CHAPTER 3

METHODOLOGY

Design of the study

A descriptive correlational study was conducted to describe social support and burden of stroke patient caregivers, and to ascertain the relationship between the two variables.

Population and sample

The target population of this study were stroke patient caregivers in Hunan Province, China. The accessible population of this study were the caregivers of stroke patients attending Outpatient Department in Xiangya Hospital of Hunan Medical University Changsha, China.

Purposive sampling method was used to select the subjects. Eligible criteria for stroke patient caregivers were as following:

1. Being stroke patient's spouse, or child, or grandchild, or daughter in law;
2. Being considered by patient or other caregiver as primary assistant to the stroke patients;

3. Being continuously responsible in taking care of stroke patient for at least whose Barthel ADL score equal or less than 60;
4. Aged 20 years and older
5. Willing to participate in the study
6. Being able to read and write Chinese

Fifty-one subjects were identified and asked to participate in the study. Of the 51 subjects, one of them withdrew during the data collection period because she said she had no time. Therefore, 50 subjects were included in the study.

Instrumentation

The questionnaire, which consists of 3 main parts: PRQ-85 part 2; The Burden Scale, and Demographic Data Recording Form was used for data collection.

1. Personal Resource Questionnaire (PRQ-85) part 2

In this study, The revised PRQ-85 part 2 was used to measure social support. The self-administered questionnaire was developed by Weinert and Brandt(1987) and revised the scoring method by Yan (1997). It was used to measure the respondent perceived provision of social support including attachment/intimacy, social integration, opportunity for nurturant behavior, reassurance of worth as an individual and in role accomplishments and the availability of informational, emotional, and material help. The instrument has a five-point likert format, consisting of 25 items ranging from "strong agree"(5) to "strong disagree"(1). Five of the items (4, 7, 10, 16, 24) are written negatively, while the other 20 items are written positively, resulting in a scale in which higher score indicate higher level of perceived social support. The total score ranges 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 (>58-91), and high level (>91-125). The validity and reliability of PRQ-85 part 2 has already been assessed by Weinert and Brandt(1987). This instrument was proved to be valid and reliable with the coefficient of Cronbach's alpha for total score .93, while the reliability of this instrument was tested by Yan (1997) from which the Cronbach's alpha coefficient obtained was .82.

2. The Burden Scale

The Burden Scale developed by Montgomery, Gonyea and Hooyman (1985) was used in this study. It includes Objective Burden Scale(OBS) and Subjective Burden Scale (SBS). OBS consists of 9 questions asking the caregivers about their perception on the extent to which their caregiving behaviors had changed nine areas of their lives, including the amount of privacy, money, energy, personal freedom they had for themselves, time for the caregiver self, vacation activities and trips, health, relationship with other family members and spent recreational and social activities time. The 5-point questionnaire range from " a lot more"(better) (1) to a lot less"(worse)(5), resulting in a scale in which high score indicate high level of objective burden. The total score ranges from 9 to 45. The overall of OBS score was classified into three levels: low (9-21), moderate (>21-33), and high level (>33-45). The OBS has been tested for its reliability (Chronbach's alpha coefficient was .85). Subjective burden was measured using the 13-items scale, asking about how often they experienced each of thirteen feelings. The scale is composed of items with 5-point in rank, rating from " rarely or never" to " most of the time", resulting in high score indicating high level of perceived subjective burden. Overall score ranges from 13 to 65. The positive statements (2, 5, 7) were reversely recorded. The total score of the SBS was categorized into three levels: low (13-30), moderate (>30-47), and high level (>47-65). An alpha of .86 was computed for the measure.

3. Demographic Data Recording Form

Demographic Data Recording Form designed by the researcher to collect data including: the caregiver age, gender, marital status, educational level, occupation; length of caregiving (months); hours of care per day; living arrangement (shared or not shared with patient); the number of caregiving assistant; the relationship of the caregiver to the care receiver; and monthly family per capita income. The patient type of medical diagnosis; duration of the diagnosis of the patient; way of medical payment; and other chronic illness history and functional status assessed by Barthel Index.

Testing reliability of the instruments

Revised PRQ-85 part 2 developed by Weinert and Brandt (1987) revised by Yan (1997) and the Burden Scale (Montgomery, Gonyea & Hooyman 1985) were considered valid and reliable in previous studies.

Because the PRQ 85 part 2 had already been translated into Chinese by Yan (1997), there was only the Burden Scale to be translated into Chinese by the researcher. The accuracy and clarity of the translation were assessed by using back-translation technique by the two Chinese experts in Hunan Medical University who both were good in Chinese and English before applying to the Chinese subjects.

Before using the instrument, reliability of the instruments was tested among 15 stroke patient caregivers who met the criteria and attended OPD of Xiangya Hospital in Hunan Medical University, Changsha. Cronbach's alpha for each was calculated from which the value obtained was .80 for PRQ-part 2, .86 for OBS and .80 for SBS.

Protection of subjects' human rights

Prior to conducting the study, the study plan and protection of human rights of the subjects was assured. The caregivers were informed about the purpose of the study, the confidentiality assurance, and the right to participate or withdraw from the study. Verbal informed consent was obtained from every caregiver.

Data collection procedure

Data collection was done by using self-administered method. The steps to be undertaken were as following:

1. Prior to conducting the study, the researcher was obtained permission from the president of Xiangya Hospital of Hunan Medical University, the directors of the Neurological Division, and Nursing Department of the hospital.

2. The research purposes and the plan were explained to the neurological physicians in Outpatient Department, and ask for cooperation. The patient diagnosis of stroke was verified by physicians.

3. After seeing the physician, the patient function

independence was assessed and the items were summed by investigator using Barthel Scale.

4. After the stroke patient function evaluation was completed, and the ADL total score 60, the caregiver was invited to a quiet and comfortable room separating from the patient.

5. After obtaining verbal consent from the stroke patient caregivers, the caregivers were asked to fill in the instruments in sequence: PRQ-85 part 2 (Weinert & Brandt, 1987); The Burden Scale (Montgomery, Gonyea & Hooyman, 1985); and Demographic Data Recording Form.

6. At last, the researcher reviewed whether there were any unfilled items of scales or questionnaire, then asked the caregiver to fill in the missing items with voluntary, and sincerely thanks to the caregiver. In order to minimize bias, only the investigator conducted the whole procedure. It was take about 10 minutes for assessing each patient and 25-45 minutes for each caregiver to fill in the questionnaire.

Analysis of the data

All data were analyzed by SPSS for windows.

1. Descriptive statistics was used to describe the range, frequency, percentage, mean, and standard deviation of demographic data, social support and burden.

2. Pearson's product moment correlation coefficient was used to test the relationship between social support and burden of stroke patient caregiver. The level of significance in this study is .05.