

CHAPTER 3

METHODOLOGY

Design of the study

This study was a quasi-experimental one-group pretest and posttest design. The purpose of this study was to investigate the effect of instruction on preoperative anxiety among abdominal surgical patients.

Population and sample

The target population of this study was the elective abdominal surgical patients admitted in the Second Teaching Hospital of China Medical University during November 1998 to January 1999. A purposive sampling method was used by the following inclusion criteria :

1. Scheduling for elective abdominal surgery under proposed general anesthesia;
2. Age 18 and older regardless gender;
3. Able to read and write or communicate well in Chinese;
4. Willing to participate in this study; and
5. No previous experience of surgery.

The sample size was 20 (Dempsey & Dempsey, 1992; Polit & Hungler, 1995).

Instrumentation

The instrumentation consisted of two parts. One was the instruments for data collection: demographic data record form and SAI used to collect demographic data and preoperative anxiety separately. Another was the instruction manual for intervention.

Part I: Instruments

Demographic data record form

A demographic data record form was used to collect descriptive information regarding gender, age, marital status, religion, educational level, occupation, family income, earned money, way of hospital payment, times of hospitalization, preoperative diagnosis, and proposed operation.

STAI-form Y-1

State Anxiety Inventory (STAI-form Y-1) developed by Spielberger (1983) and translated into Chinese by Shu (1988, cited in Zheng et al., 1993) was used to measure preoperative anxiety. Self-administered questionnaire was

used when subjects could read and write, and data were collected through reading without further explanation by researcher for subjects' reply for those who could not read and/or write.

Scoring of STAI-form Y-1 : Each STAI-form Y-1 item was given a weighted score of 1 to 4 from "not at all" to "very much so". Scores for state anxiety varied from a minimum of 20 to a maximum 80. Raw score was obtained by the sum of the weighted scores of subjects in each item.

Test for validity and reliability

The STAI-form Y-1 was a moment anxiety measure. The alpha coefficient for internal consistency of SAI was .92 in the normative samples. Validity of SAI was estimated by correlating the score with Taylor's MAS. For 126 college women, the coefficients were .80, for 80 college men the coefficients were .79 (Sieber et al., 1977; Spielberger et al., 1983).

STAI-form Y-1 was translated into Chinese by Shu (1988, cited in Zheng et al, 1993). It had been used to assess anxiety for research and clinical practice in China (Zheng et al., 1993). The reliability of STAI-form Y-1 Chinese version had been widely tested in normal populations (N=818) and hospitalized populations (N=50) in China, the

Cronbach's alpha coefficient was .88 (Zheng et al., 1993), which is an acceptable level (Burns & Grove, 1993).

In this study, the researcher tested the reliability with 10 patients who had similar characteristics set in criteria. The Cronbach's alpha was used to test the internal consistency. The value of Cronbach's alpha was .90.

Part II: Instruction manual

Instruction manual was used as intervention for this study. It consisted of information providing for patients prior to the operation. The researcher provided it in the afternoon of the day before surgery using instruction manual. The information included orientation, preparation for abdominal surgery, exercises, wound and pain management, and the relevant information regarding tube, drainage, and subclavian or intravenous line. While providing the information, the researcher applied psychological strategies for anxiety management. The whole session lasted about 50 minutes.

Test for content validity

The content validity of the instruction was validated by the Thai experts panel in nursing. The procedures were as follows:

1. Developing the first draft of preoperative instruction manual of abdominal surgery in English.
2. Selecting panel of experts which consisted of five surgical nursing experts in the faculty of nursing, Chiang Mai University, Thailand to review the content of the instruction.
3. Using results of experts' review to refine and improve instruction content and format as needed.
4. Translating the English version into Chinese version by researcher.
5. Using back translation technique to translate the Chinese version into English by one bilingual expert who worked in the Second Teaching Hospital of China Medical University.
6. Clarifying the discrepancy between the two English versions of the instruction manual by researcher and translator.
7. The content validity index of the instruction manual in English version was .91, it is on acceptable level (Davis, 1992).
8. Two nursing experts in China Medical University validated the content validity of the instruction manual in Chinese version.

Data collection procedure

Data were collected by the researcher. Data collection procedure followed in sequences:

1. Getting permission to conduct this study from director of Nursing Department of the Second Teaching Hospital of China Medical University and head nurse in the general surgical wards.

2. Contacting eligible subjects who meet the inclusion criteria in the surgical wards of the Second Teaching Hospital of China Medical University. Establishing a good relationship with subjects.

3. The purpose and procedure of the study were explained to each eligible subject and verbal informed consent was obtained. Each subject was informed that he/she can withdraw from this study at any time before the termination without any disadvantage.

4. Collecting demographic data according to the medical records and the information provided by the subjects.

5. Collecting preoperative anxiety data in the afternoon of the day before surgery as pretest, then provide instruction along with using psychological strategies such as careful listening, normalizing the anxiety experience, communicating with subject using simple word with low and

solid voice, and so on. The whole session lasted about 50 minutes.

6. Upon finishing instruction in the afternoon of the day prior to surgery, data of preoperative anxiety was collected as posttest.

7. All data were organized and recorded in the computer and analyzed as grouped data.

Data analysis

Statistical Package for the Social Science (SPSS) was used to process the data.

1. Demographic data were described by frequency, percentage, mean, and range.

2. Preoperative anxiety data were described by frequency, percentage, mean, standard deviation, and range.

3. After normal distribution testing, a paired t-test was used to compare the difference scores of preoperative anxiety between pre-intervention and post-intervention at the .05 significance level (Burns & Grove, 1993).