CHAPTER 3

METHODOLOGY

The objectives of this study were to identify the social support among renal transplant patients, to identify the quality of life among renal transplant patients, and to examine the relationship between social support and quality of life among renal transplant patients. In order to meet these objectives, the following research methodology was used in this study.

Design of the study

A correlational descriptive study was used to identify social support and quality of life of renal transplant patients, and to explore the relationship between these two variables.

Subjects

The target population of this study was all patients attending the Renal Transplantation Outpatient Clinic of the First Teaching Hospital of Xi'an Medical University during November 1998 to January 1999.

A purposive sampling method was used to select 60 renal transplant patients according to inclusion criteria set.

Criteria for sample selection were as follows:

1. being 18 years old or older;

2. having a functioning kidney based on the laboratory results of level of creatinine and BUN at the time of data collection;

3. willing to participate in this study and;

4. being able to read and write in Chinese; and being alert and oriented.

Instrumentation

The questionnaire was used for data collection in this study. It included three parts:

1. Demographic data record form

Demographic data record form was developed by the researcher for collecting the subject general information including the subject's sex, age, educational background, marital status, family relationship, family patterns, occupation (before and after operation), family income, way of hospital payment, and length of post transplantation.

2. Modified Personal Resource Questionnaire(PRQ-85)

The original PRQ-85 Part 2 was a 7-point Likert scale self-administered questionnaire developed by Weinert and Brandt (1987). The instrument consisted of 25 items. The authors reported a high internal consistency reliability coefficient (α =.93) in a sample of 100 adults, ages ranging from 30 to 37 years, obtained from a university

alumni list (Weinert & Brandt, 1987). The construct validity was found to be significantly related to the mental health measures and to the personality indicators. Low-to-moderate inverse relationships were obtained between perceived support and the mental health measures of anxiety ($r = -.42$, $p < .001$). A low inverse relationship ($r = -.28$, $p < .001$) was found between the personality measure of neuroticism and perceived support.

Modified PRQ-85 Part 2 by Yan (1997) has 5-point Likert scale ranging from strongly disagree (1) to strongly agree (5). Reliability of this instrument was tested among 15 COPD patients in Zhong San Hospital of Shanghai Medical University of China. The value of Cronbach alpha was .82. In this study, Modified PRQ-85 Part 2 was used to measure the perceived social support of renal transplant patients. When calculating the score, the items of negative statements (4, 6, 9, 15, 23) were reversely recorded (5=1, 4=2, 2=4, 1=5) to commit a positive consistence with other items. The potential total score ranged from 25 to 125. The optimal total score of the instrument was categorized into three levels according to possible total social support score: low (a score of 25-58), moderate (59-90), and high level (91-125). The high score indicated high social support perceived by patients.

3. Ferrans and Powers Quality of Life Index-Kidney Transplant Version

The instrument of Ferrans and Powers Quality of Life Index (QLI) was developed by Ferrans and Powers in 1985. There are 32 items with 6-point Likert scale which divided into two sections. One section measures satisfaction with various domains of life, and the other measures the importance of the domain to the subject. Only one item was specifically modified for QLI-Kidney Transplant Version. The content validity was supported by correlation of .65 between overall scores and a measure of life satisfaction in 37 hemodialysis patients (Ferrans & Powers, 1985), and .77 in 349 hemodialysis patients (Ferrans & Powers, 1992). Stability was checked in 1985 within the similar group by a test-retest correlation of .81 with a one-month interval. Internal consistency reliability for the overall scale was supported by Cronbach alpha value of .90 and alpha values of .87, .90, .82 and .77 for the health and functioning, psychological/spiritual, socioeconomic, and family subscales, respectively (Ferrans and Powers, 1992). According to the established procedure (Ferrans and Powers, 1985), the quality of life was scored by weighting each satisfaction response with its paired importance response. The rationale for this weighting procedure was that people who were highly satisfied with the areas of life would value higher quality of life than those with very dissatisfied

areas. Score was calculated by centering the scale on zero, subtract 3.5 from the satisfaction response by the raw importance response for each pair of satisfaction and importance items. Next, to eliminate negative numbers for the final score, add 15 to every score. This produced the final overall score. The possible range was from 0 to 30. The same steps were used to calculate the subscale scores. The possible total score was categorized into three levels that are low (0-10), moderate (11-20), and high levels (21-30). High score indicated the high quality of life perceived by patients.

Testing for validity and reliability of instruments

Content validity of modified PRQ-85 Part 2 was already supported by Chinese investigator (Yan, 1997). After Ferrans and Powers QLI-Kidney Transplant Version was translated into Chinese by the researcher, it was back translated from Chinese to English by a bilingual specialist and checked by another clinical bilingual specialist working for Xi'an Medical University.

Reliability of Ferrans and Powers QLI-Kidney Transplant Version and Modified PRQ-85 Part 2 were tested among 10 Chinese renal transplant patients having similar characteristics as the study subjects and the Cronbach alpha was utilized for calculation. The alpha values of Modified PRQ-85 Part 2 was 0.87 and of Ferrans and Powers QLI-Kidney

Transplant Version was 0.85. Hence they were acceptable according to Polit and Hungler (1991).

Data collection procedure

1. Getting the permission from the Nursing Administration Department of the First Teaching Hospital of Xi'an Medical University.

2. Contacting with patients who met criteria in the Renal Transplant Outpatient Clinic of the First Teaching Hospital of Xi'an Medical University.

3. Properly explaining the purpose of the study, the confidentiality assurance, and their right to participate in or withdraw from the study at any time during the study period.

4. Obtaining informed consent from every subject before asking them to fill up the questionnaires.

5. Controlling the extraneous factors, such as family members were not allowed to involve in filling up the questionnaires.

6. Carefully checking for missing items, and asking subjects to complete all of the questions.

7. The subjects were appreciated for their participations. In order to prevent or minimize bias, only the investigator conducted the data collection. It took about 30-35 minutes for each patient to fill up questionnaire.

8. Protecting of human rights for the subjects was assured as follows:

8.1 Using a coding system to identify each subject.

8.2 Subjects were informed confidentiality and harmlessness in any circumstance.

Analysis of data

All data were analyzed using SPSS for Windows. The analysis was divided into following parts:

1. Descriptive data including frequency, range, percentage, mean, and standard deviation were obtained to describe the demographic characteristics of subjects.

2. Frequency, range, percentage, mean, and standard deviation were used to analyze the scores of social support and quality of life.

3. Pearson product-moment correlation coefficient was used to test the relationship between social support and quality of life. The magnitude of relationship was determined by the following creteria (Burns, Susan, & Grove, 1995): r <.30 = slight, r =.31 - .50 = moderate, and r >.50 = strong.