CHAPTER 4

FINDINGS AND DISCUSSION

This study was to identify the stress level, and coping behaviors of postmastectomy patients; to examine the relationship between stress level and coping behaviors of postmastectomy patients; and to examine the relationships among stress level, coping behaviors, perceived family relationship and age of postmastectomy patients. A descriptive-correlational design was used. Fifty-seven subjects were selected by purposive sampling.

The results of data analysis are presented in this chapter. The presentation is divided into three parts. The first part presents the demographic data. The second part presents data on stress level and coping behaviors. The third part presents the relationship between stress level and coping behaviors; the relationship among stress level, coping behaviors, perceived family relationship and age of the postmastectomy patients.

Part one: Description of the demographic data

Fifty-seven postmastectomy patients participated in this study. The majority of the subjects were from the northern parts of China. Most of them knew their diagnoses, only one person (1.75%) was prevented from telling the truth by her family. Other demographic data of the subjects are presented in table 1.

Table 1 Frequency, percentage, mean and standard deviation of the subjects' demographic characteristics (divided into groups of age, marital status, education, the way of surgery payment, family income, earned income, and occupation)

Demographic characteristics	Frequency (n=57)	%	Mean	S.D
Age (in yrs)			46.77	9.39
30-39	14	24.6		
40-49	21	36.8		
50-59	16	28.1		
60-69	6	10.5		
Marital status				
Single	1	1.8		
Married	55	96.4		
Widow	1	1.8		
Separate	0	0.0		

Table 1 Frequency, percentage, mean and standard deviation of the subjects' demographic characteristics (divided into groups of age, marital status, education, the way of surgery payment, family income, earned income, and occupation) (cont')

Demographic characteristics	Frequency (n=57)	%	Mean	S.D.
Education (in yrs)				
No Education	8	14.0		
Primary school (6 yrs)	8	14.0		
Middle school (9 yrs)	11	19.2		
High school (12 yrs)	22	38.8		
College/University (17yrs)	8	14.0		
Way of surgery payment				
Whole reimbursed	15	26.3		
Partial reimbursed	26	45.6		
Total self paid	16	28.1		

Table 1 Frequency, percentage, mean and standard deviation of the subjects' demographic characteristics (divided into groups of age, marital status, education, the way of surgery payment, family income, earned income, and occupation) (cont')

Demographic characteristics	Frequency (n=57)	%	Mean	S.D.
family income (yuan/per person/month)				
<250 yuans	17	29.8		
251-350	15	26.3		
351-450	6	10.5		
451-550	5	8.8		
551-650	5	8.8		
651-750	5	8.8		
751-850	2	3.5		
>850	2	3.5		
Earned income				
Enough	26	45.6		
Fair	22	38.6		
Not enough	9	15.8		

Table 1 Frequency, percentage, mean and standard deviation of the subjects' demographic characteristics (divided into groups of age, marital status, education, the way of surgery payment, family income, earned income, and occupation) (cont')

Demographic characteristics	Frequency (n=57)	%	Mean	S.D.
Occupation				
Teacher	7	12.3		
Office staff	12	21.1		
Health personnel	2	3.5		
Scientific staff	3	5.2		
Business person	1	1.8		
Farmer	7	12.3		
Worker	19	33.3		
House keeping	6	10.5		

Table 1 shows that the age of the subjects ranged from 30 to 69 years old (N=57, Mean=46.77. SD=9.39) and 36.8% of the subjects were in their forties. Most of the subjects were married (96.4%), only one single (1.8%) and one widowed (1.8%). Educational background ranged from illiterate to university level. More than half of them were above the high school level (52.6%). Almost one-fourth of the subjects had to pay all the surgical expenses by themselves, another one-fourth of the subjects got whole reimbursed from the government or work agencies, and the rest were partially reimbursed from the government/work agencies or insurance companies. About half of the subjects had family income less than 500 yuan per person per month, and most of them feel their earned income were enough or just fair enough for the daily living, while only nine of them (15.79%) thought they had not enough money to cover their living expenses. Most of the subjects had jobs outside home, while only six of them (10.53%) stayed at home.

Part two: Description of stress, coping behaviors and family relationship.

Data of the stress level, coping behaviors and perceived family relationship of the postmastectomy patients are presented in this part.

The first research objective examined the stress level of the postmastectomy patients. The stress level of the postmastectomy patients was assessed by the Modified Symptoms of Stress Inventory (MSSI). The second research objective examined the coping behaviors of postmastectomy patients which were assessed by the Jalowiec Coping Scale (JCS).

The stress level and coping behaviors of the subjects are presented in Tables 2-5. The perceived family relationship of the subjects is presented in Table 6-7.

Table 2 Mean, standard deviation and range of the general stress level of postmastectomy patients (n=57)

Variable	Range	Mean	S.D.	Level of stress
General stress				
Raw Score	60-208	107.28	34.5	
Converted Score	1.07-3.71	1.92		mild

Table 2 shows that although the general stress level ranged from the mild to very stress, the average stress level was mild (raw score of the postmastectomy patients ranged from 60 to 208 with the possible score range of 56 to 280 and the converted score ranged from 1.07 to 3.71 with the possible range of 1 to 5). Scoring in four level measures of mild stress, moderate stress, very stress and severe stress level, no severe case was found in the general stress measure.

Table 3 Mean, standard deviation and range of the physical and emotional stress response of postmastectomy patients (n=57)

Variable	Range	Mean	S.D.	Level of stress
Physical response				
Raw Score	38-118	62.49	18.25	
Converted Score	1.12-3.47	1.84		mild
Emotional response				
Raw Score	22-95	44.79	18.84	
Converted Score	1-4.32	2.04		moderate

Table 3 shows that physical stress response was mild (raw score ranged from 38 to 118 with the possible range of 34 to 170 and the converted score ranged from 1.12 to 3.47 with the possible range of 1 to 5). No severe case was found. Emotional responses was moderate (raw score ranged from 22 to 95 with the possible range of 22 to 110 and the converted score ranged from 1 to 4.32 with the possible range of 1 to 5). The emotional stress response was found in all four levels, ranged from mild level to severe stress level (mean=2.04).

Two severe cases were found when calculate the frequency in each level. The test of the difference between the physical response and emotional response was significant ($t=2.57$, $p<.05$).

Table 4 Mean, standard deviation and range of the General coping behaviors of postmastectomy patients

Variables	Range	Mean	S.D.	Level of coping
General coping				
Raw score	37.00-141.00	102.32	20.80	
Converted score	.62-2.35	1.71		Fair

Table 4 shows that the general coping behaviors of the postmastectomy patients were fair (raw score ranged from 37 to 141 with the possible range of 0 to 180 and the converted score ranged from .62 to 2.35 with the possible range of 0 to 3).

Table 5 Mean and standard deviation of the relative score of the eight dimensions of coping behaviors of postmastectomy patients

Variables	Mean	S.D.
Optimistic	.16	.04
Confrontive	.14	.04
Self-reliant	.14	.04
Supportant	.13	.04
Fatalistic	.13	.05
Emotive	.11	.04
Evasive	.10	.03
Palliative	.10	.03

Table 5 shows that there was various use of different coping strategies among this group. The most frequently used coping styles were: optimistic coping style, confrontive coping style, and self-reliant coping style (first three in rank). Emotive coping style, evasive coping style, and palliative coping style were relatively less used (least three in rank).

Table 6 Mean, standard deviation and range of general family relationship of postmastectomy patients

Variables	Range	Mean	S.D.	Level of F.R.
General Family Relationship				
Raw score	22.00-45.00	37.51	5.88	
Converted score	1-3	2.50		Good

Table 6 shows that the general family relationship of the postmastectomy patients in this study was good with the range of 1 to 3 which was same as the possible range.

Table 7 Mean and standard deviation of four subtypes of family relationship of postmastectomy patients

Variables	Mean	S.D.
Cohesive F.R.	2.63	.49
Emotive F.R.	2.54	.48
Peaceful F.R.	2.51	.57
Supportive F.R.	2.39	.43

Table 7 shows that the family relationship of the subjects was good in all four subtypes of the relationship. (mean score ranged from 2.39 to 2.63 with the possible range of 1 to 3).

Part three: The relationship among variables

The extent to which the variables were related to each other was examined by means of Pearson correlation. Variables examined in this study were general stress score, physical stress responses score, emotional stress responses score, coping behaviors score (raw overall score for general coping and relative scores of eight substyles of coping), family relationship score (raw score and mean scores of general family relationship and four subtypes of family relationship) and age. The relationship between stress level and coping behaviors, the relationships among stress level, coping behaviors, family relationship and age of postmastectomy patients are presented in tables 8-12.

Table 8 Correlational coefficient of Pearson between stress level and general coping behaviors, eight dimensions of coping styles of postmastectomy patients

Variables	Coping Behaviors								
	General	Confron-tive	Evasive	Optimis-tic	Fatalistic	Emotive	Palliative	Support-tant	Self-reliant
	r	r	r	r	r	r	r	r	r
General stress	-.0051	-.0536	.0465	-.3278*	.2530	.4717***	-.1962	-.1176	-.1568
Physical response	-.0311	-.0532	-.0322	-.2504	.2161	.3560**	-.1497	-.2046	-.0757
Emotional response	.0395	-.1497	.1163	-.3577**	.2540	.5189***	-.2143	.0172	-.2138

Note: * p<.05, ** p<.01, *** p<.001. df=55

Table 8 shows that correlations between stress and coping were found in optimistic coping style and emotive coping style. Optimistic coping style was significantly negatively correlated with general stress score ($r=-.3278$, $p<.05$), and emotional stress response ($r=-.3577$, $p<.01$); Emotive coping style was significantly positively correlated with all three measures of stress ($r=.4717$, $p<.001$; $r=.3560$, $p<.01$; $r=.5189$, $p<.001$). No significant correlations were found between general stress score, physical stress response, emotional stress response score and general coping score and the rest six of the coping styles of the post mastectomy patients. Therefore, hypothesis 1: "there is a relationship between the stress level of postmastectomy patients and their coping behaviors" which was derived from the third research objective was partially supported.

Table 9 Correlational coefficient of Pearson between stress level of postmastectomy patients and their perceived family relationship and age

Variable	Perceived Family Relationship					Age
	General	Supportive	Emotive	Cohesive	Peaceful	
	r	r	r	r	r	r
Stress						
General stress	-.4105**	-.2694*	-.1954	-.4440***	-.4717***	.0338
Physical response	-.3009*	-.1491-	-.1130	-.3549**	-.4159***	.1672
Emotional response	-.4603***	-.3490**	-.2485	-.4695***	-.4609***	-.1001

Note: * p<.05, ** p<.01, *** p<.001. df=55

Table 9 shows that there were significantly inverse correlations between stress level of postmastectomy patients and their perceived family relationship ($r=-.4105$, $p<.001$ in general; $r=-.3009$, $p<.05$ in physical responses and $r=-.4603$, $p<.001$ in emotional response). Among four subtypes of the perceived family relationship, the cohesive relationship ($r=-.4440$, $p<.001$; $r=-.3549$, $p<.01$ and $r=-.4695$, $p<.001$) and peaceful relationship ($r=-.4717$, $p<.001$; $r=-4159$, $p<.001$ and $r=-.4609$, $p<.001$) were significantly correlated with all three measures of stress. Supportive family relationship was related with general stress score ($r=-.2694$, $p<.05$) and emotional stress responses ($r=-.3490$, $p<.01$). Emotive family relationship was not significantly related with stress measures. The second hypothesis: there is a relationship between stress level of postmastectomy patients and their perceived family relationship which was derived from the fourth research objective was supported.

It is also showed in the table 9 that there was no significant relationship between stress in any measures and age of postmastectomy patient. Therefore, hypothesis 3: there is a relationship between stress level of the postmastectomy patients and their age which was derived from the sixth research objective was rejected.

Table 10 Correlational coefficient of Pearson between coping behaviors and perceived family relationship of postmastectomy patients

Variables	Coping Behaviors								
	General r	Confron-tive r	Evasive r	Optimis-tic r	Fatalistic r	Emotive r	Palliative r	Support-tant r	Self-reliant r
Family relation									
general	.0378	.1609	-.2024	.2107	-.0675	-.3695**	.0745	.0046	.1695
Supportive	-.0476	.1263	-.2547	.0474	.0390	-.1309	-.0349	.0808	.0324
Emotive	.0078	.0615	-.1644	.2187	-.0907	-.1872	.0301	.0274	.0628
Cohesive	.1100	.1157	-.1149	.2834*	-.0794	-.4485***	.1435	-.0927	.2216
Peaceful	.0864	.2263	-.0917	.1745	-.1107	-.5106***	.1428	-.0687	.2901*

Note: * p<.05, ** p<.01, *** p<.001. df=55

Table 10 shows the relationship between coping behaviors and perceived family relationship of postmastectomy patients. Emotive coping style was significantly negatively correlated with general family relationship, cohesive family relationship and peaceful family relationship ($r=-.3695$, $p<.01$; $r=-.4485$, $p<.001$ and $r=-.5106$, $p<.001$). Optimistic coping style was significantly positively correlated with cohesive family relationship ($r=.2834$, $p<.05$). Self-reliant coping style was only significantly positively correlated with the peaceful family relationship ($r=.2901$, $p<.05$). The total coping score and other five types of coping style were not significantly related with any type of the family relationship. Therefore, hypothesis 4: there is a relationship between coping behaviors and the perceived family relationship of postmastectomy patients which was derived from the fifth research objective was partially supported.

Table 11 Correlational coefficient of Pearson between coping behaviors and age of the postmastectomy patients

Variables	Age	
	r	p
General coping	.0347	.798
Confrontive	.1345	.319
Evasive	-.0383	.777
Optimistic	.1087	.421
Fatalistic	-.1038	.442
Emotive	.1186	.380
Palliative	.1533	.255
Self-reliant	.1839	.171
Supportant	-.3258	.013*

* $p<.05$, df=55

Table 11 shows that only the supportant coping style was significantly and negatively related with the age of postmastectomy patients ($r=-.3503$, $p<.01$). Therefore, hypothesis 5: there is a relationship between coping behaviors and age of the postmastectomy patients which was derived from the seventh research objective was partially supported.

Discussion

Demographic data

Fifty-seven patients with breast cancer participated in this study at 8 to 11 post operative days. The average age of the subjects was 46.77 years old. This is a very busy period in women's life with multiple roles, high responsibility and heavy work load from taking care of the older generations and the younger ones at the same time. Most of the subjects of this study were married women (96.4%). This is fit with the traditionally and culturally defined family type and family relationship in China. More than half of the subjects (71.9%) completed the nine years of school education, among them, 52.6% finished senior high school or above that level. This is similar to the general educational level of the country. About one-fourth of the subjects had total reimbursement or medical insurance, while another one-fourth had to pay their surgery payment by themselves. People without reimbursement or medical insurance normally are the people without stable job, or no job at all, so their social economic status and education level are generally low. Hospitalization is often considered as a big threat to their budgetary plan for some of them.

Research objective 1: to identify the stress level of postmastectomy patients.

The outcomes of the cognitive appraisal of the mastectomy by the postmastectomy patients leaded to the psychological responses. Breast cancer patients receiving mastectomy in this study group reported mild stress experience in physical response and moderate stress experience in emotional response (Table 2 and 3). Emotive responses were significantly outweighed the physical responses (Table 3). These findings indicated that postmastectomy patients may have some stress experience but not very severe in the period of eight to eleven days post operation, and the major stress was from emotional reactions.

Almost all the patients perceived the mastectomy as a major surgery and life event, at the same time, the subjects in this study felt that "I am lucky to be treated as early as it was diagnosed". They perceived themselves as being fortunate because their life-threatening disease was "caught" (Hughes, 1993). This was also recognized by Krause's (1993) who found that some patients reported feeling of some kind of relief when their suspicious of cancer were confirmed. Survival was the major concern of the patients at the time of preoperative and immediate postoperative. The full impact of the surgery may not be felt until two to three months later (Krumm, 1982). Another reason of why the stress level of the

postmastectomy patients was not very high may be due to the culture differences between the eastern and the western world. The influence of Confucianism and the characteristics of the Chinese women make them appeared incapable of externalizing their negative feelings and aspects of the underlying conflicts. The subjects might prefer to keep their feeling to themselves and did not disclose too much especially when the trust relationship between them and the interviewer had not been established in such short contact. So, they might weighed their symptoms lower than they actually were. Coping style used by the postmastectomy patients may also contributed to reducing the stress level which will be discussed later. Validity of the instrument may be another issue that require consideration.

This result was consistent with previous studies on women with mastectomy in Canada (Stolar, 1982) and in the United States (Northouse, 1989). They found out that the immediately postoperative period was not considered as the most difficult time by the postmastectomy patients comparing to the period of prediagnosis, preoperation and the first three months postoperation. But the finding of the present study was inconsistent with the findings of some longitudinal studies (Maguire et al, 1978; Jamison et al, 1987; and Vinokur, 1990) which indicated the psychological problems were more severe. This may be explained by several possible

reasons. The most likely explanations might be the different timing period and culture difference which are discussed above. The timing of events has an impact on the level of stress (Ignatavicius & Bayne, 1991). The nature and degree of the stressors change over time (Stolar, 1982). The previous findings were more focused on the longer period after mastectomy, normally at two months, six months or one to two years rather than the immediately postoperative period. The previous studies were conducted from the western countries. Their culture are quite different from China where the subjects of this study were selected.

Research Objective 2: To identify the coping behaviors of the postmastectomy patients.

The general coping behaviors of the postmastectomy patients in this study group were from poor to good, but the average was fair (Table 4). They used various types of coping style. Optimistic coping style, confrontive coping style and self-reliant coping style were found most favored among the eight options provided (Table 5). Women using confrontive and optimistic coping styles appraised their problems and resources realistically and positively. They faced up to the problem, used positive thinking and took positive action to meet this challenge. Conversely, the evasive and palliative coping style were least favored. They didn't think that the problems could disappear just by the way of ignoring them.

These findings were similar to the previous studies of Dodd (1992) and Fredette (1995). They studied the coping behavior of patients with breast cancer and cancer in other sites. They found that the problem-oriented coping method, hopeful attitude and seeking support and information were the majority behaviors. Herth (1989) also concluded that when the patients' level of hope (which is the optimistic coping style) was high, the level of coping response was high.

Research Objective 3: To examine the relationship between stress level and coping behaviors of postmastectomy patients.

According to the conceptual framework, the potential of any encounter for creating psychological stress is co-determined by the relationship between the meaning of what is at stake for an individual in a stressful encounter and the coping efforts used to manage the encounter. The psychological reactions of women to mastectomy resulted from their appraisal of the event and their resource of coping. The significant inverse correlation between the stress level of postmastectomy patients and optimistic coping style (Table 8) indicated that the more use of the optimistic coping style, the lower the level of stress in general and emotional responses; The significant positive correlation between emotive coping and stress level of postmastectomy patients (Table 8) indicated that the more often the emotive coping behavior was used, the more was the likelihood of increased stress. Physical responses were only affected by the emotive coping while the emotional responses were affected by both coping styles mentioned above (Table 8).

These findings are consistent with the studies of Weismen and Worden (1977). They found that good coper used the strategies of positive, redefinition of the problem and compliance with the authority and poor coper used strategies

of suppression passivity submission and harmful tension-reducing measures which leaded to high total mood disturbance.

Research Objective 4: To examine the relationships between the stress level of postmastectomy patients and their perceived family relationship.

As proposed in the conceptual framework, the stress level is determined by the appraisal of the event and the resources. Family relationship as one of the important resources had been recognized by the postmastectomy patients in the present study. Significant inverse correlations between stress level of postmastectomy patients and their perceived family relationship (Table 9) indicated that the better the perceived family relationship, the lower the stress level of postmastectomy patients. In this study, general family relationship and cohesive, peaceful and supportive family relationships were mostly valued by the postmastectomy patients. This is consistent with the study of Neuling and Winefield (1988) which found that the satisfaction with support from family members was of prime important for psychological adjustment. Emotive family relationship was not related with any measures of the stress of postmastectomy patients. This may relate to the inexpressive personality of the Chinese people. Instead, they put the emphasis on the total family support category. Present study showed that the

supportive family relationship was significantly and negatively related with the emotional responses of the postmastectomy patients. The stronger the perceived family support, the lower the emotional responses to stress. This finding supported the study of Northoase's (1989) which showed that family support was identified as the most frequent factor that helped women cope in hospital and at home.

Research Objective 5: To examine the relationships between coping behaviors of the postmastectomy patients and their perceived family relationship.

Significant positive correlation (Table 10) between optimistic coping style and perceived family relationship indicated that women using optimistic coping style felt better about their cohesive family relationship. Women using self-reliant coping style perceived their family relationship more peaceful. The significant inverse correlation between emotive coping style and perceived family relationship of postmastectomy patients (Table 10) indicated that women who felt their general family relationship was not good, not cohesive and more conflict than peaceful were more likely to use emotive coping style. Although no study was found directly examining the relationship between the perceived family relationship and their coping behaviors, studies of social support had showed the strong relationship between

these variables (Neuling & Winefield, 1988; Northouse, 1989). Family as the most important social context in which the illness occurs and as the patient's first line of defense had been recognized (Krumm, 1982). This findings were also showed in the studies of Primomo (1990) and Palsson and Norberg (1995) which concluded that the greater the women's perception of affect and affirmation from her partner and family members, the greater her self-reported family functioning and the better her coping with the illness.

Research Objective 6: To examine the relationship between stress level and age of postmastectomy patients.

The result of the study showed no statistical significant correlation between the stress level of the postmastectomy patients and their age (Table 9). This result indicated that age was not an influence factor upon the patients' stress responses at eight to eleven days postmastectomy. This finding was inconsistent with the findings of previous studies (Micheal & Asken, 1975; Vinokur et al, 1989 and 1990; Given, et al., 1994; and Mor, et al., 1994). This may be explained by the timing issue, the small sample size and the different age groups of the subjects. For example, in Given's study, the mean age of the subjects was 63 years (S.D.=7.3); in Mor's study the age was divided into under 65 years and over 65 years. But the average age of this

study group was only 46.77 years. Good percieved family relationship of the subjects (Table 6 & 8) which Neuling and Winefield (1988) found that the satisfaction with the support from family members was of prime importance for psychological adjustment may also contributed to the low correlation between two variables.

Research Objective 7: To examine the relationship between the coping behaviors and age of postmastectomy patients.

Only the supportant coping style was inversely correlated with the age of the postmastectomy patients in this study (Table 11). It indicated that the older the patients, the less use of support system and vice versa. In Chinese population, it is normally assumed that the older people have more hardship and self-reliant spirit than younger generation. Younger people seemed more active, have larger social network, and more easy to look for outside support.

Summary of the result

The results of this study showed that:

1. The first hypothesis "There is a relationship between stress level and coping behaviors of postmastectomy patients" was partially supported by the correlations between general stress, physical responses, emotional stress responses

and optimistic coping style, emotive coping style.

2. The second hypothesis "There is a relationship between stress level and perceived family relationship of postmastectomy patients" was supported by the correlations between three measures of stress and general family relationship, supportive, cohesive, and peaceful family relationship.

3. The third hypothesis "There is a relationship between coping behaviors and perceived family relationship of postmastectomy patients" was partially supported by the correlations between optimistic, emotive, self-reliant coping styles and general family relationship, cohesive and peaceful family relationship.

4. The forth hypothesis "There is a relationship between stress level and age of postmastectomy patients" was rejected.

5. The fifth hypothesis "There is a relationship between coping behaviors and age of postmastectomy patients" was partially supported by the inverse correlation between the supportant coping style and the age of postmastectomy patients.