizations can be made. Several general conclusions were inferred. These conclusions are limited to the data obtained from this study.

1. The professional nurse staff of the operating room is not

as professionally isolated as the literature implies.

2. There is inadequate interdepartmental communication involving the operating room department.
3. The operating room nurses view themselves as providing patient-centered nursing care.
4. Those nurses possess inadequate knowledge and understanding of continuity of patient care as defined for this study.
5. The statistical analyses appear to indicate hypotheses which could arise for use in future research.

These conclusions can not be carried beyond the nurses of this population or the situations in which they are employed. The raw data appear to bear direct relationship to the identified aspects of nursing care, and the questions arising from the review of related literature. Not all the conclusions based upon the raw data have been statistically proven.

This research study has in actuality proven to be a pilot study, with the data obtained giving as much proven information about the survey form as about the sample population.

Recommendations for Further Studies

1. A similar study be done involving more hospitals and a larger number of nurses in an effort to apply the generalizations more extensively.

2. A similar study be done utilizing a revised survey form which facilitates increased statistical manipulation of the data.
3. A similar study be done utilizing the staff nurses of surgical wards for the purpose of determining their interpretation of the role and responsibilities of the operating room nurse in providing patient care.