THE EFFECT OF PREOPERATIVE INSTRUCTION BY A PROFESSIONAL OPERATING ROOM NURSE ON POSTOPERATIVE ANXIETY

by

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ABSTRACT

An experimental study with two randomly assigned groups was designed to measure the effects of preoperative instruction by a professional operating room nurse on the anxiety level of surgical patients during the postoperative period. The Experimental Group received structured instruction for thirty minutes the evening before surgery incorporating information concerning events of the perioperative period. Postoperative anxiety levels were measured by the Institute for Personality and Ability Testing (IPAT) Anxiety Scale. Nursing helpfulness as reported by patients was measured by a researcher-designed questionnaire.

The research hypothesis that preoperative instruction would result in lower levels of postoperative anxiety was not supported. The hypothesis was supported that patients receiving instruction from the professional operating room nurse would give higher scores on the questionnaire measuring nursing helpfulness.

Studies involving a larger sample and refinement of instruction to meet the needs of various socioeconomic groups are recommended in order to pursue the effectiveness of preoperative instruction in reducing postoperative anxiety.
CHAPTER 1

INTRODUCTION

Currently the field of nursing is devoted to expanding its body of scientific knowledge and formulating theoretical bases for practice. Research provides the vehicle for the acquisition of these goals. This study was undertaken in an attempt to further the development of this knowledge. As an experimental study, the investigation was designed to explore the effects of preoperative instruction on postoperative anxiety. While previous studies have been conducted on the effects of preoperative instruction, this endeavor was designed to research the effectiveness of utilizing a professional operating room nurse to administer the instruction.

Statement of the Problem

The particular problem of concern of this study is the anxiety engendered by surgery. Anxiety is a well established concomitant of surgery. This study seeks the answers to the following questions: Will preoperative instruction by a professional operating room nurse reduce postoperative anxiety? Can professional operating room nurses effectively administer this preoperative instruction?
The answers to these questions are significant to nursing because they will affect the type of care nurses give to patients. Nursing goals include ascertaining and meeting patients’ needs. If, through preoperative instruction, patients can be helped to a quicker and less traumatic recovery, nurses will have come nearer to the goal.

**Hypotheses**

The hypotheses tested in this study are as follows.

1. The mean score on the IPAT Anxiety Scale will be significantly lower postoperatively for patients receiving preoperative instruction from a professional operating room nurse than for patients receiving instruction from a regularly assigned staff nurse.

2. Surgical patients receiving preoperative instruction from a professional operating room nurse will assign significantly higher scores on a questionnaire measuring nursing helpfulness as reported by patients, than postoperative surgical patients who receive instruction from a regularly assigned staff nurse.

**Delimitations**

This study was delimited by the following factors.

1. The study was a field experiment with limitations on the control of the variables.
2. The sample consisted of only fourteen literate, English speaking male and female patients, 21-65 years of age, who entered the hospital for major elective surgery, requiring a general anesthetic.

3. The patients had not undergone surgery since reaching adulthood, 18 years of age, or within the last five years.

4. A maximum of 40 minutes was spent with each patient for instruction.

5. The patients were under the care of four physicians who specialize in surgery.

6. The patients were hospitalized in one of three general hospitals in a southwest urban community.

**Theoretical Framework**

Janis (1958) stated that,

From a psychological standpoint, a major surgical operation constitutes a stress situation which resembles many other types of catastrophies and disasters in that the "victim" faces a combination of three major forms of imminent danger—the possibility of suffering acute pain, of undergoing serious bodily damage, and dying (p. 10).

If the circumstances are such that an individual's anticipatory fear is not stimulated prior to a stressful event (e.g. when there is a lack of warning), the person will tend to react to the stress stimuli with anger and resentment; whereas, if the same person is exposed to the precise threat stimuli which arouse some degree of anticipatory fear, the possibility of such reactions is markedly less (p. 330).
Departing from Janis' explanation of the effects of worrying on postoperative anxiety, this study explored the aspect of instruction as a preparation for stress, focusing upon the postoperative anxiety level which was associated with two methods of preoperative teaching.

Dumas and Leonard (1963) found support for Janis' theory by conducting a study which indicated that the incidence of postoperative vomiting was reduced in patients receiving preoperative instruction. More recently Healy (1968) in research with over 300 patients found that the 181 patients, who received preoperative instruction, required less medication for pain than those who did not receive the instruction.

Janis (1958) further points out that,

The evidence bearing on the relationship between preoperative information and postoperative emotional reaction forms the basis for the following generalization concerning the probable effects of preparatory communication: if a person's anticipatory fear is stimulated to a moderate degree by warnings or by other forms of information, the probability that he will subsequently overreact emotionally to acute stress stimuli and develop sustained attitudes will be markedly lower than if his anticipatory fear is not all stimulated during the precrisis period (p. 401).

Unlike Janis' study this study is designed to supplement the previous studies in exploring if there is a significant reduction in the anxiety of patients subjected to stressful situations when they have been adequately prepared prior for the event through instruction. The study
will be conducted on surgical patients as were the Healy and Dumas and Leonard studies, but will measure anxiety specifically rather than analgesia required postoperatively or the incidence of vomiting.

Definitions

For this study, the following definitions shall apply:

Anxiety is the free-floating manifest concern of uneasiness as measured by the IPAT Anxiety Scale (Cattell and Scheirer, 1963, p. 13).

Professional nursing in the operating room is the identification of the physiological, psychological, and sociological needs of the patient and the development and implementation of an individual program of nursing care that coordinates the nursing action, based on knowledge of the natural and behavioral sciences, to restore or maintain the health and welfare of the patient before, during, and after surgical intervention (Association of Operating Room Nurses' Journal, 1969, p. 48).

The professional operating room nurse, therefore, is the practitioner of professional operating room nursing. The professional operating room nurse conducting this study has a Bachelor of Science degree in Nursing and is presently enrolled in the Master's program in Nursing at The University of Arizona.

Preoperative instruction shall consist of basic generalized information pertinent to every surgical patient who is to undergo surgery; specific information applicable to individual patients according to their anticipated needs;
and information concerning procedures that the patient will experience in the operating room before being anesthetized. Content of the instruction is outlined in Chapter 3.

Benefit is anything contributing to an improvement in condition as measured in the study by the questionnaire.

A surgical patient is a person hospitalized for an operative procedure. In this study, the surgical patient shall be a literate, English-speaking individual, between 21-65 years of age who is entering the hospital for major elective surgery requiring a general anesthetic. These individuals shall not have undergone surgery since reaching adulthood or within the past five years.

Basic Assumptions

For the purpose of this study, the following assumptions are made:

1. Patients have a satisfactory relationship with their physician.
2. The patient undergoing surgery is subject to an anxiety producing experience.
3. Anxiety can be measured.
CHAPTER 2

REVIEW OF LITERATURE

The following review of literature is divided into two categories: the literature pertaining to anxiety and material related to measurement tools.

Literature Related to Anxiety

Janis' (1958) studies concerning anxiety associated with surgery were the forerunners of increased attention to preoperative instruction. These studies indicated the importance of well-planned preoperative instruction in relieving postoperative anxiety. The possibility of the individual reacting to a stressful situation with anger is markedly reduced when the person is exposed to precise threat stimuli which arouse some degree of anticipatory fear.

Quimby (1968) stated, "To avoid the complications of postoperative pain and the drugs used to treat it, the physician who cares for the preoperative patient must develop a supportive relationship with him looking to the postoperative period. The physician must not only support the patient but they must also teach him how to participate effectively in the period after operation" (p. 79).
"Skilled and conscientious physical and psychological preparation of the surgical patient is of crucial importance if postoperative complications are to be minimized" (Dumas and Leonard, 1963, p. 52).

Healy (1968) conducted research involving over 300 patients which revealed that the 181 patients receiving preoperative instruction on deep breathing, body mechanics, leg exercises, and anticipated postoperative occurrences required smaller amounts of postoperative analgesia than those patients not receiving instruction.

Brophy (1968) stated that,

Each individual who faces surgery has anxieties based on the three d's . . . death, disability, and disfigurement. Each individual reacts to these in terms of; 1) culture, 2) perception, 3) social environment, 4) previous experience, 5) expectations, 6) age, and 7) level of understanding. The steps for allaying anxiety in these patients are: 1) establish what the nurse must know about the proposed surgery, 2) assess the needs of the individual patient, 3) prepare a plan of action, and 4) evaluate the plan of action (p. 44).

Bird (1955) indicated that it was the nurse's responsibility to provide the main reduction of postoperative anxiety. He suggested that the content of the discussion be patient-initiated rather than prestructured.

Wolfer and Davis (1970) assessed surgical patients' preoperative emotional condition and postoperative welfare. The study involved 76 females who underwent elective gynecological surgery with a general anesthetic and 70 male
patients who underwent major abdominal surgery with general anesthesia. The results indicated the following: (1) females reported more fear and anxiety than did males, (2) postoperative self-ratings of emotional states are promising criterion measures of postoperative recovery in terms of being sensitive to individual differences and changing in the expected direction from day to day, and (3) no substantial relationship was found between patients' preoperative level of anxiety and any aspect of their postoperative recovery.

Cassady and Altrocchi (1960) interviewed 40 female patients the evening before they were to undergo general surgery to identify concerns about their operation. The interviewers found that 34 of the 40 women verbalized one or more concerns.

Carnevali (1966) conducted research involving 81 patients which was directed toward discovery of the identity of patients' preoperative fears. Fear of the "unknown" was of concern to 53 of the 81 patients.

Egbert et al. (1964) concluded that there was a reduction in the amount of postoperative pain expressed by patients who were visited preoperatively by anesthesiologists who instructed the patient about expected pain and methods of reducing the pain by practicing relaxation.

Myers (1964) conducted research involving types of communication on 72 hospitalized patients. She concluded
that "... less tension is created when the patient is
given specific information upon which he can structure the
event of impending stress" (p. 131).

Lynch, Struch, and Wermer (1958) stated, "It is
likely that anxiety causes disruptive postoperative
physiological changes, since the mental attitude of the
patient prior to a serious operation seems to have a sig­
nificant effect on both the patient's ability to tolerate
the procedure and on his postoperative course" (p. 58).
Their study utilized operating room nurses to deliver the
preoperative instruction, but failed to indicate a signifi­
cant reduction in anxiety in the 32 patients who were
visited by operating room nurses. They indicated that the
15 minute period allotted for instruction was too brief and
that, "there appeared to be a tendency for more anxiety
reduction associated with patients ORN-visited than those
not visited" (p. 58).

McBride (1967) conducted a study of the effect of
instruction on pain relief which resulted in the group
receiving in-depth support and teaching having quicker and
longer lasting relief than the group not receiving instruc­
tion.

Flatt (in Wells et al., 1969) stated that the nurses
in the operating room of a southwest institution have been
practicing preoperative visits for two years. The nurses
indicated that there is an observable lessening in the
anxiety demonstrated by patients upon arrival in the operating room.

Weiler (1968) in a study involving 100 patients who underwent open heart surgery revealed that the majority of the patients indicated that the instruction received was very important. "As one patient so aptly said, 'A person fears that which is "unknown" much more than that which he knows to be very unpleasant'" (p. 1465).

Vararo (1965), after completing an instruction project involving patients having open heart surgery, stated,

It is our conviction, based on experience with patients who have been taught by this method, that the quality of the preoperative nursing care, of which planned instruction is an integral part, has a direct relationship to the reaction of the patient and his family to his postoperative nursing care. When the instructions are planned in a systematic manner, employing a nurse-patient relationship based on knowledge, warmth, interest, and a feeling of wanting to help, a more comfortable, safer, and faster recovery can be expected for the patient, and a more satisfying nursing experience for the nurse (p. 115).

The results of recent research by Johnson, Dobbs, and Leventhal (1970, p. 26) did not confirm the emotional drive theory which predicted that a moderate level of preoperative fear would motivate the work of worry and result in postoperative adjustment. This study was conducted in a 774 bed hospital utilizing 63 patients for the study. Results indicated that chronic anxiety and birth order as
well as situational-aroused fear predicted emotional responses.

In a recent article, Levine and Fiedler (1970) stated, "The postoperative course and rehabilitative progress of the surgical patient is often directly related to the type and amount of preoperative preparation he receives" (p. 26). This statement is a result of an investigation conducted at Montefiore Hospital and Medical Center.

Ireland (1969) points out in _Low Income Life Styles:_

In almost every phase of health care and behavior, the poor behave differently from the middle class and more affluent sectors of American society (p. 51).

The genuine powerlessness experienced by the lower class is the source of persistent fatalistic beliefs. The counterpart of feeling helpless is belief in uncontrollable external forces. The attitude is reminiscent of belief in fate. People cannot avoid what is going to happen to them. Resignation is the most realistic approach to life (p. 7).

Hand in hand with fatalism goes a persistent tendency to think in terms of the present rather than the future (p. 7).

The diffuse fatalistic feeling of powerlessness which informs so strongly the relationships of the poor to the rest of society is embodied most pathetically in resignation to illness. It is often regarded as unavoidable. ("If you're going to get sick, you are going to get sick, and there's no use worrying about it.") (p. 7).

Kosa and Robertson (1969) felt that knowledge acquired from previous experiences influence attitudes toward health and care. They stated, "Thus one may expect that low
income and other underprivileged groups handle health-related anxiety and decision making differently from the privileged groups" (p. 174).

Piers and Singer (1953) stated, "The value attached to health and a long life and the fear that one may be punished for 'bad conduct' through illness are important cultural factors in explaining the anxiety. What transforms the anxiety into guilt anxiety is not the unconscious oedipal conflict but a very conscious reference to the moral code and world view of the world" (p. 67).

Kiev (1968) stated, "When illness occurs in a religious and pious person, it is rationalized by the belief that God allows men to suffer in order to learn" (p. 34).

Duff and Hollingshead (1968) found that even when prognosis was controlled, ward patients had more apprehensions about their illnesses and treatment they received than either semiprivate or private patients during their convalescent period.

McReynolds (1968) indicated that the IPAT Anxiety Scale is a measure of trait anxiety which represents overall, existent anxiety rather than state anxiety due to the circumstances affecting the individual at the time. This may explain diverse findings in studies of anxiety.
Measurement Tools

The instrument utilized to measure anxiety in this study is the IPAT Anxiety Scale. In support of the usefulness of this instrument Cohen (1965) stated, "This questionnaire for the assessment of general free anxiety level is distinct from neurosis and psychosis" (p. 121). The IPAT Anxiety Scale's impressive systematic research background commends it for use as an overall measure.

Cattell and Scheirer (1963) state that the IPAT Anxiety Scale can be used for ages 14-15 through adulthood as anxiety reaches a level around age twenty which it tends to maintain until age 55-60.

The total construct validity in relation to the situation for the IPAT Anxiety Scale is +.85 while the content validity ranges between +.30 - +.40 (Cattell and Scheirer, 1963, p. 7).

Cattell and Scheirer (1963, p. 8) related the reliability for this instrument as +.93 in relation to the situation.

Summary

The literature reviewed above was considered in the design of the study.
CHAPTER 3

RESEARCH PROCEDURES

This study utilized the following research procedures.

Research Design

This is an experimental study designed to investigate the effect of preoperative instruction on postoperative anxiety of the surgical patient and to evaluate the ability of a professional operating room nurse to administer the instruction.

The study is based on fourteen patients, half of which were assigned through randomization to a control group.

In conducting the study, the patient's chart was reviewed to familiarize the researcher with the patient's medical and social background, the surgical procedure to be performed, and the special procedures to be anticipated.

For the interviews with patients the researcher wore a "scrub dress" and a name tag that specified, "operating room," to identify her as an operating room nurse.

Patients were informed that this was a study directed at improving care for surgical patients, that they would be asked to answer questions about their care when
they were feeling better after surgery, and that they were free to withdraw from the study any time they desired.

After securing permission from the patient, the researcher proceeded with the instruction according to the program prepared from the information from the chart.

Basic information given to every patient consisted of generalized information pertinent to every patient who is to undergo surgery. This information included:

1. Explanation of procedures to be performed the evening before surgery.
   a. Bowel evacuation
   b. Shave preparation
   c. Nothing by mouth after a certain time
   d. Importance of a good night's rest including medication ordered for rest

2. Explanation of procedures to be performed the day of surgery.
   a. Bath and mouth care before surgery
   b. Voiding before receiving preoperative medication
   c. Purpose and action of preoperative medication
   d. Necessity of removing make-up, jewelry, and all prosthetic devices, except dentures, before receiving preoperative medication
   e. Designated area where the family may wait while the patient is in the operating room
f. Method of transportation to the operating room

g. Odors prevalent in the operating room

3. Explanation of what to anticipate postoperatively.
   a. Description of the recovery room or intensive care unit, as is indicated, including the purposes of the unit and its policies
   b. Demonstration and information concerning deep breathing and coughing
   c. Importance of moving and turning
   d. Analgesia for discomfort

Specific information was given each patient relevant to the particular procedure the patient was scheduled to undergo. This information included such things as Foley catheters, intravenous fluids, and Levine tubes.

A pilot study was conducted involving one patient in each group in order to evaluate the research design and provide experience for the researcher. No changes in design resulted from the pilot study.

**Sampling**

Fourteen patients were selected from the private practice of one of three physicians specializing in surgery and from patients at the county hospital in a southwest urban community.
Random assignment of patients to one of two treatment groups was accomplished through utilization of the table of random numbers from Young and Veldman (1965).

**Measurement and Analysis of Data**

The patient was visited on either the second or third postoperative day, after he had had time to recover from anesthesia and felt like communicating.

The IPAT Anxiety Scale was administered by the researcher. The following day the researcher-designed questionnaire was administered by a registered nurse associate who had completed a study on preoperative instruction.

The data were analyzed through the use of the one-tailed t-test with a predetermined level of .05 significance.
CHAPTER 4

PRESENTATION AND ANALYSIS OF DATA

In this chapter, the sample is described, the findings analyzed, and comparison is made with the hypotheses presented in Chapter 1.

Characteristics of the Sample

In obtaining the sample for this study, fifty patients were interviewed prior to surgery. Of those considered, sixteen patients met the criteria of the study. Those patients were interviewed and given preoperative instruction. Two of the patients were later eliminated; one due to early discharge from the hospital and the other due to the inability to understand the vocabulary on the IPAT Anxiety Scale. The characteristics of the fourteen patients included in the study are presented in Table 1.

The patients ranged in age from eighteen to sixty-five years with a mean age of 37.57 years and standard deviation of 5.19 years. Five of the patients were male and nine female. Nine were married, one was separated, one was divorced, and three were single. Many Mexican-American patients were available in the area; however, because of the language barrier, some were lost to the study. The sample
### Table 1. Characteristics of the Sample

<table>
<thead>
<tr>
<th>Subject</th>
<th>Sex</th>
<th>Age</th>
<th>Race</th>
<th>Marital Status</th>
<th>Surgery Performed</th>
<th>Hospital</th>
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<td><strong>Control</strong></td>
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</tr>
<tr>
<td>1</td>
<td>F</td>
<td>47</td>
<td>Cau.</td>
<td>Married</td>
<td>Cholecystectomy</td>
<td>County</td>
</tr>
<tr>
<td>2</td>
<td>F</td>
<td>52</td>
<td>Cau.</td>
<td>Married</td>
<td>Cholecystectomy</td>
<td>County</td>
</tr>
<tr>
<td>3</td>
<td>F</td>
<td>32</td>
<td>M-A</td>
<td>Divorced</td>
<td>Bilateral Salpingectomy</td>
<td>County</td>
</tr>
<tr>
<td>4</td>
<td>M</td>
<td>64</td>
<td>Cau.</td>
<td>Married</td>
<td>Cholecystectomy</td>
<td>Private</td>
</tr>
<tr>
<td>5</td>
<td>F</td>
<td>39</td>
<td>M-A</td>
<td>Separated</td>
<td>Hysterectomy</td>
<td>County</td>
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<tr>
<td>6</td>
<td>F</td>
<td>28</td>
<td>Cau.</td>
<td>Single</td>
<td>Bilateral Salpingectomy</td>
<td>County</td>
</tr>
<tr>
<td>7</td>
<td>M</td>
<td>18</td>
<td>Cau.</td>
<td>Single</td>
<td>Herniorrhaphy</td>
<td>Private</td>
</tr>
</tbody>
</table>

| **Experimental** |     |     |      |                |                           |            |
| 1       | M   | 20  | Cau. | Married        | Herniorrhaphy             | County     |
| 2       | F   | 40  | Cau. | Married        | Vagotomy                  | Private    |
| 3       | F   | 23  | M-A  | Single         | Cholecystectomy           | County     |
| 4       | F   | 37  | N    | Married        | Hysterectomy              | County     |
| 5       | M   | 28  | Cau. | Married        | Herniorrhaphy             | County     |
| 6       | M   | 65  | Cau. | Married        | Cholecystectomy           | Private    |
| 7       | F   | 33  | N    | Married        | Hysterectomy              | County     |
was composed of nine Caucasians, two Negroes, and three Mexican-Americans.

All of the patients in the sample underwent major elective surgery. The surgeries performed included four hysterectomies, four cholecystectomies, three herniorrhaphies, two bilateral salpingectomies, and one vagotomy.

The IPAT Anxiety Scale

To evaluate the hypotheses presented in Chapter 1, the sample was measured according to the response to the IPAT Anxiety Scale Questionnaire and the response on the researcher-designed questionnaire. Due to the small size of the sample, the one-tailed t-test of the differences between sample means was utilized to measure the differences between groups. Results are reported accordingly.

Hypothesis 1 stated that the mean score on the IPAT Anxiety Scale would be significantly lower postoperatively for patients receiving preoperative instruction from a professional operating room nurse than for patients receiving instruction from a regularly assigned staff nurse.

The IPAT Anxiety Scale demonstrates a total raw score and seven subscores: A, covert anxiety; B, overt anxiety; Q3, lack of integrated self-sentiment; C, ego weakness; L, suspiciousness; O, guilt proneness; Q4, frustrative tension.
The total raw scores ranged from 18 to 51. The average range of anxiety designated by Cattell and Scheirer (1963) was 17 to 51. The overall raw score mean was 32.57, standard deviation 9.26. The total raw score mean of the general population as reported by Cattell and Scheirer was 27.10 with a standard deviation of 11.40.

The total raw scores for the Control Group ranged from 18 to 47, with a mean of 29.71 and a standard deviation of 9.80. The total raw score for the Experimental Group ranged from 25 to 51, with a mean of 35.43 and a standard deviation of 8.40. The t-test value of 1.18 was not significant at the .05 level of probability.

The raw scores for subgroup A for the Control Group ranged from 6 to 21, with a mean of 14.30 and a standard deviation of 5.00. The raw scores for subgroup A for the Experimental Group ranged from 10 to 24, with a mean of 16.29 and a standard deviation of 5.14. The t-test value of 1.11 was not significant at the .05 level of probability.

The raw scores for subgroup B for the Control Group ranged from 9 to 26, with a mean of 15.43 and a standard deviation of 6.16. The raw scores for subgroup B for the Experimental Group ranged from 6 to 27, with a mean of 19.14 and a standard deviation of 6.70. The t-test value of .35 was not significant at the .05 level of probability.

The raw scores for subgroup Q3 for the Control Group ranged from 2 to 10, with a mean of 5.29 and a standard
deviation of 1.57. The raw scores for subgroup Q3 for the Experimental Group ranged from 4 to 8, with a mean of 4.86 and a standard deviation of 1.57. The t-test value of .39 was not significant at the .05 level of probability.

The raw scores for subgroup C for the Control Group ranged from 0 to 7, with a mean of 3.29 and a standard deviation of 2.54. The raw scores for subgroup C for the Experimental Group ranged from 4 to 7, with a mean of 5.43 and a standard deviation of 1.41. The t-test value of 1.98 was significant at the .05 level of probability.

The raw scores for subgroup L for the Control Group ranged from 2 to 8, with a mean of 4.00 and a standard deviation of 2.23. The raw scores for subgroup L for the Experimental Group ranged from 2 to 6, with a mean of 4.43 and a standard deviation of 1.82. The t-test value of .40 was not significant at the .05 level of probability.

The raw scores for subgroup O for the Control Group ranged from 5 to 14, with a mean of 8.74 and a standard deviation of 3.18. The raw scores for subgroup O for the Experimental Group ranged from 5 to 15, with a mean of 10.43 and a standard deviation of 3.31. The t-test value of 9.84 was significant at the .005 level of probability.

The raw scores for subgroup Q4 for the Control Group ranged from 5 to 13, with a mean of 9.00 and a standard deviation of 3.05. The raw scores for subgroup Q4 for the Experimental Group ranged from 8 to 16, with a mean of
10.29 and a standard deviation of 2.73. The t-test value of .85 was not significant at the .05 level of probability.

The t-test values for subgroups C and O were significant at the level of .05 and .005, respectively, in the opposite direction than was stated in Hypothesis 1. These subgroups relate to ego weakness and guilt proneness.

Postoperative Questionnaire

The postoperative questionnaire was designed to evaluate what were considered by the researcher to be the major sources of information available to the surgical patient in the hospital. These categories included physician, anesthesiologist, staff nurse, and, in the case of the Experimental Group, the operating room nurse.

The maximum score on the questionnaire was 21 which was derived in the following manner. The total score for the group was 202 with a mean of 14.43, standard deviation of 5.76. For the Control Group, the score was 83 with a mean of 11.86, standard deviation of 5.17. For the Experimental Group the score was 119 with a mean of 17.00, standard deviation of 3.78. The total score for the physician was 14 with a mean of 1.00, standard deviation of 7.21. The total score for the anesthesiologists was 7 with a mean of 0.5, standard deviation of 5.78. The total score for the staff nurse was 66 with a mean of 4.72, standard deviation of 6.13. The total score for the operating room
Table 2. IPAT Anxiety Scale Results Compared by t-Test

<table>
<thead>
<tr>
<th>Range of Total Score</th>
<th>A</th>
<th>B</th>
<th>Q3</th>
<th>C</th>
<th>L</th>
<th>O</th>
<th>Q4</th>
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<tr>
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<tr>
<td>Control Group</td>
<td>18-47</td>
<td>100</td>
<td>108</td>
<td>37</td>
<td>23</td>
<td>28</td>
<td>57</td>
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<td>Experimental Group</td>
<td>25-51</td>
<td>114</td>
<td>134</td>
<td>34</td>
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<tr>
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<td>16.29</td>
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<td>4.86</td>
<td>5.43</td>
<td>4.43</td>
<td>10.43</td>
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<tr>
<td>Standard Deviation:</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Control Group</td>
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<td>5.00</td>
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<td>2.48</td>
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<td>6.70</td>
<td>1.57</td>
<td>1.41</td>
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<td>1.11</td>
<td>.35</td>
<td>.39</td>
<td>1.98</td>
<td>.40</td>
<td>9.84</td>
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<td>Degrees of Freedom</td>
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<td>6</td>
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<td>&lt; .05</td>
<td>&lt; .05</td>
<td>&lt; .05</td>
<td>&gt; .05</td>
<td>&lt; .05</td>
<td>&gt; .005</td>
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</table>
nurse was 115 with a mean of 16.43, standard deviation of 4.47.

In general the response to the questionnaire indicated that the Experimental Group received more information from the operating room nurse than the total group received from the other three categories combined. The questionnaire results are presented in Table 3.

Summary

In this chapter the characteristics of the sample are presented, and the findings of the study reported and analyzed by the one-tailed t-test. A discussion of these findings is presented in Chapter 5.
Table 3. Analysis of Raw Scores, Mean, and Standard Deviation on Researcher Designed Questionnaire

<table>
<thead>
<tr>
<th>Group</th>
<th>P</th>
<th>A</th>
<th>O</th>
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<td>21</td>
<td>0</td>
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<tr>
<td>5</td>
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<td>15</td>
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<tr>
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<td>2</td>
<td>0</td>
<td>115</td>
<td>2</td>
<td>119</td>
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<td>0.50</td>
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<td>Mean Standard Deviation</td>
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</table>
CHAPTER 5

DISCUSSION OF THE FINDINGS

The following chapter is designed to analyze the findings revealed in Chapter 4 and to present recommendations for further investigations.

Results of the IPAT Anxiety Scale

The results of the IPAT Anxiety Scale failed to support the first hypothesis that anxiety would be significantly lower postoperatively for those patients receiving preoperative instruction from a professional operating room nurse than for patients receiving preoperative instruction from a regularly assigned staff nurse. For the combined IPAT Anxiety Scale, the t-value for the .05 level of significance was 1.94 with 6 df. The derived t-value for the combined score was 1.18 which is not significant.

Subscore C, ego weakness, was statistically significant in the opposite direction with a t-test value of 1.98 at the .05 level.

Subscore O, guilt proneness, was statistically significant at the .005 level in the opposite direction with a t-value of 9.84.

The remainder of the subscores were not statistically significant.
The sample utilized was small and few commonalities were demonstrated. The age ranged from 18 to 65 years. The sample contained nine Caucasians, three Mexican-Americans, and two Negroes. There were nine females and five males. Operative procedures varied with five different procedures being represented. The predominate commonality seemed to have been socioeconomic status with ten patients having been county patients and four private patients, with five county patients and two private patients in each group.

It is entirely possible that persons in different socioeconomic groups share different attitudes toward health care and have varying amounts of anxiety.

As pointed out in Chapter 2, Ireland (1969) reported that persons in a lower socioeconomic class behave differently than do members of more affluent groups. Persons from lower socioeconomic groups experience a feeling of powerlessness which results in fatalistic attitudes. This results in a tendency to be present rather than future oriented. The individual becomes resigned to illness without hope for altering the course of the recovery.

Kosa and Robertson (1969) indicated that attitudes are influenced by previous experiences. As experiences affecting persons in lower socioeconomic groups have been harsh, they tend to handle health related anxieties in the same frame, expecting the worst.
As the preoperative instruction was designed for middle class patients perhaps it failed to meet the needs of the lower socioeconomic groups. Perhaps, as suggested by Kosa and Robertson, they have a fatalistic attitude and would rather not be bothered by information that they feel cannot alter the course of events.

The statistical significance of Subgroup 0, guilt proneness, proved very interesting and stimulated further study into this area. Piers and Singer (1953) reported that punishment for "bad conduct" through illness is an important attitude factor in explaining anxiety. Therefore, if the nurse provides information which lessens the "suffering" perhaps they will not have "paid" sufficiently for their misdeeds.

Kiev (1968) reported the same tendency in extremely religious individuals.

Duff and Hollingshead (1968) found that when other variables such as prognosis were controlled that ward patients were more apprehensive than were semiprivate or private patients during their convalescence. Nine of the fourteen patients in this study were ward patients.

It must be taken into consideration that lower socioeconomic groups may have different attitudes toward health care and information. Several factors may be responsible for these attitudes, fatalism and guilt are certainly possibilities.
Results of the study may have also been due to the measurement tool utilized. McReynolds (1968) indicated that the IPAT Anxiety Scale is a measure of trait anxiety which represents overall, existent anxiety rather than state anxiety due to the circumstances affecting the individual at the time.

It is also possible that the members of the study responded to the questions without understanding their meaning. The IPAT Anxiety Scale has an educational level of eighth grade. Unfortunately, level of education was not assessed, only the ability to speak English was required. Therefore, the efficacy of the tool may be questioned in consideration of the sample utilized.

Results from Researcher Designed Questionnaire

The researcher designed questionnaire was designed to evaluate the patient's perception of the instruction he received. The second hypothesis stated that patients receiving preoperative instruction from a professional operating room nurse would have significantly higher scores on the questionnaire than patients receiving instruction from a regularly assigned staff nurse.

The data supported this hypothesis. Total score for operating room nurse was 115, for the staff nurse 66. As the opportunity presented itself, information was also
gathered on the physician and the anesthesiologist. Total scores for these groups were 14 and 7 respectively.

Conclusions

1. Hypothesis 1 indicating that patients receiving preoperative instruction from a professional operating room nurse would have significantly lower scores on the IPAT Anxiety Scale was not supported. The total results were not significant; however, Subgroup C, ego weakness, and Subgroup 0, guilt proneness, were significant at the .05 and .005 levels respectively in the opposite direction to that hypothesized.

2. Hypothesis 2 indicating that patients receiving preoperative instruction from a professional operating room nurse would score higher on a questionnaire designed to measure nursing helpfulness was supported.

Recommendations

Based on the findings of this study, the following recommendations are presented.

1. Further investigation is indicated regarding the value of preoperative instruction, optimum time for instruction, design of instruction, and agent for instruction.
2. Investigation into the effects of socioeconomic status on the desire for information concerning the events of a hospital stay.

3. A longitudinal study providing a larger sample is indicated to supplement such experimental studies.
CHAPTER 6

SUMMARY

The purpose of this study was to determine if preoperative instruction by a professional operating room nurse reduced postoperative anxiety.

An experimental design with two randomly assigned groups was utilized to test the approach. Anxiety was measured by the IPAT Anxiety Scale. Patient evaluation of information received was obtained comparable to those of the researcher postoperatively by an unbiased assistant with qualifications by means of a researcher-designed questionnaire.

The sample consisted of fifteen patients between the ages of 18 and 65 years, under the care of four general surgeons in three general hospitals between the dates of August 15, 1970 and November 5, 1970.

Time with the patients ranged from a minimum time spent with the control group to an average of 30 minutes spent with each experimental patient for preoperative instruction. Time spent with patients postoperatively was individualized.
The one-tailed t-test was utilized to analyze the data in order to determine the difference between group means in relation to raw scores of the IPAT Anxiety Scale. The findings are summarized in relation to the two hypotheses of the investigation.

Hypothesis 1 proposed that postoperative anxiety would be significantly reduced by preoperative instruction administered by a professional operating room nurse. There was no significant difference between groups on the total IPAT scores. There was, however, a significant difference in the opposite direction in the Subgroups C, ego weakness, and O, guilt proneness.

Hypothesis 2 proposed that patients receiving preoperative instruction from a professional operating room nurse would score higher on a researcher-designed questionnaire measuring nursing helpfulness than would patients receiving instruction from regularly assigned staff nurses.

The postoperative interview with the research assistant revealed that the experimental group felt that the most helpful information concerning the surgery was provided by the professional operating room nurse.

The conclusion of this study is that there was no statistically significant difference in the total level of anxiety demonstrated postoperatively between the control group and the experimental group as measured by IPAT Anxiety Scale.
Recommendations for further study include investigation into differing attitudes between various socioeconomic groups regarding their desire for information, a refinement of measurement tools, further investigation into the value of preoperative instruction, and the design of instruction to better meet patient needs.
APPENDIX A

INFORMATION AND CONSENT FORM FOR PARTICIPATION
IN AN INVESTIGATION UTILIZING PATIENTS
UNDERGOING ELECTIVE SURGERY

An investigative study is being conducted by Frances Koch, R.N., a Master of Science student in nursing, involving patients undergoing elective surgery.

All that will be required for your participation will be a few moments of your time and your response to a checklist. All information which is obtained will be kept confidential. Your doctor has already given permission for you to participate in this study. The record of your feelings could contribute some very important information to health workers interested in finding out how they can be more helpful to patients. If you are willing to participate, please sign your name in the space provided below.

I consent to participate in the study described above. I understand that I may withdraw from the study at any time I so choose.

Signature_____________________
Date_________________________
APPENDIX B

INFORMATION AND CONSENT FORM FOR THE USE OF PATIENTS FROM PHYSICIAN'S PRIVATE PRACTICE

Dear ______________________,

I am a Master of Science student in nursing at The University of Arizona. I plan to conduct a research project which will attempt to indicate that preoperative instruction can reduce postoperative anxiety. The second objective of this study is to demonstrate that professional operating room nurses not only qualify to deliver this instruction, but that patients receive benefit from having someone from the operating room communicate with them.

Having been employed in the operating room for the past eight years, I feel qualified to function as the professional operating room nurse in this study.

The instruction will consist of explanations about the procedures and occurrences that the patient can anticipate preoperatively and postoperatively.

I plan to use patients undergoing elective surgery for the first time since reaching adulthood.

On the second or third day after surgery, I would give the patient a checklist to determine his anxiety level and ask him to complete a brief questionnaire in order to obtain my data.
If you desire more information or have specific information that you wish your patients to receive, I would welcome the opportunity to discuss this with you.

Enclosed please find a self-addressed stamped envelop for your reply.

Sincerely,

I consent to have Frances Koch use patients, under my care, in an investigative study designed to determine postoperative anxiety.

Signature__________________

Date_______________________
APPENDIX C

OUTLINE FOR PREOPERATIVE INSTRUCTION

I. Explanation of procedures to be performed the evening before surgery.
   A. Bowel evacuation
   B. Shave preparation
   C. Nothing by mouth after a certain time
   D. Importance of a good night's rest including medication ordered for rest

II. Explanation of procedures to be performed the day of surgery.
   A. Bath and mouth care before surgery
   B. Voiding before receiving preoperative medication
   C. Purpose and action of preoperative medication
   D. Necessity of removing make-up, jewelry, and all prosthetic devices, except dentures, before receiving preoperative medication
   E. Designated area where the family may wait while the patient is in the operating room
   F. Method of transportation to the operating room
   G. Odors prevalent in the operating room
III. Explanation of what to anticipate postoperatively.

A. Description of the recovery room or intensive care, as is indicated, including the purposes of the unit and its policies

B. Demonstration and information concerning deep breathing and coughing

C. Importance of moving and turning

D. Analgesia for discomfort
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<thead>
<tr>
<th>Section</th>
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<tbody>
<tr>
<td>Info on Moving and Turning</td>
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<tr>
<td>Info on Deep Breathing and Coughing</td>
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<tr>
<td>Description of Recovery Room</td>
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<tr>
<td>Info on What to Anticipate in Operating Room</td>
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<td>Info on What to Anticipate After Surgery</td>
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</tr>
<tr>
<td>Procedures Performed Evening Before Surgery</td>
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</table>

Legend:
- A: Anesthetologist
- P: Physician
- O: Operating Nurse
- S: Staff Nurse
APPENDIX E

IPAT ANXIETY SCALE QUESTIONNAIRE
1. I find that my interests, in people and amusements, tend to change fairly rapidly.

2. If people think poorly of me I can still go on quite serenely in my own mind.

3. I like to wait till I am sure that what I am saying is correct, before I put forward an argument.

4. I am inclined to let my actions get swayed by feelings of jealousy.

5. If I had my life to live over again I would:
   (A) plan very differently, (B) want it the same.

6. I admire my parents in all important matters.

7. I find it hard to "take 'no' for an answer", even when I know what I ask is impossible.

8. I doubt the honesty of people who are more friendly than I would naturally expect them to be.

9. In demanding and enforcing obedience my parents (or guardians) were: (A) always very reasonable, (B) often unreasonable.

10. I need my friends more than they seem to need me.

11. I feel sure that I could "pull myself together" to deal with an emergency.

12. As a child I was afraid of the dark.

13. People sometimes tell me that I show my excitement in voice and manner too obviously.

14. If people take advantage of my friendliness I:
   (A) soon forget and forgive, (B) resent it and hold it against them.

15. I find myself upset rather than helped by the kind of personal criticism that many people make.

16. Often I get angry with people too quickly.

17. I feel restless as if I want something but do not know what.

18. I sometimes doubt whether people I am talking to are really interested in what I am saying.

19. I have always been free from any vague feelings of ill-health, such as obscure pains, digestive upsets, awareness of heart action, etc.

20. In discussion with some people, I get so annoyed that I can hardly trust myself to speak.

CONTINUE ON NEXT PAGE.
21. Through getting tense I use up more energy than most people in getting things done. 

22. I make a point of not being absent-minded or forgetful of details. 

23. However difficult and unpleasant the obstacles, I always stick to my original intentions. 

24. I tend to get over-excited and "rattled" in upsetting situations. 

25. I occasionally have vivid dreams that disturb my sleep. 

26. I always have enough energy when faced with difficulties. 

27. I sometimes feel compelled to count things for no particular purpose. 

28. Most people are a little queer mentally, though they do not like to admit it. 

29. If I make an awkward social mistake I can soon forget it. 

30. I feel grouchy and just do not want to see people: 
   (A) occasionally, (B) rather often. 

31. I am brought almost to tears by having things go wrong. 

32. In the midst of social groups I am nevertheless sometimes overcome by feelings of loneliness and worthlessness. 

33. I wake in the night and, through worry, have some difficulty in sleeping again. 

34. My spirits generally stay high no matter how many troubles I meet. 

35. I sometimes get feelings of guilt or remorse over quite small matters. 

36. My nerves get on edge so that certain sounds, e.g., a screechy hinge, are unbearable and give me the shivers. 

37. If something badly upsets me I generally calm down again quite quickly. 

38. I tend to tremble or perspire when I think of a difficult task ahead. 

39. I usually fall asleep quickly, in a few minutes, when I go to bed. 

40. I sometimes get in a state of tension or turmoil as I think over my recent concerns and interests. 

STOP HERE. BE SURE YOU HAVE ANSWERED EVERY QUESTION.
REFERENCES


McBride, Mary Angela B. "Nursing Approach, Pain and Relief: An Exploratory Experiment," *Nursing Research,* 16:337, Fall, 1967.


