CHAPTER 3

METHODOLOGY

The objectives of this study were to identify family support and quality of life, and to examine the relationship between family support and quality of life of hemodialysis patients in Changsha, People's Republic of China. In this chapter, design, subject, instrumentation, data collection procedure and analysis of data are presented based on the study objectives.

Design of the study

A descriptive correlational design was used to explore family support and quality of life and the relationship between family support and quality of life among Chinese hemodialysis patients.

Subjects

Population and sample, sampling

Targeted population: The samples for of this study were 60 CRF patients undergoing hemodialysis at the hemodialysis units of the First, Second and Third Teaching

Hospitals of Hunan Medical University, and Hunan People Hospital, Changsha, China from December, 1997 to February, 1998.

Eligible criteria:

1) The ability to communicate in Mandarin.

2) Undergoing hemodialysis.

3) Voluntary participation in the study.

4) Currently living with at least one family member.

Sampling: A purposive sampling was used to select 60 subjects to achieve at least 20 subjects for each variable (Polit & Hungler, 1991). Hemodialysis patients who met the criteria of this study would be eligible subjects.

Instrumentation

Questionnaires consisted of 3 parts: demographic questionnaire, a Modified Quality of Life Questionnaire, and a Modified Perceived Social Support from Family Scale

Demographic data profile

A demographic data profile was developed by the researcher for collecting general information about the subject including subject's age, sex, marital status, educational level, number of family members, occupation, monthly family income, way of medical payment, length of

time on hemodialysis, general health status, and current treatment.

Modified Quality of Life Questionnaire (MQLQ)

Uppalabut's Quality of Life Instrument (1994) was based on Zhan's concept (1992). This instrument was used to measure quality of life of 120 leukemic patients in Thailand. The validity and reliability were checked. The Cronbach's alpha was .85. It is a 60-item five-point rating scale which included four aspects: life satisfaction, self-concept, health and functioning, and socio-economic factors. It includes 15-items in each domain. The instrument was translated from Thai to English by a bilingual expert (a Thai English Lecturer from the Faculty of Humanities, Chiang Mai University), and was modified to ensure it was appropriate for CRF patients who receive hemodialysis, by the researcher. Eight items were deleted because the experts suggested that the content of the items were not suitable for CRF patients who receive hemodialysis. Some items were relocated into appropriate categories according to the experts' suggestions. The MQLQ is a 52-item, five point scale which includes four domains: life satisfaction (10 items, from NO.1 to NO.10), self-concept (16 items, from NO.11 to NO.26), health and functioning (16 items, from NO.27 to NO.42), as well as

socio-economic factors (10 items, from NO.43 to NO.52). Fifteen of them were negative items (2, 3, 12, 13, 14, 19, 23, 24, 38, 39, 45, 46, 48, 49, 50). The scoring of the positive items was 5 as very much, 4 as much, 3 as moderate, 2 as little, 1 as very little. The scoring of the negative items was 1 as very, 2 as much, 3 as moderate, 4 as little, 5 as very little. The possible highest score of the MQLQ was 5 x 52 (260) which represented the best quality of life, the possible lowest score was 1 x 52 (52).

The MQLQ was translated into Chinese by the researcher. The accuracy and clarity of the translation was assessed by two Chinese experts with English language skills. In order to assess the accuracy of the words, the instruments were translated back by a Chinese-English bilingual expert (from Hunan Medical University) before being applied to the Chinese patients. The sample mean score was used to classify subjects to be in a high or low quality of life group.

Modified Perceived Social Support from Family Scale (MPSS-Fa Scale)

Procidano and Heller (1983) developed Perceived Social Support from Family (PSS-Fa) Scale to measure family support in 222 undergraduates, Indiana University. PSS-Fa scale is intended to measure the extent to which an

individual perceives that his/her needs for support, information, and feedback are fulfilled by family. The scale is a 20-item questionnaire with items answered in a yes, no, don't know format. The total score ranges from 0 to 20 with the higher score indicating more support. PSS-Fa had been proved to be homogeneous and measures with Cronbach's alpha of .90. The Modified Perceived Social Support from Family (MPSS-Fa) Scale was modified by Zhang (1997) from the PSS-Fa Scale (Procidano & Heller, 1983) to study family support in breast cancer patients. Zhang modified the scale by taking out "don't know" response because subjects who might give more responses of "don't know" could not be included in her study. Five items from the PSS-Fa Scale were deleted by Zhang (1997) because they were not suitable to assess family support. The MPSS-Fa Scale was a 15-item questionnaire with items answered in a yes, no format. Five of them were negative items (3, 4, 13, 14, 15). The scoring of the positive items was 1 as yes, 0 as no. The scoring of the negative items was 0 as yes, 1 as no. The possible highest score of the MPSS-Fa was 1 x 15 (15) which represented the best family support, the possible lowest was 0 x 15 (0).

For original PSS-Fa, the test-retest reliability is .83 over a 1-month interval and internal consistency is .90

(Cronbach's alpha) (Procidano & Heller, 1983). Before Zhang (1997) used the MPSS-Fa Scale in the Chinese version to measure family support of the Chinese breast cancer patients, content validity of the MPSS-Fa Scale in the English version had been tested and it was considered valid.

Gavazzi (1994) used the PSS-Fa Scale to assess the family support of the adolescents and reported that the coefficient alpha was .85. Zhang (1997) used the MPSS-Fa Scale in the Chinese version to measure family support of Chinese breast cancer patients and reported that Cronbach's alpha of KR-21 of MPSS-Fa was .90 which was considered as acceptable. The sample mean score was used to classify subjects to be in a high or low family support group.

Validity and Reliability

1. Modified Quality of Life Questionnaire

The content validity of MQLQ in the English version was checked by four experts who had research experience in quality of life in the Faculty of Nursing, Chiang Mai University, Thailand.

The MQLQ was tested for its internal consistency among ten hemodialysis patients who were consistent with the inclusion criteria and attended the Second Teaching

Hospital of Hunan Medical University in Changsha, China. The reliability of the scale was measured by Cronbach's alpha. The internal consistency reliability coefficiency was .75 which reached the acceptable level (Polit & Hungler, 1995).

2. The Modified Perceived Social Support from Family Scale

Reliability of the MPSS-Fa Scale in the Chinese version was tested among ten hemodialysis patients who were consistent with the inclusion criteria and attended the Second Teaching Hospital of Hunan Medical University in Changsha, China. The reliability of the scale was measured by Kuder-Richardson 21 (KR-21). The internal consistency reliability coefficiency was .75 which reached the acceptable level (Polit & Hungler, 1995).

Data collection procedure

All data was collected by the researcher as follows

1) The researcher obtained permission from the presidents, and the Directors of the Nephrology Divisions and Nursing Departments of the First, Second, and Third Teaching Hospitals of Hunan Medical University, and Hunan People Hospital. The researcher explained the purpose of this study to physicians of the hemodialysis units and

asked for cooperation.

2) The researcher checked medical records, assessed eligible subjects, then approached them in order to gain their agreement to participate in the study.

3) The researcher met subjects in the hemoodialysis unit of the hospital from 9:00 am to 4:00 pm.

4) The researcher explained the purpose of the study to the subjects. They were assured of the voluntary participation and confidential aspects of the study.

5) After receiving written consent, the researcher distributed the questionnaires to the subjects. For subjects who could not read the questionnaire (9 patients) the researcher read each item for them and helped them fill in the questionnaires without any explanation.

6) The researcher collected all questionnaires, and checked for completion of each questionnaire.

7) The researcher prepared all completed question-naires for data analysis.

Analysis of data

Analysis of data was completed by a computer using the Statistical Package for Social Science (SPSS) software package. The analysis was divided into three parts.

1. Descriptive analysis was used to analyze

demographic data in terms of percentage, mean, standard deviation and range.

2. Descriptive analysis was used to analyze the scores of MPSS-Fa Scale and MQLQ in terms of percentage, mean, standard deviation (S. D.), and range.

3. Pearson's product-moment correlation coefficient was used to analyze the relationships between family support and quality of life among hemodialysis patients because there was a normal distribution of the scores. According to Burns, Susan, and Grove (1995), r value .1 to .3 is considered a weak relationship, r value >.3 to .5 is considered a moderate relationship, r value >.5 is considered a strong relationship.