

CHAPTER 3

METHODOLOGY

In this chapter, the research design, sample, instrument and data collection procedure are described. The plan for data analysis is presented related to the objective of the study.

Design of the study

A descriptive design was used in this study to describe the dependent-care performance of mothers for their children with cancer.

Population and sample

The target population of this study were Chinese mothers whose children, aged 1-15 years old, were diagnosed as having any type of cancer and admitted in two hospitals including the First and Second University Hospitals of Hua Xi Medical University in Chengdu, China.

A sample of 50 mothers was selected through the purposive sampling method. The inclusion criteria of the sample was as follows:

1. having children admitted in the two hospitals because of cancer;

2. be able to communicate in Chinese;
3. willing to participate.

The study was conducted in the pediatric wards, neurosurgical wards and child surgical wards of the two hospitals: the First and Second University Hospital of Hua Xi Medical University.

Instrumentation

In this study, the questionnaire for data collection is composed of two parts (Appendix A): Demographic Data Form and Dependent-care Agent Performance Questionnaire.

Demographic data form, developed by the investigator, includes two aspects: (1) Child's demographic data form measured the characteristics of children including age, sex, type of cancer, medical treatment, duration of illness, and times of hospitalization; (2) Mother's demographic data form was used to obtain mothers' age, marital status, educational level, occupation, family type, and family income.

Dependent-care agent performance questionnaire (DCAPQ), developed by Moore and Mosher (1997), was modified and used in this study.

The modified DCAPQ consisted of 51 items and included three dimensions which were universal,

developmental, and health deviation. The answer sheet of the modified DCAPO was indicated by 4-choice rating scale (1=never, 2=sometime, 3=often, and 4=always). There are 21 items in universal dimension and the possible score is 21 to 84; 7 items in developmental dimension and the possible score is 7 to 28; and 23 items in health deviation dimension and the possible score is 23 to 92. Total score for the dependent-care agent performance is 51 to 204.

After completion, the scores of the total dependent-care performance and the three dimensions were divided into three levels by investigator in table 1 according to the possible score: low level means below $\text{min.} + (\text{max.} - \text{min.})/3$; moderate level means between $\text{min.} + (\text{max.} - \text{min.})/3$ and $\text{min.} + 2 \times (\text{max.} - \text{min.})/3$; and high level means above $\text{min.} + 2 \times (\text{max.} - \text{min.})/3$.

Table 1
Level of Dependent-care Agent Performance

	Low	moderate	High
Universal	21- 42	42.01-63	63.01-84
Developmental	7- 14	14.01-21	21.01-28
Health deviation	23- 46	46.01-69	69.01-92
total	51-102	102.01-153	153.01-204

Test for validity and reliability of DCAP

1.1 Validity of the instrument

The content validity of the modified DCAPQ was assessed using the Content Validity Index (CVI) by five nursing faculty members of the Faculty of Nursing, Chiang Mai University, Thailand, who are experts in the areas of Orem's self-care theory and pediatric nursing (Appendix B and C). They had been asked to review the questionnaire and to determine whether additional items should be added and whether there were any inappropriate items. Their suggestions were incorporated into the instrument. The CVI score was 0.81 that was considered acceptable (Davis, 1992). Because the instrument was developed in English, the modified DCAPQ was translated into Chinese using the back translation technique by the investigator. The face validity and readability of Chinese version was assessed by two linguist experts who are good at English and Chinese in Chengdu, China.

1.2 Reliability of the instrument

The Cronbach's coefficient was used with 14 Chinese mothers of children with cancer attending the Pediatric Department of the Second University Hospital of HXMU, Chengdu City, to assess internal consistency of the modified DCAPQ. The Cronbach's coefficient was 0.89 which was satisfactory (Polit & Hungler, 1991).

Data collection procedures

1. Asked for the permission for data collection from the presidents and head nurses of the two hospitals in Chengdu, China. Informed the head nurses of the relevant wards of the objective and the procedures of the study.

2. Obtained names and bed numbers of children with cancer from the patients list chart or referrals from nurses or doctors of the relevant wards.

3. Selected samples and obtained verbally informed consent from the mothers of children with cancer beginning with the investigator's self-introduction, before conducting the study.

4. Provided explanations (Appendix D) about the purpose and procedure of the study to the sample.

5. Completed the child's demographic data form. The mothers were asked to fill out the mother's demographic data form. Then interviewed the mother using modified DCAPQ.

6. Checked and processed the data to be ready for data analysis.

Protection of human rights

Permission from the Hospital Administrative Committee and the subjects were assured. The subjects were identified by code numbers to ensure their confidentiality. The code numbers were marked for matching the modified DCAPQ

of the subjects and the review of the Demographic Data form. In addition, the subjects participated in this study voluntarily and they were free to withdraw at any time.

Analysis of data

Statistical Package for Social Sciences (SPSS) was used to perform the process of data analysis.

Range, frequency, percent, mean, and standard deviation (SD) were used to describe the demographic data and the score and level of dependent-care performance.