CHAPTER 4

FINDING AND DISCUSSION

This descriptive study was used to describe the stressor and stress appraisal as well as coping among burned patients. Sixty subjects were selected by purposive sampling technique according to the inclusion criteria.

The results of data analysis are presented in this chapter. The presentation is divided into two parts. The first part is the demographic data and the second part is the information of stressor and stress appraisal as well as coping.

Findings

Part one: Description of the demographic data

Sixty adult burned patients who were scheduled to be discharged participated in this study. Twenty six were recruited from the First Teaching Hospital University, 24 from the Second Teaching Hospital University, and 10 in from the Third Teaching Hospital of Hunan Medical University. The detailed demographic data of the subjects are presented in tables 1 to 4.

Table 1

Frequency and percentage of the subjects' gender, age group, marital status, level of education, and living status.

Variable	Frequency (N=60)	Percentage (%)
Gender		
Male	44	73.3
Female	16	26.7
Age (yrs)(X = 31.7, S.D.= 8.7)		
18-20	5	8.3
21-30	24	40.0
31-40	25	41.7
41-50	4	6.7
51-58	2	3.3
Marital status		
Married	44	73.3
Single	13	21.6
Widow	1	1.7
Divorced	1	1.7
Separated	1	1.7
Education		
Primary school (6 yrs)	9	15.0
Junior school (9 yrs)	28	46.7
Senior school (12 yrs)	10	16.6
Diploma (3 yrs)	4	6.7
Associate degree (3 yrs)	5	8.2
College/University (4 yrs)	4	6.7
Living status		
With spouse and children	34	56.7
With parents	12	20.0
With spouse	7	11.6
With children	6	10.0
Alone	1	1.7

Table 1 shows that the majority of subjects (44, 73.3%) were males. The age of the subjects ranged from 18 to 58 years with mean of 31.7 (S.D.=8.7). The greatest proportion of the age groups was the group aged from 31 to 40 years (41.7%), followed by the group aged 21 to 30 years (40.0%). Most of them were married (44, 73.3%). Forty-one subjects (85%) had completed junior school or higher education. Most of them lived with spouse and children (34, 56.7%).

Table 2

Frequency and percentage of number of people under their responsibility, occupational status, ways of payment, and family income

Variable	Frequency (n=60)	Percentage (%)
Number of people under Their responsibility		
None	14	23.3
One	17	28.4
Two	23	38.3
Three	5	8.3
Four	1	1.7
Occupational status		
Farmer	27	45.0
Worker	18	30.0
Teacher	6	10.0
Office staff	3	5.0
Business person	2	3.3
Soldier	2	3.3
Housewife	2	3.3
way of payment		
Fully reimbursed	27	45.0
Partial reimbursed	16	26.7
Self paid	17	28.3
Family income (yuan/month) ($\tilde{X}$ = 452.0, S.D.= 331.5)		
200-500	44	73.4
501-1000	14	23.3
1,001-1,500	1	1.7
1,501-1,600	1	1.7

Table 2 illustrates that forty-six (76.7%) of the subjects had at least one person under his or her responsibility. Approximately half of the subjects (27, 45%) were farmer, followed by worker (18, 30.0%). About half of the group (27, 45%) got fully reimbursement from the government or work agencies and 16 of them (26.7%) were partially reimbursed. Most of the subjects (44, 73.3%) had family income less than 500 yuan per month.

Table 3

Frequency and percentage of severity and location of burns

Variable	Frequency (n=60)	Percentage (%)
Severity of burns		
Mild burn injury	18	30.0
Moderate burn injury	21	35.0
Severe burn injury	21	35.0
Location of burn injury		
Entire body (involved at least five of the following area: face, neck, trunk, arm, hand, or leg)	20	33.3
Face and hand	24	40.0
Hand	4	6.7
Lower part of the leg	8	13.3
Other(back, thigh or buttock)	4	6.7

Table 3 shows that 18 subjects (30%) sustained mild burns, 21 (35%) had moderate burn, and 21 (35%) suffered severe burns. Twenty subjects (33.3%) sustained entire body burns and twenty-eight of them (46.7%) suffered face and/or hand burns.

Table 4

Frequency and percentage of duration of hospitalization, number of received operation, and site of accident

Variable	Frequency (n=60)	Percentage (%)
Place of admission		
First Teaching hospital of HMU*	26	43.3
Second Teaching Hospital of HMU	24	40.0
Third Teaching Hospital of HMU	10	16.7
Duration of hospitalization ** ($\bar{X}$ = 29.13, S.D.=22.16)		
4 - 14 days	17	28.3
15 - 28 days	19	31.7
>28 days	24	40.0
Times of operation		
0	29	48.3
1	18	30.0
2	7	11.7
≥3	6	10.0
Site of accident		
Work place	42	70.0
Home	16	26.7
Other (restaurant and river bank)	2	3.3

Note: * HMU: Hunan Medical University
** Range of duration of hospitalization: 4 to 100 days

Table 4 illustrates that most of the subjects (26, 43.3%) were admitted at First Teaching Hospital. Duration of hospitalization ranged from 4 to 100 days with mean of 29.13 (S.D.=22.16). Seventeen of the subjects (28.2%) stayed in the hospital less than 14 days in hospital and twenty-four (40%) stayed more than 28 days. Nearly half of them (29, 48.3%) had no operation during hospitalization and 13 (21.7%) had at least two operations. Forty-two subjects (70%) were injured at the work place.

Part two : Description of stressors, stress appraisal, and coping

Information about number of stressors, stress appraisal, and coping strategy are presented in this part.

Table 5

Range, mean, and standard deviation of number of stressors and stress appraisal towards personal, environmental stressors and overall stressor among the burned patients

Variable	Range	Mean	S.D.
Personal dimension			
Stressor	6-18	13.33	3.26
Stress appraisal	1.23-3.71	2.13	0.56
Environmental dimension			
Stressor	2-13	6.63	2.65
Stress appraisal	1.0-3.83	1.89	0.58
Overall			
Stressor	10-31	19.97	5.08
Stress appraisal	1.20-3.50	2.05	0.53

Table 5 shows that this group defined the range of personal stressors from 6 to 18 with mean of 13.33 (S.D.=3.26). Stress appraisal towards personal stressor ranged from 1.23 to 3.71 with mean of 2.13, (S.D.=0.56). The range of environmental stressors was 2 to 13 with mean of 6.63 (S.D.=2.65) and the stress appraisal towards environmental stressor ranged from 1.0 to 3.83 with mean of 1.89 (S.D.=0.58). The overall stressor ranged from 10 to 31 with mean of 19.97 (S.D.=5.08) and range of stress appraisal from 1.20 to 3.50 with mean of 2.05 (S.D.=0.53).

Table 6

Frequency and percentage of burned patient who had high and low stress appraisal compared to mean of the group

Variable	Frequency	Percentage
Stress appraisal		
High	26	43.3
Low	34	56.7

Note: High stress appraisal: Stress appraisal ≥2.05
Low stress appraisal: Stress appraisal <2.05

Table 6 shows that 26 of the subjects (43.3%) had high stress appraisal whereas 34 (56.7%) had low stress appraisal as compared to mean of the group (2.05).

Table 7

Mean and standard deviation of stress appraisal Towards personal and environmental stressors organized in rank

Rank	Items	Mean	S.D.
	Stress appraisal towards:		
	Personal stressor		
1	My disfigured appearance	2.48	0.91
2	Uncertainty regarding outcome Of the treatment	2.33	1.13
3	Inability to take care of Everyday responsibility	2.30	1.00
4	Pain	2.13	0.87
5	Itching	2.08	0.94
	Environmental stressor		
1	Prejudice and discrimination from others	2.10	1.17
2	My current situation	1.97	1.15
3	Not enough time with family	1.35	0.95
4	Job insecurity	1.18	1.33
5	Too much interruptions	1.13	1.02

Table 7 shows the top five rank of stress appraisal towards personal stressors and environmental stressors. The top five stress appraisal towards personal stressor were as follows: "my disfigurement appearance", "uncertainty regarding outcome of the treatment", "inability to take care of everyday responsibility", "pain", and "itching". Their mean ranged from 2.48 to 2.08. "Prejudice and discrimination from others", "my current situation", "not enough time with my family", "job insecurity", and "too much interruptions" were the top five rank of stress appraisal towards environmental stressors with mean ranged from 2.10 to 1.13.

Table 8

Frequency and percentage of problem-focused coping dominant group and emotion-focused coping dominant group

Variable	Frequency (n=60)	Percentage (%)
Problem-focused coping Dominant group	49	81.7
Emotion-focused coping Dominant group	11	18.3

Table 8 shows that 49 subjects (81.7%) used problem-focused coping more than emotion-focused coping whereas 11 subjects utilized emotion-focused coping more than problem-focused coping.

Discussion

Demographic data

Sixty adult burned patients participated in this study. Predominant gender of the subjects was male, accounting for 73.3%, which was congruent with the finding of Li (1995). Average age of the subjects was 31.7 (S.D.=8.7) whereas the greatest proportion of the age groups was the group age ranged between 31 to 40 years (41.7%). The majority of them (81.7%) was young adult with the age of 20 to 40 years old, which was consistent with the previous study (Xiao & Cai, 1992). This age group resumed multiple roles with various responsibilities and heavy workload.

The majority of them (73.3%) was married and forty six subjects (73.3%) had at least one person under their responsibility. Nearly half of the group was farmer (45%). Most of the subjects (85%) finished at least nine years of school education which was consistent with the minimum education requirement of China.

For their hospitalization, almost half of the subjects (45%) had total reimbursement or medical insurance, while about one-fourth of the subjects (28.3%) had to pay by themselves. This later group was farmers with temporary job. Forty-four of the subjects (73.4%) had family income equal or less than 500 yuan a month, which was less

than the average chinese family income. According to statistics from Statistics Information Center of National Health Ministry (1998), chinese farmer family income was 540 yuan per month while the urban citizen's family income was 1,173 yuan per month. In addition, payment for burn management was higher than that of other surgical and medical management. Hospitalization was often considered as a big threat to their budgetary plan for some of them.

Most of the subjects (39, 65%) sustained from mild to moderate burn injury and one-third of the subjects (21, 35%) suffered severe burns. Nearly half of the subjects (46.7%) had burns that were visible on the face, neck, and/or hand, which were similar to the previous reports in China (Li, 1995). Most of burn injuries (42, 70%) occurred at work place, which indicated most of the subjects got work agencies compensation for their injury.

Research objective 1: to describe the stressors and stress appraisal of burned patients.

The result of this study showed that the mean number of stressors of the burned patients was 19.97 (S.D.=5.08) whereas the possible score ranged from 0 to 33. The average personal stressor was 13.33 (S.D.=3.26) with the possible score ranged from 0 to 19 whereas mean of environmental

stressors was 6.63 (S.D.=2.65) with the possible score ranged from 0 to 14 (Table 5). Stress appraisal of the subjects was 2.05 (S.D.=0.53) with the possible score range of from 1 to 4 (Table 5). More than half of the group (34, 56.7%) had the stress appraisal less than the mean of 2.05 (Table 6). Stress appraisal towards stressors such as disfigured appearance, uncertainty regarding outcome of the treatment, and inability to take care of everyday responsibility were the top three stress appraisal toward personal stressors whereas prejudice and discrimination from others, current situation, and having not enough time with their families were the top three stress appraisal toward environmental stressors (Table 7).

Theses findings indicated that pre-discharge burned patients had certain degree of stress appraisal but not severe as number of pre-discharge adult burned patients who had stress appraisal lower than mean of the group was dominant. This result was inconsistent with the findings of Partridge and Robinson (1995), Taal and Faber (1998), Tucky (1987), Wallace and Lee, (1988), which found that adult burned patients experienced extremely stressful time at approaching discharge time. In addition, depression and anxiety as the reflection of stress response generated by high stress was found among most of the burned patients during

hospitalization (Patterson et al., 1993). The possible reason for this finding may be explained from the following aspects.

Burns was the painful injury (Defide et al., 1997). However the discharge day approached, most of the suffering conditions were relieved; for instance, all wounds had completely healed and their conditions were stable. In addition, most of the subjects in this study (39, 65%) had mild to moderate burn injury and only about half of them (29, 48.3%) needed an operation. According to Lewis and colleagues (1996), the burned patients who had mild to moderate burn injury might get satisfactory outcome with no visible disfigurement and no obvious dysfunction at discharge. For the severe burned patients, although some changes already occurred, the full impact of the burn injury, such as disfigurement, constracture, may not be felt until 6 to 18 months later after injury (Helm, 1992; Hurren, 1995). Scar tissue might remain immature from 6 to 18 months which hypertrophy would be seen. The appearance of scar would become red and purple, markedly elevated, harm, and itching. In addition, the impairment of function increased apparently along with the contracture. After the area tissue got mature and stop growth, the impaired function maintained stable (Helm, 1992; Hurren, 1995; Sattle, 1996). The

maximum time after injury for this group of the subjects was 100 days (3 months and 10 days). Therefore, the changes of appearance and function were not perceived as their maximum impact.

Another possible explanation may be due to the characteristics of the subjects, most of them were male and farmer. They concerned more on their physical function and capability rather than their appearance. In addition, most of the burn injuries (58, 96.7%) occurred during working. Therefore, the burned patients' disfigurement and dysfunction were deeply understood and gaining sympathy by their significant others and families. Moreover, the burned patients resumed less responsibility for the accident during working. The work agencies provided them some economic support and compensation. Therefore, even they could not work during hospitalization. They did not need to worry about their family living expense. Besides, nearly half of the subjects (27, 45%) had fully reimbursement and about one-fourth of them (16, 26.7%) had partial reimbursement (paying for 30-50% hospital fee). Therefore, although most of this group (44, 73.4%) had low income, payment for hospitalization was not an issue.

At present time in China, most hospitals aim at providing holistic care for patients. There have been an

improvement of clinical setting condition to provide a comfortable environment for patients as much as possible. Single rooms and small rooms with two or three beds and air condition were common including the Burned and Plastic Surgical Department of the three teaching hospitals. Patients had opportunity to choose the places where fit with their satisfaction mostly. In addition, medical and nursing staff had a good attitude towards caring of the patients. Quality of care has increasingly enhanced in recent years, especially at the teaching hospitals affiliated with Medical University. Therefore, stress as appraised by the patients encountered with hospital environment may be greatly reduced. Moreover, in China, the family members of the patients with moderate to severe condition were allowed to stay and take care of the subjects all day long. Therefore, it was likely that the ones who supposed to face with tremendous stressors generated by severity of injury, receive enough support from their significant others.

At pre-discharge time, the patients had no chance to experience life in real situation after discharge. Some difficulties that might be found at home environment probably were under estimated and unexpected. This reason might contribute to low stress appraisal of the group.

The another possible explanation might be due to the

culture differences between the eastern and the western world. Chinese people, especially men, tended not to verbalize their negative feelings because of their dignity of being a "big" man. Therefore, the report of stressors and stress appraisal might be under estimated.

Research objective 2: To describe the coping used by burned patients

This study found that all subjects used combination of problem-focused coping and emotion-focused coping strategies. However, Majority of them (49, 81.7%) used problem-focused coping more than emotion-focused coping while only 11 subjects (19.3%) utilized emotion-focused coping more than problem-focused coping (Table 9). That was, most of them prioritized solving the problem or handling the situation rather than relieving the distress accompanied a stressful situation.

These findings provided some empirical evidence for the view suggested by Folkman and Lazarus (1980). Such findings were supported by the study of Fong (1997) that found burned patients used both problem-focused and emotion-focused coping strategies to manage a stressful situation and the The study of Caldwell (1991) and Jalowiec (1980) that found problem-focused coping strategy was significantly

rated higher in degree of use among hospitalized patients.

Problem-focused coping was generally directed at changing the person-environment relationship when the situation was changeable. Emotion-focused coping was more directed at regulating emotion when the situation was accepted or appraised, as few strategies could affect the final outcome (Folkman & Lazarus, 1984). Perhaps, for pre-discharge burned patients in this study, the majority of them had mild to moderate burned injury, although there were the changes of skin color, scar, and contracture, their general condition was quite good and stable and most of physical difficulties were controlled in acceptable level. Therefore, the subjects probably still maintained a sense of hope for normalization. In addition, there were several things regarding their body-environment relationship that they could change and kept under control, for instance, seeking more information about way of taking care of themselves, prevention of adverse effects of injury, engaging in rehabilitation program to improve their physical function, and finding way or technique of relaxation to their difficulties. Even for severe burned patients, some of them tried their best to do these activities to improve their situation. Therefore, the majority of them felt they were capable enough to take control over the situation. As

the result, the situation became better. Therefore, most of them reported use of problem solving strategies mostly.

In addition, some studies suggested that males tended to use more problem-focused coping than female (Folkman & Lazarus, 1980; Fong, 1997). In this study, majority of the group was male (73.3%). Traditionally, most Chinese did not hold the strong belief in God, but physicians. Therefore, they did not think that the problems could be relieved by praying, fatalism, daydream, and ignoring. Besides, because of traditional Chinese culture, Chinese, particularly men, tended to keep negative feelings such as crying, thinking of death to themselves. They tended not to disclose their feelings with others. Within short time communication with the researcher, trust relationship might not be established. Therefore, they might express their emotion-focused coping strategies less than they actually did in the reality.