CHAPTER 4

FINDINGS AND DISCUSSION

A correlation descriptive study was conducted to describe family support and self-concept of COPD patients, and their relationship as well as the relationships between frequency of hospitalization and duration of being diagnosed and family support and self-concept. This chapter presents demographic data of the subjects, findings and discussion relevant to the research questions and the hypothesis.

Findings

Demographic data of the subjects

The sample of the study was composed of 108 Chinese COPD patients aged 50 to 84 years old with mean age of 64.9, and S.D. of 9.57. Most of the patients (75%) were male, and married (88%). Their major role in families were father/ mother or grandfather/grandmother. The predominant educational level was below senior school. Almost 39% of patients were government servicers, 26.9% were workers, while only 3.7% were health care personnel. Half of the subjects (50.9%) had person per capita income of equal or less than 500 yuans. In present study, the COPD patients resided with 1 to 6 family members. The average number of family members was 2.92 (SD = 1.26). About half of the patients (51.9%) could partially reimburse for medical

payment. In the study, the patients had experienced COPD for an average period of 11.47 years (SD of 10.80) with a range from 5 months to 54 years, and had 0 to 14 times of hospitalization with mean of 2.40 and S.D. of 2.83. Thirty-six point one percent of the COPD patients had other chronic diseases including coronary heart disease(13.0%), hypertension (6.5%), chronic gastritis(4.6%), chronic rhinitis, diabetes mellitus, pleural effusion, chronic pharyngitis, arthritis, tuberculosis, and hepatitis A. (See Table 1)

Table 1

Demographic Characteristics of COPD patients (N=108)

Variables	N (%)
Gender	
Male	81(75.0)
Female	27(25.0)
Age (years)	
50-59	39(36.1)
60-69	27(25.0)
70-79	35(32.4)
≥80	7(6.5)
Marital status	
Married	95(88.0)
Divorced	1(0.9)
Widowed	12(11.1)
Major role	
Grandfather/Grandmother	45(41.7)
Father/mother	46(42.6)
Husband/Wife	17(15.7)
Number of family members	
1-2	36(33.3)
3-4	60(55.6)
>4	12(11.1)
Education level	
No formal education	12(11.1)
Primary school	24(22.2)
Junior school	22(20.4)
Senior school	28(25.9)
College or above	22(20.4)
Monthly income (Yuan/person)	
≤250	17(15.7)
251-500	38(35.2)
501-800	28(25.9)
>800	25(23.1)

Table 1

Demographic Characteristics of COPD patients (cont'd)

Variables	N (%)
Occupation	
Teacher	9(8.3)
Health personnel	4(3.7)
Government servicer	42(38.9)
Business person	1(0.9)
Worker	29(26.9)
Unemployed	2(1.9)
House keeper	13(12.0)
Farmer	7(6.5)
Others	1(0.9)
Medical payment	
Total reimbursement/insurance	21(19.4)
Partial reimbursement	56(51.9)
Totally self-paid	31(28.7)
Duration of being diagnosed as COPD (years)	
< 1	5(4.6)
1 -10	63(58.4)
11-20	26(24.0)
>20	14(13.0)
Times of hospitalization	
0	34(31.5)
1-3	48(44.5)
4-6	20(18.5)
>6	6(5.6)
Having other disease	
Yes	39(36.1)
No	69(63.9)
Additional chronic disease	
Coronary heart disease	14(13.0)
Hypertension	7(6.5)
Chronic gastritis	5(4.6)
Chronic rhinitis	3(2.8)
Diabetes mellitus	2(1.9)
Others	8(7.4)

Family support of COPD patients

Family support score of the subjects ranged from 69 to 120 with a mean of 93.60 and SD of 9.08. The scores were at moderate and high level. Fifty-six point five percent subjects perceived family support at high level, the others perceived at moderate level. (See Table 2)

Table 2

Frequency and percentage of subjects according to Level of Family Support of the samples (N=108)

Level	N (%)
Moderate level	47(43.5)
High level	61(56.5)

Self-Concept of the COPD patients

The study demonstrated that the self-concept score of the subjects ranged from 119 to 232, with a mean of 159.37, and SD of 15.95. When the self-concept scores were categorized into highly negative, moderately negative, moderately positive, and highly positive self-concept, it was demonstrated that nobody had highly negative self-concept. Majority of the subjects (81.5%) perceived moderately positive self-concept (See Table 3)

Table 3

Frequency and percentage of subjects according to Categories of Self-concept of the samples (N=108)

Categories	N (%)
Moderately negative	17(15.7)
Moderately positive	88(81.5)
Highly positive	3(2.8)

Since the questions in the five dimensions of Modified Self-concept Scales seem to be independent from each other, the score for each dimension was also analyzed. The body sensation had the lowest rating mean score of 2.87 and SD of .65, while the self-ideal got the highest mean score of 3.74 and SD of .43 (See Table 4)

Table 4

Means, Standard deviations, and Range for score of the five dimensions in self-concept (N = 108)

Dimensions	Possible score	Range	Mean	S.D.
Body image	1-5	2.25-4.00	3.06	.41
Body sensation	1-5	1.38-4.38	2.87	.65
Self-consistency	1-5	2.27-4.64	3.17	.46
Self-ideal	1-5	2.50-5.00	3.74	.43
Moral-ethical-spiritual self	1-5	2.64-8.64	3.61	.59

Relationship between family support and self-concept of COPD patients

Pearson's correlation was undertaken to analyze the degree of association between family support and self-concept of COPD patients. Each dimension of self-concept was also analyzed separately for their relationship with family support. The results showed that family support was positively related to total self-concept of COPD patients at moderate level ($r = .462$, $p < .01$). It indicated that the COPD patients who perceived high level of family support would be more likely to have positive self-concept. A significant positive relationship was also found between family support and body sensation, family support and self-consistency, family support and self-ideal, and between family support and moral-ethical-spiritual self, but no

statistically significant relationship between family support and body image was demonstrated (See Table 5).

Table 5

Pearson's correlation coefficient between family support and self-concept of the sample (N=108)

Dimension of self-concept	Pearson's r
Body sensation	.397**
Body image	.156
Self-consistency	.362**
Self-ideal	.313**
Moral-ethical-spiritual self	.248**
Overall self-concept	.462**

Note: ** $p < .01$

In addition, as indicators of severity of COPD, frequency of hospitalization and duration of being diagnosed were also analyzed for their relationship with family support and self-concept using Pearson's correlation method. There were moderately negative relationships between frequency of hospitalization, duration of being diagnosed and self-concept, but no statistically significant relationships between frequency of hospitalization, duration of being diagnosed and family support were demonstrated. (See Table 6)

Table 6

Pearson's correlation coefficient between frequency of hospitalization, duration of being diagnosed and family support, self-concept of the sample (N=108)

Variable	Pearson's r	
	Family support	Self-concept
Frequency of hospitalization	-.098	-.389**
Duration of being diagnosed	-.123	-.346**

Note: ** p < .01

Discussion

The discussion of this study is presented in three sections: discussion of the sample characteristics, discussion of the descriptive data related to family support and self-concept, and discussion of findings related to the relationship between the two variables.

Sample characteristics

In this study, the mean age of the subjects was 64.9 years old, and their average duration of being diagnosed as COPD was 11.47 years, so, the patients were mostly affected by COPD in their 50s. This is similar to other studies in COPD patients in western country (Sexton, 1990). Most of the subjects (75%) were male. This characteristic of the

sample is typical for COPD patients all over the world due to the predominant smokers in male (Monahan & Neighbors, 1998). The major roles of the subjects were parent (42.6%), grandparent (41.7%), and spouse (15.7%). With the age of around 64.9 years old, they could have more than one child. Most of the subjects had 3 family members ($\bar{X}$ = 2.92). These demographic characteristics also fit the traditional and cultural family structure and family relationship in China.

Over half of the subjects (53.7%) had junior school education or lower. This was almost congruent with urban residents' educational background which 57.7% of Chinese had junior school education or lower (China Health Ministry Statistics, 1998). This may be explained that according to the sample characteristics, most of the subjects were government servicer, worker, teacher, or health personnel, while only 6.5% were farmers. Therefore, it can be estimated that majority of sample for this study were urban residents.

In this study, about half of the subjects (50.9%) had person per capita income of 500 yuans or lower, and another half of them had person per capita income over 500 yuans. In China, the mean of per capita income of urban resident was 362 yuans, while the mean of rural resident' per capita income was 151 yuans (China Health Ministry Statistics, 1998). Considering that majority of the subjects were urban residents, this finding suggested that most of the subjects were in or above average economic

status. The high economic status could be due to their occupation and average age. Among all occupations, government servicer was the predominant one (38.9%). Generally, the pension of government servicer in China is higher than the income of workers or farmers. Also since most subjects were around 64.9 years old, at which their children should be at the age of working to earn money, their children may support the patient financially. Furthermore, because majority of the subjects could pay medical cost by partial reimbursement, they did not have much expense. In this study, all subjects had been diagnosed as COPD over four months and most of the subjects had been hospitalized less than three times (see Table 1). Although 36.1% of the subjects had other chronic diseases, but from the investigation, their other chronic diseases were stable, and they had no complication of COPD. All characteristics being discussed reflected that the sample seemed to be a good representative for the target population of this study.

Family support of COPD patients

The results of this study demonstrated that more than half of the subjects (56.5%) perceived family support at high level, while the others did at least at moderate level with a quite high mean score ($\bar{X}$ = 93.60).

As literature reviewed, there are many factors affecting family support such as number of family members, relationships among family members, educational level of patients and their family members, family economic status,

and the interaction between patients and their family members. According to the sample characteristics, most subjects had three family members, and from the investigation, with the age of 60s, they had more than one child from whom they might receive support. Furthermore, majorities of the subjects (88%) were married and were aged of around 64.9 years old; in China, traditionally, these patients were more likely to have high support from spouse or children who may have an intimate relationship with them. As Hobfall and Vaux (1993) stated, the intimate relationships made family members be more likely to be responsive to a person's distress, to be motivated to spend energy to help, to be sensitive about a person's needs and wants, to be accurate about the nature and degree of a person's difficulties, and to provide support appropriate to a person's needs, and at the same time at the least cost to a person's self-esteem. Some studies reported that the COPD patients with spouses had higher support from their spouses than those without spouses (Yan, 1997; Sexton & Munro, 1988). Meanwhile, in Chinese tradition, children have the responsibility to take care of parent when he/she is in illness to make him/her feel better. All these may support higher mean score of perceived family support among subjects.

Turk and Kerns (1985) pointed out that the more severe and long lasting the illness, the greater the potential for family disruption. Therefore, frequency of hospitalization and duration of being diagnosed which are

the indicators of disease severity should negatively influence the interaction between patients and their family members as well as the perceived family support of the patient. In this study, although most of the subjects had been diagnosed as COPD for eleven years, their perceived family support was still high. This may be because most subjects had been hospitalized for less than three times and did not have serious complication, the disease was not so severe and was stable. Furthermore, nearly half of the subjects (46.3%) were at higher educational level. With high education, they may understand COPD well and could seek more assistance and information about the disease from many resources. Also, in Chinese tradition, old people, especially old men (75% were male in the study) highly educated, are usually the most authoritative persons in the family, they are highly respected and supported by their family members. Therefore, their perceived family support was high. Likewise, most of the patients were in or above average economic status. The higher economic level makes the assistance from the others possible thereby high family support.

This finding was similar to that of Jiang's (1999) study using the Modified Perceived Social Support from Family Scale (Zhang, 1997) to measure family social support in COPD patients, found that Chinese COPD patients perceived family social support at a high level. Since the subjects were obviously from the same cultural background and got the

same probles, they might have the similar perceived family support.

However, the study result was not congruent with that of Yan's (1997) study. Yan (1997) using the same instrument (the MPRQ-Part2) to measure social support in COPD patients, found that Chinese COPD patients perceived social support at a moderate level. The social support being studied could come from all sources not specific to family member. Since family is the basic unit of society, close geographic proximity, close emotional bonds, and more aspect needs among family members (Jassak, 1992) may make perceived support from family more important to patients than that from wider social systems. In addition, social isolation and immobilization due to COPD make the caregiving family become the major social field of the COPD patient (Lucas, Golish, Sleeper & O'Ryan, 1988). That is why the perception of social support from family is stronger than that from other social resources.

Self-concept of COPD patients

The results of the study found that most subjects (81.5%) rated their self-concept moderately positive (Table 2) with a mean score of 159.37 and SD of 15.95. The study also showed that, among the five dimensions of self-concept, patients experienced body sensation at the lowest level ($\bar{X}$ = 2.87), while they experienced self-ideal at the highest level ($\bar{X}$ = 3.74).

Since COPD might incapacitate patient physically, psychologically, and socioeconomicly (Sexton, 1990), COPD

patient is more likely to have a negative self-concept. However, in this study, most of the patients perceived positive self-concept, only 15.7% of them got moderately negative self-concept. This might be explained by the factors affecting self-concept, including growth and development, learning, reactions of others, perception, maturational crises, and coping strategies (Roy, 1991).

Normally, during the age of 60s or young old age group, the body functions might not change much. COPD can make patients face many limitations and be not able to control their body funtions as usual. The disease might also result in ineffective responses when patients only use their previous ways to deal with daily life and might make the patients unable to act as the expected roles according to their maturational tasks. All these might negatively influence patients' self-concept. However, since most patients were not frequently hospitalized during 11 years, it implied the patients' disease was not too severe. So, the degree of negative influences was not high. With rich learning experiences over average of sixty years, and nearly half of the patients had higher education (46.3%), they could seek information to help themselves coping with COPD well. Furthermore, more than one family member ($\bar{X}$ = 2.92) could share the tasks of helping them. Therefore, both patients and their family members would not feel burdensome, and the patient perceived self-concept positively.

In this study, the mean score of self-ideal was the highest among all of the dimensions, while the score for body sensation was the lowest. The possible explanations may be the intimate relationships between patients and their family members, the higher educational level of the patients, and the higher economic status, as well as the stabilization of the disease make and encourage the subjects expect to be able to cope with COPD well. Therefore, it was not difficult to understand why the subjects rated their self-ideal at the highest level. In contrast, COPD always primarily influences the individuals' physical aspect, causing many symptoms including dyspnea on exertion or even at rest, fatigue, and feeling not having enough energy to perform activities of daily living (Monahan & Neighbors, 1998). This feeling will normally increase with the progressive disease. So, it was not surprised that the subjects experienced their body sensation at the lowest level.

In China, no any study on the self-concept of the COPD patient was reported. The only study of self-concept was done in schizophrenic patients (Li, 1998) in which the higher mean score of self-concept was shown (189.93). The difference in mean score might be due to the difference in the number of item. In this study, there was 48 items with the potential total score of 48-240, while in Li's study the number of item was 56 with the possible score of 56-280. The lower potential total score in this study surely made the mean score lower. In addition, different problems from

different kinds of patients might be able to explain the difference of mean self-concept score.

Relationship between family support and self-concept of COPD patients

A significant moderately positive relationship was found between family support and self-concept of the subjects ($r = .462$, $p < .01$). It indicated that COPD patients who perceived high level of family support rated more positive self-concept. Moreover, further analysis indicated family support was positively associated with body sensation, self-consistency, self-ideal, moral-ethical-spiritual self of the COPD patients ($r = .397$, $.362$, $.313$, and $.248$, respectively, $p < .01$). However, the results failed to confirm the relationship between perceived family support and body image of the subjects.

In this study, family support included five dimensions: intimacy, social integration, nurturance, worth, and assistance, which was rated by most subjects at high level. This means that the subjects perceived high level of intimacy, social integration, nurturance, worth, and assistance. Since intimacy between people make them feel they have someone who care for them and give them assistance when needed, high perceived intimacy among the subjects can lead to self worth. Also, intimacy can reduce subjects' emotional isolation and loneliness, leading to social integration from which social support can be perceived. The subjects would be more likely to receive many advices about an effective method to make themselves feel better from

others. With less physical discomfort and high emotional support, the subjects' body sensation was improved. The subjects might feel not causing burden to their family members and did not feel bad about self. Opportunity for nurturance gives an individual a sense of being needed (Dimond & Jones, 1983). The feeling of self worth and self esteem demonstrate a positive self-concept (Fuller & Schaller-Ayers, 1994). The more support from the family, the higher the positive self-concept. These might explain a positive relationship between family support and the self-concept, as well as to the particular aspects of self-concept including body sensation, self-consistency, self-ideal, and moral-ethical-spiritual self.

However, as mentioned previously, COPD is an irreversible, progressive chronic disease with body structure changed (Weilitz & Sciver, 1996). It actually influences physical self of the patient. No matter how much family support the patient receives, the feeling towards the changed body structure such as barrel chest is still negative. This might explain why there was no significant relationship between family support and body image. This result was consistent with that of a previous study. Yan (1997) conducted a study on social support and quality of life in 73 COPD patients, found that social support was significantly correlated with all dimensions of quality of life except the dimension of body image concerns. Although the body image concerns is not the same as body image in self-concept, their meanings are similar. Meanwhile, the

perceived family support is the perceived social support emphasizing resource on family. The relationship between family support and body image should be consistent with the relationship between social support and body image concerns in the same subjects.

The positive relationship between family support and overall self-concept of COPD patients was similar with South's (1995) study among school-aged children with leukemia. Although South studied the relationship between social support and self-concept, but as mentioned before, family support is the social support received from only family members. Therefore this study could be compared with South's study. Different age may lead to different self-concept (Roy,1991), South's study found that patients with high social support still reported positive self-concept. The positive relationship between family support and self-concept of COPD patients is clinically relevant to nurses and other professionals and warrants further study.

Considering the two variables, frequency of hospitalization and duration of being diagnosed, as the indicators of disease severity, might influence both family support and self-concept, this study also examined the relationships among those concepts. The finding showed that there were significantly negative relationships between frequency of hospitalization and self-concept, between duration of being diagnosed and self-concept (-.389, -.346, respectively, $p < .01$), but no statistically significant relationship between each of the two variables and family

support. These results were partially consistent with the study's framework. The negative relationships between frequency of hospitalization, duration of being diagnosed and self-concept indicated that the more times the subjects being hospitalized, and the longer they being diagnosed as COPD, the higher negative self-concept the subjects experienced. This might explain as following. COPD is an irreversible, progressive chronic disease, the longer the subjects being diagnosed as COPD, normally, the more dyspnea, fatigue, and not enough energy for activities the subjects experiences, and the more dependence on others, leading to more negative self-concept (Weilitz & Sciver, 1996). The more frequent hospitalization means the more severe the disease the subjects got, the more multiple dependence on others, leading to more negative self-concept (Weilitz & Sciver, 1996). Furthermore, the more frequent hospitalization, the more distruption to family members, leading to both the patients and their family members feel more burdensome (Sexton, 1990), resulting in more negative self-concept. The possible explanation for the unexpected result, no relationship between frequency of hospitalization and duration of being diagnosed and family support, might be from three aspects. Firstly, there was no variation in severity among the subjects in the study no matter how high or how low the support the subjects perceived. Secondly, the subjects were recruited only at Outpatient Department of Xiang Ya Hospital, leading to selection bias. And thirdly, as nearly half of the patients (49.1%) had person per capita

income of over 500 yuan, and most of them (71.3%) could totally or partially reimburse the medical payment, the subjects may be able to get support every time of hospitalization. Therefore the relationship between the severity of disease and family support was not demonstrated. The finding of this study could not compare with other study because the few study conducted on the variables among frequency of hospitalization, duration of being diagnosed, family support, and self-concept were found from the literature.