CHAPTER 4

RESULTS AND DISCUSSION

The purpose of this chapter is to present and discuss the result of the study findings and to answer the research questions giving reasons and justifications. Results of this study were based on data from 98 families who had members admitted to Intensive Care Unit (ICU) and (Coronary Care Unit), and 98 nurses working in ICU or CCU. The subjects who were willing and met the inclusion criteria were taken from the two-referral hospitals and the three district hospitals in Central Java, Indonesia.

The results of the study are presented in the following orders:

Part 1 Subject characteristics

Part 2 Level of families' perceptions on family needs

Part 3 Level of nurses' perceptions on family needs

Part 4 The differences of the families' and nurses' perception regarding family needs

Part 1 Subject Characteristics

The study recruited ninety-eight family members and ninety-eight ICU and CCU nurses (Table 4-1) who were willing and met the inclusion criteria. Subjects were recruited from ICU and CCU of the two-referral hospitals and the three district hospitals. Forty-nine family members and sixty-four nurses were taken from the two-

referral hospitals. The regional referral hospitals can represent the target subjects as patients at the all district hospitals would be sent to referral hospitals. From the three district hospitals, forty-nine family members and thirty-four nurses were recruited.

Table 4-1: Number of family members (n=98), and nurses (n=98) in ICU and CCU of the five hospitals

Hospitals/Status	Family members	Nurses
A/ referral	25	32
B/ referral	24	32
C/district	19	12
D/district	16	12
E/district	14	10

1.1 Family members' characteristics

Table 4-2 presents the demographic characteristics of the family members. Over half of the sample was female (58.2%) and fifty-two subjects were young adults (aged from 31 to 40 years). All of the subjects (100%) were Moslems. The majority of the sample had attained high school education or higher (39.8% and 32.7%, respectively). Half of them (50%) were private employees and had a monthly average income of between 500,000 – 1,000,000 Rupiahs, which is equal to approximately US $ 56-111 (equal to approximately 2500-4700 Baht). Regarding medical payment, fifty seven percent (57.1%) of subjects were total self-paying. Most of them, 90.8 %, did not have previous experience of hospitalization of ill relatives.

Table 4-2: Frequency and percentage of family members demographic characteristics (n=98)

Characteristics	Frequency	Percentage
Gender		
Female	58	58.2
Male	40	40.8
Age (years)		
18-20	1	1.0
21-30	17	17.3
31-40	52	53.1
41-50	20	20.4
51-60	8	8.2
M = 37.76, *SD* = 8.91, Range = 20-60 years		
Religion		
Islam	98	100
Educational level		
Elementary school	10	10.2
Junior high school	17	17.3
Senior high school	39	39.8
College/University	32	32.7
Occupation		
Farmer	10	10.2
Government employee	33	33.7
Private employee	42	42.9
Retired	7	7.1
House wife	1	1.0
Others	5	5.1
Family income		
None	3	3.1
≤ Rp. 500,000,-	4	4.1
Rp. 500,000,- – 1,000,000,-	50	51.0
Rp. 1,000,000,- – 2,000,000,-	39	39.8
Rp. > 2,000,000,-	2	2.0
Payment of the illness		
Total reimbursement	24	24.5
Partial reimbursement	18	18.4
Total self paid	56	57.1
Previous experience		
No	89	90.8
Yes	9	9.2

1.1 Critically ill patients' characteristics

Table 4-3 shows the demographic characteristics of the critically ill patients. Just over half of the hospitalized, critically ill patients were female (53.1%) and the patients' age ranged from 19 to 94 years (M = 42.72, SD = 16.81) with thirty five (35.7%) over 51 years. The majority of the patients were admitted to critical care units with neurologic disorders (44.9%) and cardiovascular disorders (24.5%). The duration admission of patients in intensive care unit and coronary care unit was mostly 24 hours (44.9%).

Table 4-3: Frequency and percentage of patients' demographic characteristics (n=98)

Characteristics	Frequency	Percentage
Gender		
Female	52	53.1
Male	46	46.9
Age (years)		
18-20	8	8.2
21-30	19	19.4
31-40	19	19.4
41-50	17	17.3
51-60	25	25.5
61+	10	10.2
M = 42.72, SD = 16.81, Range = 19-94 years		
Medical Diagnosis		
Neurologic disorders	44	44.9
Craniotomy	16	16.3
Stroke Non Hemorrhagic	14	14.3
Stroke Hemorrhagic	10	10.2
Severe Head Injury	4	4.1
Cardiovascular disorders	24	24.5
Old Myocardial Infarction	10	10.2
Acute Myocardial Infarction	9	9.2
Congenital Heart Failure	4	4.1

Table 4-3: (Continued)

Characteristics	Frequency	Percentage
Chest Pain	1	1.0
Pulmonary disorders	16	16.3
Shock	12	12.1
Shock Septic	7	7.1
Shock Hypoglycemia	2	2.0
Shock Hyperglycemia	2	2.0
Shock Hypovolemic	1	1.0
Post major surgery	16	16.2
Post Sectiocesarian	9	9.1
Post Laparatomy	6	6.1
Post Laminectomy	1	1.0
Duration of admission		
24 hours	44	44.9
48 hours	37	37.2
72 hours	17	17.3
M = 1.72 days, SD = .74, Range = 24-72 hours		

1.2 Critical care nurses' characteristics

There were 98 nurses working in the intensive critical care unit and coronary care unit recruited in this study. These characteristics are presented in Table 4-4. The majority of subjects were female, 64.3%. Most (61.2%) were aged between 21 and 30 years. The most all were Moslems (99%). The educational level was mainly Diploma III of Nursing (91.8 %). Among them, thirty-three subjects (33.7%) had between 6 - 10 years working experience.

Table 4-4: Frequency and percentage of critical care nurses' demographic characteristics (n=98)

Characteristics	Frequency	Percentage
Gender		
Female	63	64.3
Male	35	35.7
Age (years)		
21-30	60	61.2
31-40	25	25.5
41-50	9	9.2
51-60	4	4.1
M = 31.14, *SD* = 7.65, Range = 22-63 years		
Religion		
Islam	97	99.0
Christian	1	1.0
Highest educational level attained		
Senior School of Nursing	6	6.1
Diploma III of Nursing	90	91.8
Bachelor of Nursing	2	2.0
Length of working experience (years)		
0- 5	16	16.3
6-10	33	33.7
11-15	21	21.4
16-20	15	15.3
21-25	9	9.2
26-30	4	4.1
M = 2.80, *SD* = 1.36, Range = 1-6 years		

Part 2 Level of Families' Perceptions of Family Needs

Table 4-5 shows the mean total of family members' perception of family needs to be 161.13 (*SD* = 14.21) ranging from 134 to 198 which indicates high perception of family needs. Seventy one percent family members (71.4%) perceived their needs at a high level and twenty-eight (28.6%) perceived at a moderate level (Table 4-6).

Table 4-7 shows the rank order of all mean dimensions of family needs perceived by family members. The highest mean score of family needs was perceived by family members, which was needed for assurance (M = 3.32, SD = 0.27). While the lowest mean score of family needs was for comfort needs (M = 2.87, SD = 0.37). Nevertheless, this was at moderate level.

Table 4-8 represents the top three items of importance of family needs perceived by family members there were (1) feel there is hope (M = 3.84, SD = 0.37), (2) have questions answered honestly (M = 3.72, SD = 0.45), and (3) have explanations of environment (M = 3.70, SD = 0.58). The three family needs lowest in importance perceived by family members were (1) have someone of the same gender care (M = 1.92, SD = 0.88), (2) be encouraged to cry (M = 2.07, SD = 0.88), and (3) have a dining room near the waiting room (M = 2.10, SD = 0.74).

The levels of family members' perception of family needs scores were analyzed. Tables 4-9, 4-10, 4-11, 4-12, and 4-13 show the means, standard deviations and levels of the three highest and the three lowest for each dimension of family needs.

Table 4-5: Minimal, maximal score, mean, standard deviation, skewness and kurtosis of family needs perceived by family members (n=98)

Variables	Min	Max	Mean	SD	Skewness	Kurtosis
Family needs perceived by family members	134	198	161.13	14.21	0.24	-0.34

Table 4-6: Frequency and percentage of levels of family needs perceived by family members (n=98)

Level	Possible score	Frequency	Percentage
Low perception of family needs	52 – 104	0	0
Moderate perception of family needs	104.1 – 156	28	28.6
High perception of family needs	156.1 – 208	70	71.4

Table 4-7: Means, standard deviations, and levels of each subscales of family needs perceived by family members (n=98)

Subscales	Mean	SD	Level
Assurance	3.32	0.27	High
Proximity	3.17	0.32	High
Information	3.16	0.44	High
Support	3.03	0.36	Moderate
Comfort	2.87	0.37	Moderate

Table 4-8: Means, standard deviations, and levels of the top three and the lowest three items of family needs perceived by family members (n=98)

Family needs items	Mean	SD	Level
Top three items			
Feel there is hope	3.84	0.37	High
Have questions answered honestly	3.72	0.45	High
Have explanations of environment	3.70	0.58	High
Lowest three items			
Have someone to care with the same gender	1.92	0.88	Low
Be encourage to cry	2.07	0.88	Low
Having dining room near waiting room	2.10	0.74	Moderate

2.1: The levels of family needs for support

Table 4-9 shows the three highest and the three lowest mean items scores of family needs for support perceived by family members. The family members perceived that the highest level of support needs were to have explanations of the environment before going into the critical care unit for the first time (M = 3.70, SD = 0.58), to talk about possibility of patient's death (M = 3.60, SD = 0.51) and to have directions at the bed side (M = 3.41, SD = 0.55). Meanwhile, to have Pengajian (pray as gathering in Islam) to support (M = 2.78, SD = 0.83), to talk about negative feeling (M = 2.29, SD = 1.00), and to be encouraged to cry (M =2.07, SD = 0.88) were placed at the lowest mean score.

Table 4-9: Means, standard deviations and levels of the three highest and the three lowest family needs for support perceived by family members (n=98)

Variables	Mean	SD	Level
The three highest			
Have explanations of environment	3.70	0.58	High
Talk about the possibility of patient's death	3.60	0.51	High
Have directions as to what to do at the relative' bedside	3.41	0.55	High
The three lowest			
Have "Pengajian" (pray gathering) to support	2.78	0.83	Moderate
Talk about negative feelings	2.29	1.00	Moderate
Be encouraged to cry	2.07	0.88	Low

2.2 The levels of family needs for comfort

Table 4-10 shows means, standard deviations, and levels of the three highest and the three lowest mean scores of family needs for comfort perceived by family members. Family members perceived them the highest comfort needs were to have praying room near the waiting room, to be assured it is all right to leave the hospital for a while, and to have a bathroom near the waiting room, with mean scores of 3.12 (SD = 0.54), 3.10 (SD = 0.55), and 3.09 (SD = 0.48), respectively. On the other hand, family members showed the moderate perceptions at the lowest mean scores on the items to feel accepted by the hospital staff (M = 2.89, SD = 0.85), to have comfortable furniture in waiting room (M = 2.66, SD = 0.73), and to have a dining room (M = 2.10, SD = 0.74).

Table 4-10: Means, standard deviations and levels of the three highest and the three lowest of family needs for comfort perceived by family members (n=98)

Variables	Mean	SD	Level
The three highest			
Have praying room near waiting room	3.12	0.54	High
Be assured it is all right to leave the hospital	3.10	0.55	High
Have bathroom near waiting room	3.09	0.48	Moderate
The three lowest			
Feel accepted by the hospital staff	2.89	0.85	Moderate
Have comfortable furniture in waiting room	2.66	0.73	Moderate
Have dining room near waiting room	2.10	0.74	Moderate

2.3 The levels of family needs for information

Table 4-11 shows means, standard deviations, and levels of the three highest and the three lowest of information needs' items perceived by family members. Family members had high perception of information needs for the items to know how the patient is being treated medically (M =3.57, SD = 0.53), to know why things were being done (M = 3.56, SD = 0.56), and to know exactly what is being done for the patient (M = 3.45, SD = 0.56). However, family members perceived need for helping with the patient's physical care (M = 2.88, SD = 0.61), to know which staff members could give information (M = 2.83, SD = 0.72), and to know about the type of staffs (M = 2.26, SD = 0.94), were scored with the lowest means and were at a moderate level.

Table 4-11: Means, standard deviations and levels of the three highest and the three lowest of family needs for information perceived by family members (n=98)

Variables	Mean	SD	Level
The three highest			
Know how patient is being treated medically	3.57	0.53	High
Know why things were done	3.56	0.56	High
Know exactly what is being done	3.45	0.56	High
The three lowest			
Help with the patient's physical care	2.88	0.61	Moderate
Know which staff members could give information	2.83	0.72	Moderate
Know types of staff members	2.26	0.95	Moderate

2.4 The levels of family needs for proximity

Table 4-12 presents the means, standard deviations, and levels of the three highest and the three lowest mean scores of family needs for proximity perceived by family members. Family members scored at high levels of perceptions on the need to receive information once a day (M = 3.44, SD = 0.54), followed by being called at home about changes (M = 3.37, SD = 0.53), and being told about transfer plans to another unit (M = 3.27, SD = 0.53). On the other hand, family members perceived with the lowest mean scores at moderate level this needs for seeing the patient frequently (M = 3.02, SD = 0.76), leading or praying at the bedside during the scheduled time of praying (M = 2.97, SD = 0.70), and visiting the relative at any time (M = 2.93, SD = 0.63)

Table 4-12: Means, standard deviations and levels of the three highest and the three lowest mean scores of family needs for proximity perceived by family members (n=98)

Variables	Mean	SD	Level
The three highest			
Receive information once a day	3.44	0.54	High
Be called at home about changes	3.37	0.53	High
Be told about transfer plans to another unit	3.27	0.53	High
The three lowest			
See the patient frequently	3.02	0.76	Moderate
Lead or pray with relatives at scheduled time	2.97	0.70	Moderate
Be able to visit at any time	2.93	0.63	Moderate

2.5 The levels of family needs for assurance

Table 4-13 shows means, standard deviation, and levels of the three highest and the three lowest mean scores of family needs for assurance perceived by family members. Items of family members' perceptions of assurance needs, which were scored at high levels, were feeling there is hope (M = 3.84, SD = 0.37), having questions answered honestly (M = 3.72, SD = 0.45), and to die peacefully if there was no hope (M = 3.64, SD = 0.52). The need to have someone to care for the patient with the same gender, however, was perceived at low level (M = 1.92, SD = 0.88).

Table 4-13: Means, standard deviations and levels of the three highest and the three lowest of family needs for assurance perceived by family members (n=98)

Variables	Mean	SD	Level
The three highest			
Feel there is hope	3.84	0.37	High
Have questions answered honestly	3.72	0.45	High
To die peacefully if there was no hope	3.64	0.52	High
The three lowest			
Be assured that the best care given	3.38	0.49	High
Feel that health care personnel care about the patient	3.17	0.63	High
Have someone of the same gender to take care	1.92	0.88	Low

2.6 The additional analysis for the effects of family members' demographic variables on the perceptions of family needs

Analysis of Variance (ANOVA) was carried out to analyze the effect of age, medical diagnosis, duration of admission, education level, occupation, family

income, payment of illness, and hospital setting as the independent variables. For age level of family members, it was grouped into 5 levels (previously the age level had 6 groups) since there was only one subject in the 18-20 group, this group was included in to the 21-30 group. The dependent variable was the total mean score of the family needs perceived by family members. As shown in Table 4-14, only type of the illness payments and gender were significantly related to family needs (F = 3.89, $p < .05$; t = -3.49, $p < .01$, respectively). The other independent variables were not significantly related. For this type of payment, the researcher performed a post hoc test to see the difference in each pair of payment types. Post hoc analysis with Boferrani test showed that subjects with full reimbursement had higher family needs score than subjects with total self payment (mean difference = 9.07, $p < .05$). Meanwhile the difference in mean scores of other pairs were not significantly different.

An independent t-test was conducted to find out the effect of gender on the family needs perception. Table 4-14 shows that was significant different between female' and male' perceptions on family needs (t = -3.49, $p < .01$). Males had a higher score for family needs than did females (males, M = 166.85, SD = 14.40; females, M = 157.19, SD = 12.77).

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Table 4-14: Mean, standard deviation, F-test, and t-test result of the demographic variables and total mean score of family needs perceived by family members

Demographic variables	Total mean score of family needs		
	Mean	SD	F/t
Age of family members (years)			1.68^{NS}
21-30	156.29	14.19	
31-40	160.25	14.82	
41-50	165.05	12.29	
51-60	164.63	11.78	
Educational level			2.76^{NS}
Elementary school	166.56	13.44	
Junior high school	157.32	16.33	
Senior high school	157.36	15.48	
College/University	160.67	9.30	
Occupation			1.08^{NS}
Farmer	156.30	18.26	
Government employee	159.79	13.93	
Private employee	163.10	14.19	
Retired	164.14	7.34	
Others	163.60	13.46	
Family income			.42^{NS}
None	157.00	10.44	
≤ Rp. 500,000,-	163.75	22.19	
Rp. 500,000,- - 1,000,000,-	161.34	14.06	
Rp. 1,000,000,- - 1,500,000,-	161.23	14.33	
Rp. > 2,000,000,-	151.00	7.07	
Payment of the illness			3.89*
Total reimbursement	167.00	15.69	
Partial reimbursement	163.28	13.33	
Total self paid	157.93	13.02	
Medical Diagnosis			1.72^{NS}
Neurologic disorders			
Craniotomy	163.06	12.05	
Stroke Non Hemorrhagic	158.36	16.22	
Stroke Hemorrhagic	152.90	7.65	
Severe Head Injury	175.25	7.80	
Cardiovascular disorders			
Old Myocardial Infarction	157.70	10.87	
Acute Myocardial Infarction	162.25	25.38	
Congenital Heart Failure	157.11	19.55	

Table 4-14: (Continued)

Demographic variables	Total mean score of family needs		
	Mean	SD	F/t
Pulmonary disorders	152.83	8.73	
Shock			
Shock Septic	159.00	12.77	
Shock Hypoglycemia	169.00	19.80	
Shock Hyperglycemia	166.00	2.83	
Post major surgery			
Post Sectiocesarian	167.20	5.17	
Post Laparatomy	178.33	11.71	
Duration of patient admission (hours)			.64 NS
24	160.68	13.02	
48	162.94	13.09	
72	158.35	15.50	
Hospitals			2.11 NS
RSUP. Dr. Kariadi	161.40	13.13	
RSU. Prof. Dr. Margono Soekarjo	167.33	11.20	
RSU. Tugurejo	155.63	15.05	
RSU. Kota	160.56	17.66	
RSU. Purwodadi	158.14	12.97	
Gender (family member) •			-3.49**
Female	157.19	12.77	
Male	166.85	14.40	

** $p < .01$ * $p < .05$

• Independent sample t-test was conducted

NS = not significant

2.7 Open-ended Question Results

Additionally, two questions, "Do you have any other suggestions related to family needs?" and "Please give more reason why you suggest it?" were asked. Almost all the subjects (96.94%) did not have anything to say to these questions. On the other hand, three family members (3.06%) gave suggestions to add more in the family needs. One suggested that the family members should be asked if they feel they need to be secure and safe while was waiting the relative. This reflected needs for comfort. This female family member stated:

When I am waiting for my father, I need to be secure and safe while I am sleeping or staying whole days at the waiting room, especially at night. When some of my relatives go home and just two or three left in.

The daughter of one patient

Other two family members focused on visiting time. They focused on needs for proximity. One patient's family member stated:

I hope the hospital will change the policy, visitors are permitted to see their relatives more than 1 person so we can give more support and lead to pray to my relatives. This will be more powerful and meaningful.

The daughter of one patient

Another patient's family member reported that:

I hope the nurses can give flexible visiting hours for my relatives that come from other cities or suburbs to visit, support, and pray with the patient, although, it is not in the visiting hours.

The wife of one patient

Part 3 Level of Nurses' Perceptions of Family Needs

Table 4-15 presents the mean total score indicating a moderate level of family needs perceived by nurses with a mean score of 149.34, ranging from 118 to 187 (*SD* = 14.66). Sixty-four nurses (65.3%) scored at a moderate level of family needs, and 34 nurses (34.7%) perceived family needs at a high level (Table 4-16).

Table 4-17 shows that nurses perceived that family members of critically ill patients required assurance needs (M = 3.19, SD = 0.33) at the highest level. On the other hand, nurses' perceptions of proximity needs (M = 2.68, SD = 0.42) were ranked the lowest with the moderate levels.

Table 4-18 represents the top three items of the importance of family needs perceived by family members that were as follows: (1) to have explanation of

environment (M = 3.58, SD = 0.59), (2) to know why things were done (M = 3.56, SD = 0.58), and (3) to be assured that the best care possible is given (M = 3.53, SD = 0.54). The three lowest of the importance of family needs perceived by family members were (1) to be encouraged to cry (M = 1.96, SD = 0.91), (2) to see the patient frequently (M = 2.03, SD = 0.89), and (3) to have someone of the same gender to take care (M = 2.04, SD = 0.61).

The levels of nurses' perceptions on family needs scores were analyzed. Tables 4-19, 4-20, 4-21, 4-22, and 4-23 present the means, standard deviations, and levels of the three highest and the three lowest mean scores of family needs.

Table 4-15: Minimum, maximum, mean, standard deviation, skewness, and kurtosis of levels of family needs perceived by nurses (n=98)

Variables	Min	Max	Mean	SD	Skewness	Kurtosis
Family needs perceived by nurses	118	187	149.34	14.66	0.12	-0.42

Table 4-16: Frequency, and percentage of level of family needs perceived by nurses (n=98)

Levels	Possible score	Frequency	Percentage
Low perception of family needs	45 – 99	0	0
Moderate perception of family needs	99.1 – 154	64	65.3
High perception of family needs	154.1 – 208	34	34.7

Table 4-17: Means, standard deviations, and levels of each subscale of family needs perceived by nurses (n=98)

Subscales	Mean	SD	Level
Assurance	3.19	0.33	High
Information	2.91	0.34	Moderate
Support	2.85	0.38	Moderate
Comfort	2.78	0.49	Moderate
Proximity	2.68	0.42	Moderate

Table 4-18: Mean, standard deviation, and levels of the three top items and the three lowest items of family needs questionnaire perceived by nurses (n=98)

Family needs items	Mean	SD	Level
Top three items			
Have explanation of environment	3.58	0.59	High
Know why things were done	3.56	0.58	High
Be assured that the best care possible is given	3.53	0.54	High
Lowest three items			
Be encourage to cry	1.96	0.91	Low
See patient frequently	2.03	0.89	Low
Have someone to care with the same gender	2.04	0.61	Low

3.1 The levels of family needs for support

Table 4-19 shows the means, standard deviations, and levels of the three highest and the three lowest mean scores of family needs perceived by nurses in support needs. Nurses perceived at high level of support needs on giving explanations of the environment before going into the critical care unit for the first time (M = 3.58,

SD = 0.59), talking about the possibility that the relative may die (*M* = 3.49, *SD* = 0.61), and being told about religious services (*M* = 3.35, *SD* = 0.54). On the other hand, only two items were perceived by nurses at low level, which were to talk about their negative feelings, and to be encouraged to cry mean scores of 1.96 (*SD* = 0.86) and 1.99 (*SD* = 0.91), respectively.

Table 4-19: Means, standard deviations and levels of the three highest and the three lowest of family needs for support perceived by nurses (n=98)

Variables	Mean	SD	Level
The three highest			
Have explanation of environment	3.58	0.59	High
Talk about possibility of patient's death	3.49	0.61	High
Be told about religious services	3.35	0.54	High
The three lowest			
Have nurse to remind praying time	2.23	0.94	Moderate
Talk about negative feelings	1.99	0.86	Low
Be encourage to cry	1.96	0.91	Low

3.2 The levels of family needs for comfort

Table 4-20 shows the means, standard deviations, and levels of the three highest and the three lowest mean scores of nurses' perception of family needs' items regarding comfort. The highest mean scores of the levels of comfort needs perceived by nurses were families needed to have a praying room near the waiting room (*M* = 3.30, *SD* = 0.58), to feel accepted by the hospital staffs (*M* = 3.17, *SD* = 0.63), and to have bathroom near waiting room (*M* = 2.95, *SD* = 0.65). On the other hand, nurses

perceived that family moderately needed comfortable furniture (M = 2.43, SD = 1.00), a telephone (M = 2.38, SD = 0.62), and dining room (M = 2.21, SD = 0.78)

Table 4-20: Means, standard deviations and levels of the three highest and the three lowest of family needs for comfort perceived by nurses (n = 98)

Variables	Mean	SD	Level
The three highest			
Have praying room near waiting room	3.30	0.58	High
Feel accepted by hospital staff	3.17	0.63	High
Have bathroom near waiting room	2.95	0.65	Moderate
The three lowest			
Have comfortable furniture near waiting room	2.43	1.00	Moderate
Have telephone near waiting room	2.38	0.62	Moderate
Have dining room near waiting room	2.21	0.78	Moderate

3.3 The levels of family needs for information

Table 4-21 shows the means, standard deviations, and levels of the three highest and the three lowest family needs for information perceived by nurses. Nurses had high perception of information needs that families needed to know why things were done (M = 3.56, SD = 0.58), how their relatives were treated medically (M = 3.42, SD = 0.56), and what was being done for their relatives (M = 3.42, SD = 0.54). Nurses scored the lowest mean scores of information needs in family members on the items to have a specific person to call (M = 2.65, SD = 0.88), to talk to the doctor every day (M = 2.55, SD = 0.63), and to know about the types of staff members (M =

2.05, *SD* = 0.78). On the other hand, the mean scores of these needs represented moderate levels.

Table 4-21: Means, standard deviations and levels of the three highest and the three lowest of family needs for information perceived by nurses (n=98)

Variables	Mean	SD	Level
The three highest			
Know why things were done	3.56	0.58	High
Know how patient is treated medically	3.42	0.56	High
Know exactly what is being done	3.42	0.54	High
The three lowest			
Have a specific person to call	2.65	0.88	Moderate
Talk to the doctor every day	2.55	0.63	Moderate
Know types of staff members	2.05	0.78	Low

3.4 The levels of family needs for proximity

Table 4-22 presents the means, standard deviations, and levels of three highest and the three lowest of family needs for proximity perceived by nurses. Nurses perceived that the three highest mean scores of proximity needs were families needed to be told about transfer plan (*M* = 3.35, *SD* = 0.54), to have visiting hours start on time (*M* = 3.11, *SD* = 0.57), and to have a waiting room near the patient (*M* = 2.82, *SD* = 0.72). Meanwhile, the lowest mean scores of the nurses' perceptions on proximity needs were for families to be called at home about changes at a moderate level (*M* =2.52, *SD* = 0.94), for families to visit their relatives at any time at a

moderate level (M = 2.30, SD = 0.93), and for families to see their relatives frequently at a low level (M = 2.03, SD = 0.89).

Table 4-22: Means, standard deviations and levels of the three highest and the three lowest of family needs for proximity perceived by nurses (n=98)

Variables	Mean	SD	Level
The three highest			
Be told about transfer plans	3.35	0.54	High
Have visiting hours start on time	3.11	0.57	High
Have waiting room near patient	2.82	0.72	Moderate
The three lowest			
Be called at home about changes	2.52	0.94	Moderate
Visit at any time	2.30	0.93	Moderate
See patient frequently	2.03	0.89	Low

3.5 The levels of family needs for assurance

Table 4-23 shows the means, standard deviations, levels of the three highest and the three lowest of nurses' perception of assurance needs. The three highest mean scores of assurance needs perceived by nurses were for families to be assured that the best care was being given (M = 3.53, SD = 0.54), to have explanations given that were understandable (M = 3.51, SD = 0.30), and for their relatives to die peacefully (M = 3.42, SD = 0.57). On the other hand, nurses ranked that families needed to have questions answered honestly at a high level (M = 3.28, SD = 0.64), to feel there was hope at a moderate level (M = 3.00, SD = 0.72), and to have someone of the same gender to care for their relatives at a low level (M = 2.04, SD = 0.61).

Table 4-23: Means, standard deviations and levels of the three highest and the three lowest of family needs for assurance perceived by nurses (n=98)

Variables	Mean	SD	Level
The three highest			
Be assured that the best care possible is given	3.53	0.54	High
Families needed to have explanations given that are understandable	3.51	0.30	High
Families needed their relatives to die peacefully if there was no hope	3.42	0.57	High
The three lowest			
Families needed to have questions answered honestly	3.28	0.64	High
Families needed to feel there is hope	3.00	0.72	Moderate
Have someone of the same gender to take care	2.04	0.61	Low

3.6 The additional statistics for the effect of nurses' demographic variables on the family needs' perceptions

One Way Analysis of Variance (ANOVA) was carried out to analyze the effect of age, the highest educational level attained, and length of working experience, as the independent variables. The dependent variable was the mean total score of the family needs perceived by nurses. As shown in Table 4-24, all the results of F-tests show no significant relationships so that post hoc analysis was not performed it. In addition, independent sample t-test was done to find the effect of gender on family needs. The t-test indicated no significant difference between perception of female nurses and male nurses on family needs.

Table 4-24: Mean, standard deviation, F-test, and t-test result of the demographic variables and total mean score of family needs perceived by nurses (n=98)

Demographic variables	Total mean of family needs score		
	Mean	SD	F/t
Age (years)			$.65^{NS}$
21-30	150.95	15.05	
31-40	146.64	13.37	
41-50	146.22	17.37	
51-60	149.00	3.26	
Highest educational attained			2.02^{NS}
Senior School of Nursing	138.50	14.49	
Diploma III of Nursing	149.33	13.33	
Bachelor of Nursing	157.00	42.43	
Length of working experience (years)			1.40^{NS}
0-5	151.75	14.89	
6-10	148.13	13.62	
11-15	144.24	16.59	
16-20	155.73	12.49	
21-25	147.78	10.83	
26-27	155.50	22.29	
Hospitals			1.63^{NS}
RSUP. Dr. Kariadi	146.25	16.79	
RSU. Prof. Dr. Margono	152.66	14.99	
RSU. Tugurejo	154.92	9.79	
RSU. Kota	144.17	12.39	
RSU. Purwodadi	148.10	10.75	
Gender *			1.46^{NS}
Female	150.94	14.80	
Male	146.46	14.16	

* Independent –sample t-test was conducted
NS = not significant

3.7 Open-ended Question Results

As a result of the feedback from nurses during data collection, an additional question, "Do you have any other suggestions related to family needs?" was added. All the nurses answered that they did not have any suggestion to add in family needs

because all the items were already mentioned and covered the needs of family members. Further, the nurses said that they already attended to some of the family needs mentioned at MCCFNI to satisfy family members while waiting for their relatives.

Part 4 Differences in Family Needs' Perceptions between Family Members and Nurses

The difference of perceptions between family members and nurses was examined using inferential statistics, i.e. the independent t-test. The assumptions of the independent t-test were examined. These included tests of normality and homogeneity of variances between the two groups and the assumptions were met in most variables. Independent t-test was used to examine the equality between mean scores of family members' and nurses' perceptions.

Table 4-25 indicates that comparison of the family members' and nurses' perceptions of family needs yielded a significant difference (t=-5.72, p<.01).

Table 4-25: Comparison of the total mean scored between family members' and nurses' perceptions of family needs by t-test (n=198)

Variables	Mean	SD	t	p
Family members' perceptions of family needs	161.13	14.21	-5.72	.000*
Nurses' perceptions of family needs	149.34	14.66		

* p<.001

Table 4-26 presents the discrepancies between family members' and nurses' perceptions revealed in support, information, proximity, and assurance, but not comfort. The data shows normally distributed. In these four needs of MCCFNI, need for support (t = -3.33, p < .01), information (t = -4.28, p < .001), proximity (t = -9.17, p < .001), and assurance (t = -2.95, p < .01), family members' perception scores were significantly higher than nurses' perception scores. However, there were no significant differences in the comfort needs' perception scores between family members and nurses.

Table 4-27 presents the three highest differences of mean importance of each subscale of family needs perceived by family members and nurses. The three highest differences of mean scores of support needs perceived by family members and nurses were to have nurse to remind praying room (mean difference = 0.60), to have another person to visit with family in ICU (mean difference = 0.57), and to have someone to join while praying (mean difference = 0.48). For comfort needs, family members and nurses perceived different mean scores in having a telephone near waiting room (mean difference = 0.68), having good food available (mean difference = 0.30), and feeling accepted by hospital staff (mean difference = 0.28). Among needs for information, family members and nurses had different mean scores of perceived family needs to talk to the doctor every day (mean difference = 0.68), to have a specific person to call (mean difference = 0.47), and to know whom they could contact for religious help (mean difference = 0.44). Among needs for proximity, family members and nurses had different mean scores of perceived family needs to see patient frequently (mean difference = 0.90), to visit at any time (mean difference

= 0.67), and to talk to nurse every day (0.58). Among needs for assurance, the three highest differences perceived by family members and nurses were the family needs to feel there was hope (mean difference = 0.84), to have questions answered honestly (mean difference = 0.44), and to die peacefully if there was no hope (mean difference = 0.22).

Table 4-26: Means, standard deviations, and p value of family needs' perceptions between family members and nurses (n=196)

Items	Mean	SD	t	*p*
Support				
Family members	51.52	5.17	-3.33	.001*
Nurses	48.52	6.44		
Comfort				
Family members	22.96	2.95	-1.42	.156
Nurses	22.26	3.90		
Information				
Family members	28.40	3.99	-4.28	.000**
Nurses	26.22	3.06		
Proximity				
Family members	31.70	3.20	-9.17	.000**
Nurses	26.80	4.23		
Assurance				
Family members	26.55	2.13	-2.95	.004*
Nurses	25.54	2.64		

** $p < .001$ * $p < .01$

Table 4-27: The three highest differences of mean scores in each subscales of family needs perceived by family members (n=98), and nurses (n=98)

Items of family needs	Family member mean	Nurse mean	Different mean score
Support			
Have nurse to remind praying time	2.83	2.23	0.60
Have another person to visit with family in ICU	3.28	2.71	0.57
Have someone to join while praying	2.93	2.45	0.48
Comfort			
Have telephone near waiting room	3.06	2.38	0.68
Have good food available	2.93	2.63	0.30
Feel accepted by the hospital staff	2.89	3.17	0.28
Information			
Talk to the doctor every day	3.23	2.55	0.68
Have a specific person to call	3.12	2.65	0.47
Know whom they can contact for religious help	3.18	2.74	0.44
Proximity			
See patient frequently	2.93	2.03	0.90
Visit at any time	2.97	2.30	0.67
Talk to nurse every day	3.16	2.58	0.58
Assurance			
Feel there was hope	3.84	3.00	0.84
Have questions answered honestly	3.72	3.28	0.44
To die peacefully if there was no hope	3.64	3.42	0.22

* The difference of the mean scores perceived by family members and nurses

Discussion

This study aimed to identify the levels of families' and nurses' perceptions, and to examine the differences between families' perceptions and nurses' perceptions regarding family needs.

Discussion of the study findings will be presented in four parts. The first part will focus on characteristics of subjects, the second part will focus on family members' perceptions of family needs, the third part will focus on the nurses'

perceptions of family needs, and the fourth part will discuss the mean differences of family need perceptions between family members and nurses.

Part 1 Characteristics of Subjects

1.1 Critically ill patients and families profile

The age of critically ill patients ranged from 19 to 94 with a mean age of 42.72 years (SD = 16.81). Most patients were female and aged between 41 and 60 years. The majority of patients were admitted to ICU and CCU owing is neurologic disorders (40.8%) and cardiovascular disorder (30.2%). These diseases are common among older adults in Indonesia, and are considered the highest causes of death (26.4%) (Population Sources, 2000). Moreover, patients with neurologic and cardiovascular disorders are considered as real or potential life-threatening health problems requiring continuous intervention to prevent complications and restore health (Beare & Myers, 1994; Beebe, 2003; Hoyt et al., 1991).

The patients' family members, who were waiting, and taking an active role in caring for the patients, were mostly females (58.2 %) who had the most intimate relationship with the patient such as mother, spouse or sister. In Javanese families, the women often have more intense relationship, responsibility, and are expected to take care of the family members during sickness, because women are closely related to mothering. They use the natural feminine characteristics of nurturing, compassion, and submissiveness. The female role leaves the male relatively functionless in regard to the caring of sick family members (Koentjaraningrat, 1985).

The Javanese religion is mainly Islam (Shield & Hartati, 2003) and all subjects in this study were Muslims (100%). Islam influences the Javanese Muslim way of life (Koentjaraningrat, 1985). The family's religious/spiritual belief is used in the appraisal of a stressful situation (Kloosterhouse, 2002).

According to Statistics Indonesia (1998), about 63% of Indonesians' educational levels are at elementary school, 33% at high school, and 4% at tertiary degree. It was found that family members in this study were relatively educated. Indonesians with a tertiary degree are more likely people who live in urban areas than rural. They had mainly (39.8 %) finished Senior High School, and 32.7% had finished diploma/associate or university. This study was held in the four hospitals in Semarang and Purwokerto, which are located in urban areas.

Half of the subjects in this study worked at private companies, and received a monthly income from 500,000 to 1,000,000 Rupiahs, which is higher than the standard minimum salary in Indonesia (Annual Report BPS, 2000). However, the family's income was not adequate to support the admission in ICU or CCU, of relatives who were self-paying (57.1%). Daily rates, for the lowest class of ICU or CCU, ranged from about 100,000 to 150,000 Rupiahs (equal to $ 10 and $ 15, respectively), while the highest class ICU or CCU costs up to 500,000 Rupiah (equal to $ 50). These ICU or CCU costs are considered expensive for low and middle class people.

Most of the family members (90.8 %) did not have any experience about critical care units. Family members did not know what they should or should not do when their relatives were admitted to the ICU or CCU. Based on observation, family

members looked very stressed, and uncomfortable and were mostly waiting their relatives outside, and hoped that they would receive information about their relatives' progress. Similarly, Fleury and Moore (1999) reported that family members felt fear, frustration, and anxiety over uncertainty with relative's condition.

1.2 Critical care nurses profile

The ninety-eight subjects who fulfilled the required criteria were recruited from the two referral hospitals, and the here district hospitals in Central Java, Indonesia. Majority of the subjects were female (64.3%) because Indonesian people perceive that nursing profession is as woman's job. They believe that nursing is more suitable to women, who can take care better than men or they have a mother's instinct (Wardhono, 1992). This finding was similar with traditional view of nursing that "Florence Nightingale saw nursing as closely related to mothering because both used the natural feminine characteristics of nurturance, compassion, and submissiveness" (Leddy & Pepper, 1998).

Regarding the educational background of the ICU and CCU nurses, ninety-two subjects (91.8 %) had attained the Diploma III of Nursing. Nowadays, Indonesian government's dedicates to improving the standard and level of nursing education from Senior Nursing School into Diploma III. The mean working experience among nurses was 6.11 years (SD = 6.05). Before becoming critical care nurses, they were trained for three months to gain skills and knowledge about caring for critically ill patients. Then, they would be trained or attended additional courses related to critical care and how to operate new high tech equipment.

Part 2 The Level of Needs of Families who have Members Admitted to Critical Care Units Perceived by Family Members

The total mean score of family members' perception on family needs was 161.13 (SD = 14.21), which is a high level (Table 4-5). One explanation would be that the critical illness of one family member is stressful for the entire family members. When critically ill patients' family members experience crisis, they are greatly influenced by fear and anxiety, grief, disorganization, helplessness, and changed family roles and responsibility (Hupcey & Penrod, 2000; Johnson et al., 1995). These situations can cause physical, psychosocial, and spiritual impacts on the family (Horn et al., 2002), and will lead to difficulty in mobilizing appropriate coping resources during critical illness (Price et al., 1991). As a result, family members had more needs for assurance, proximity, information, support, and comfort when coping with crisis situations than in normal conditions. The results of this study will be discussed in detail ranked by the levels of family needs perceived by family members as follows:

2.1 Assurance needs

The highest family needs perceived by family members was the need for assurance (M = 3.32, SD = 0.54) (Table 4-7). In the hospitals, the families could not see their relatives frequently because of restricted visiting hours; meanwhile, nurses and doctors did not have time to discuss or talk to the family members about patients' conditions. Family members needed assurance to alleviate stress, avert a potential crisis, and reduce uncertainty (Leske, 1991).

As shown in table 4-13, Family members needed to be assured about feeling there was hope (M = 3.84, SD = 0.37), their questions to be answered honestly (M =

3.72, SD = 0.45), and their relatives to die peacefully if there was no hope (M = 3.64, SD = 0.52). The patients' family members highly perceived that hope is needed to cope during a period of illness.

In this study, hope was the most important of assurance needs perceived by Javanese family members. This finding might indicate that the major concern of Javanese families is the health conditions of their relatives, and advanced medical technology. Because of the illness and impact on the patients, the family members referred their relatives to the hospitals that provide specialist doctors and advanced medical technology (Plowfield, 1999). This also was supported by Gelling (1999) that family members' priority of assurance needs was hope for better expected outcome.

In addition, culture and religion influence the perceptions of family members on hope. Javanese family members perceived that family support is as a source of hope. When family members faced with crisis situation they looked for hope to cope with crisis situation. This result is supported by the finding of Tin, French, & Leung, 1999 that hope is the priority need to help individuals to cope with crisis. Hope is seen as an essential prerequisite to coping during a period of illness. By fostering hope, family members can make sense of and cope with, their current situation (Gelling, 1999).

Every individual will bring his or her personal beliefs to cope during crisis situation. Family members sought solace through a belief in God, and it was beyond the families' ability to understand why crisis events occur. In addition, maintaining hope as an important need in this study could be explained in part by family members' strong belief in Islam (Carson et al., 1988 as cited in Wilson & Miles,

2001). Islam believes that illness or wellness is God's will and their fate is within God's hands only (Al-Hasan & Hweidi, 2004). The families' needed to feel that there was hope, and they did not want his/her relative to suffer but would die peacefully (Heneman & Cardin, 2002). In order to fulfilled the family hope, they preferred to receive honest answers from the health care teams or to be told the truth about the patient's condition, even if the information conflicted with or compromised their need for hope, to prepare, if necessary, for patients' approaching death. It is relevant that in the Islam principle, when death approaches, the close families and friends try to support and comfort the dying person through supplication as well as remembrance of Allah and His will. Passages from the Qur'an will be read to them and the "Shaddah" recited (Husen, 2004).

On the other hand, the two lowest assurance needs perceived by family members (Table 4-13), were the need to be assured that the best care was being given (M = 3.38, SD = 0.49), to feel that personnel care about the patient (M = 3.17, SD = 0.63). However, these needs are still perceived at a high level. Family members perceived that they needed to be assured that the best care were given and to feel that health personal cared about the patient at high levels but it was ranked lower than the need for hope. This would be a result of family members' believed that the illnesses that happened with their relatives were complicated, and nurses and doctors were experts, skillful, gave continuing treatment, and provided better care for the patients. These findings of the study were supported by Hupcey (1998), who reported that family members trust that health care providers were expert and deliver good quality care to critically ill patients. Another lowest need was to have someone of the same

gender to take care (M = 1.92, SD = 0.88). Even though Javanese families are strictly influenced by Islam (Koentjaraningrat, 1985) they did not perceive that someone who cares to their relatives with the same gender was important. The most important for them is nurses giving the best care for the ill person.

2.2 Proximity needs

The second highest level of family needs perceived by family members was needs for proximity (M = 3.17, SD = 0.56) (Table 4-7). Family members wanted to be near their loved ones who were sick. Staying in close proximity with the patient was one way that family members coped with a critical illness event (Leske, 1986).

The results (Table 4-12) showed that family members needed to receive information once a day (M = 3.44, SD = 0.44). The information was not given every day either from the doctors or the nurses. They just gave the important information to family members when patients were in critical ill or unstable, because they were very busy. Family members also perceived that they needed to be called at home about changes (M = 3.37, SD = 0.53). When family members went home or left patients for a while, they wanted to know the progress, and to be called if there were any change in conditions. Providing information and monitoring the changed conditions would decrease the anxiety and uncertainty levels (McKinley, 1999). In addition, the family members needed to be told about transfer plans to another unit (M = 3.27, SD = 0.53). In fact, the transfer plans were informed to the family members few hours before transferred to another unit. However, the caregiver may need more time to be informed about this transfer. The study of Sawatzky (1996) supported the present study, which explored the stress in critical care nurses. It found that there was a severe

and threatening communication difficulties for nurses because of the workload in ICU.

However, in this dimension, family members did not need to see the patient frequently (M = 3.02, SD = 0.76), to lead or pray with relatives at the scheduled time (M = 2.97, SD = 0.70), or to be able to visit their relatives at any time (M = 2.93, SD = 0.63). These findings of the study were not consistent with other previous studies (Kosco & Warren, 2000; Mikuen et al., 1999) that found that seeing the patient frequently and visiting any time highly perceived as the important needs by family members. Our findings might be the result of family members not wanting to disturb the patients and healthcare teams. Family members preferred to let relatives to rest and sleep rather than wake up relatives to pray at the designated time. However, one patient's family member reported that she preferred to have flexible visiting hours, and have three or four visitors together.

2.3 Information needs

As shown in Table 4-7, the family members ranked the needs for information the third, at a high level (M = 3.13, SD = 0.62). This finding was consistent with the result of studies both in the West (Quinn, 1996) and in Asian (Al-Hasan, 2004; Leung, 2000). When family members experienced uncertainty and stress in critical situation, information needs were important. With the information it will alter perception of family members, help the situational control, and alleviate stress of family members. According to Hilton (1992) uncertainty as a cognitive state that exists when an event cannot be accurately assessed due to lack of information. Uncertainty about the unknown information may contribute additional distress and

reinforce a sense of loss of control for the family during in stressful time (Lindsay, Sherrad, Bickertson, Doucette, Harkness, & Morin , 1997).

Family members perceived the need to know about how patient was being treated medically (M = 3.57, SD = 0.53), why things were done (M = 3.56, SD = 0.56), and what was being done (M = 3.45, SD = 0.56) as very important (Table 4-11). Usually, after giving treatment or doing some procedures for patients, nurses, doctors, or other health providers did not have time to give information to family members. They just made a record on the patients' charts. There was no report that was assigned to family members. These findings are similar to those of Bond et al., (2003). They reported that family members required information about the diagnosis, the treatments, and the rationale for those treatments. In addition, from the observation and information given by families, the researcher found that it was difficult for families to know who they were talking to when all the ICU and CCU staffs were dressed alike in surgical scrub uniforms and in a hurried environment.

On the other hand, family members perceived that the lowest information needs were related to information about helping the patient's physical care (M =2.88, SD = 0.61), knowing which staff members could give information (M = 2.83, SD = 0.72), and the type of staff members (M = 2.26, SD = 0.95). These might be because family members perceived that information about their relatives was more important and interesting than such information about staff members.

In one study, forty family members (40.8 %) were males (Table 4-2), who had the most intimate relationship with patients as fathers, spouses, or brothers, and who were waiting for the patients. The males had higher mean scores on the

perceptions of family needs than females (Table 4-14) so that they perceived family needs as more important than females did. Males expect to be kept informed; when information is not forthcoming, they may become anxious. Gathering information is a way males use to control anxiety and manage uncertainty (Dixon, 1996).

2.4 Support needs

It can be seen from Table 4-7 that family members perceived support needs at the moderate level (M = 3.03, SD = 0.64). This would be the result of families in crisis finding enough support from the close relatives, friends, and neighbors. They would offer help to handle family problems, share feeling and emotion, and obtain spiritual consultation, when someone was ill. They were close and had strong relationship. Koentjaraningrat (1985) reported that Javanese families mainly received support from other family members and the community, which reflects the concept of "rukun" as mutual assistance, cooperation, and sharing of burdens. Moreover, families might receive many visitors who would support and pray together for the ill person (Huda, 2004). Andrew (1998 as cited in Beeby, 2003) reveals that support is the active help and assistance given to family members to enable them to cope with the crisis situation.

As for the findings of this study, the item related to highest perceived needs to have explanations of the environment (M = 3.70, SD = 0.58), to talk about the possibility of the patient's death (M = 3.60, SD = 0.51), and directions at bed side (M = 3.41, SD = 0.55) (Table 4-9). There were no information systems to the family members regarding environment, possibility of patient death and direction given what they should do at the bedside. The family members felt disorientated with the

situation. Family members needed support from health care providers for preparing them by giving information what they should do or not do at the bedside of their loved one (Kettunen, Solovieva, Laamanen, & Santavirta, 1999).

In this study, the lowest need was the item related to the families needing to have "Pengajian" support (M = 2.78, SD = 0.83). Interestingly, the study found that "Pengajian" (pray gathering) support was rated lower by family members, even though, all of them were Muslims. This might be result of they already having had many visitors who would pray with and for the patient and family. The other two lower needs were to talk about their feelings (M = 2.29, SD = 1.00) and to be encouraged to cry (M = 2.07; SD = 0.88). These would be because Javanese families are closed people or as have an introvert character. They would feel shame and uncomfortable to express their feeling to strangers. They would prefer to share and express their burdens with close or familiar people, and family members (Koentjaraningrat, 1985).

With respect to demographic factors, ICU and CCU costs are considered expensive for low and middle classes people (Shield & Hartati, 2003) who had total self-paying (57.1%). These family members needed support from other relatives to handle with financial problem. Controversially, Euro-American families with high income did not need financial support (Gannotti, Kaplan, Handwerker, & Groce, 2004).

2.5 Comfort needs

Family members perceived that the lowest family need was for comfort (M = 2.87, SD = 0.57) (Table 4-7), although, public hospitals in Central Java did not

provide convenience waiting rooms and other comforting measures for the visitors. Comfort needs, such as food, bathroom, furniture, and amenities, were the lowest ranked needs (Leung et al., 2000; Redley et al., 2003). The explanation of this result may be that family members do not have much concern about their personal and physical needs. The families' needs appeared to be focused on the care of the critically ill patient rather than on the families' feelings of comfort (Jamerson et al., 1996). The family members saw the staff as being responsible only for the care of the patient and not for his family (Molter,1979).

Although, public hospitals in Central Java did not provide a convenient waiting room or other comforting measures for the visitors, family members perceived that to feel accepted by hospital staff (M = 2.89, SD = 0.85), to have comfortable furniture (M = 2.66, SD = 0.73), and to have a dining room (M = 2.10, SD = 0.74) as of the lower importance (Table 4-10). Similarly, Al-Hasan and Hweidi (2004) reported that families of critically ill patients ranked the need for comfort at less important. This finding indicates that most of family members did not much concern about their personal and physical needs. Javanese families are more concerned about the patients' condition than the availability of feeling accepted by hospital staff, comfortable furniture, and having a dining room. They would accept what things are already provided or served by hospitals. These would be also influenced by the Javanese family's value of "nrimo" (acceptance) (Ferguson, 2002). They would accept what things are already provided or served by hospitals. This finding is similar to the study of Lee et al. (2000). They found that the families'

immediate needs appeared to be focused on the care of the critically Ill patient and on being with the patient, rather than on their own feelings and comfort.

On the other hand, the most important need perceived by family members was to have a praying room near waiting room (M = 3.12, SD = 0.54). They prefered to have a praying room closed to the setting. They might use prayers to help them deal with stressful situations. When experiencing a crisis in family life, family members would perform extra prayers beside five times a day at designated times (Koentjaraningrat, 1985).

From the open-ended result, interestingly, one family member reported she needed safety waiting room. From her experienced, she was disturbed by somebody while waiting her relative in ICU. This could be considered that waiting room should be a secure and safe. According to Kolcaba (1994), safe and comfortable environment are part of environment comfort needs.

Part 3 Level of Nurses' Perceptions

The following discussion highlights the level of total mean score, the highest level of dimension, the lowest level of dimension, and in each dimensions of family needs perceived by nurses.

Level of family needs perceived by ICU and CCU nurses has been reported in this study. As presented in Table 4-15, the mean total score of nurses' perceptions of family needs was at a moderate level (M = 149.34, SD = 14.66), 65.3% of ICU and CCU nurses perceived that family needs were moderately needed by families who had members admitted to critical care units. The explanation of this result may be that

sometimes nurses pay more attention to the seriously ill patient than to family needs, and nurses perceived that family needs mainly were not their responsibility. This finding is similar to those of previous studies (Leung et al, 2000; Mi-Kuen, 1999; O'Maley, 1991). The results of this study are discussed in detail ranked by the levels of family needs perceived by nurses as follows:

3.1 Assurance needs

The mean score of the need for assurance for family members was at the highest level among the five dimensions perceived by nurses (M = 3.15, SD = 0.61) (Table 4-17). In critical care unit, nurses highly responded that patients' family members needed assurance to alleviate stress, avert a potential crisis, and reduce uncertainty, and to assist families back to equilibrium state (Leske, 1991). Nurses believed that assurance could help maintain hope, and gave the family a sense of security and trust in the healthcare system.

As shown in Table 4-23, nurses perceived the three highest needs for assurance that family members need to be assured that the best care possible is given (M = 3.53, SD = 0.54), and that the patient would die peacefully if there was no hope (M = 3.42, SD = 0.57). Nurses perceived that they were responsible to give the best care and to help patient die peacefully. Nurses placed the highest values on the caring perspective (Grunstein-Amadore, 1992). Nurses also perceived explanations given that are understandable (M = 3.51, SD = 0.30). They perceived that the explanation should be given to assure the relatives and to help understanding with patient condition. This information would help families to decrease anxiety (Lee et al., 1999).

However, the two lowest nurses' perceptions of assurance needs were families needing to have questions answered honestly (M = 3.28, SD = 0.64), and feeling there was hope (M = 3.00, SD = 0.72). When patients fell in bad condition, and there was little hope of recovery, nurses thought that they did not have right to give this information to families. They realized that the medical doctors had authority to disclose information about patient illness. Nurses perceived that the information should be given by the doctors. Corley (1998) mentioned that nurses are afraid to challenge a physician, who have more power, or are hesitant to report changes in patient's condition.

3.2 Information needs

The second highest response of nurses' family needs was that family members needed information (M = 2.91, SD = 0.68) (Table 4-17). Receiving information was a need of families identified frequently in the literature (Al-Hasan, 2004; Leung et al., 2000). The need for information reflects the family's need to understand the patient's condition. Information may provide understanding and allow the family to feel a greater sense of control, reducing the negative emotional responses that occur when a family is unable to function (Gavaghan & Carrol, 2002).

As shown in Table 4-21, nurses highly perceived that they had to inform critically ill patients' family members why things were done to their relatives (M = 3.56, SD = 0.54), how patient was treated medically (M = 3.42, SD = 0.56), and what was being done to the patient (M = 3.42, SD = 0.54). Nurses often found that family members reacted by asking the same question repeatedly, talking incessantly or requesting more information about the patient. Holden, Harrison, and Johnson (2002)

mentioned that nurses needed to inform about patients, the care received, progress, and their relatives' feelings. Comprehension of the diagnosis, prognosis and treatment is essential if families are to understand the nature of the disease, to measure the risk of death, to adjust their hopes to reality, and to form a clear overall picture of the patient's situation (Azoulay & Sprung, 2004).

On the other hand, nurses underrated the information needs of family members needs for having a specific person to call (M = 2.65, SD = 0.88), talking to the doctor every day (M = 2.55, SD = 0.63), and knowing types of staff members (M = 2.05, SD = 0.78). The information about specific person to call, talking to doctor everyday, and knowing types of staff members were not necessary given to family members. Nurses gave priority for patients, they gave less important for those three needs. The study of Fox and Jefrey (1997 as cited in Tracy & Cerronsky, 2001) the findings of the present study, which conducted a descriptive correlational study to identify nurse role expectations related to family care. It found that more than half of nurses (55% of 47 nurses) worked most of the time to complete the task, and were too busy to care for the needs of family.

3.3 Support needs

The nurses perceived the need for support at a moderate level (M = 2.85, SD = 0.38) (Table 4-17). They usually focused more on patient condition than family member. As shown in Table 4-19, it is imperative that the family was offered support by the ICU nurses, which would assist them to cope with the crisis. Nurses perceived that families needed explanations of the environment before going into the critical care unit for the first time (M = 3.58, SD = 0.59) at the high level. This would be

because nurses perceived that the explanation of ICU environment at the first time was needed by family to get them familiar with the units and the critical condition of their relative. Azoulay et al., (2002) reported the positive impact of the family information about critical care methods, and the ICU environment that might decrease family anxiety and depression.

Nurses also perceived to be told about the possibility that the relative may die (M = 3.49, SD = 0.61), and religious services (M = 3.35, SD = 0.54). These findings were incongruent with Lee (2000) study, she reported that families were perceived as not liking to talk about relatives' "life or death". This cultural issue may encourage the nurses to not talk about relatives' death.

3.4 Comfort needs

The fourth family need perceived by nurses was the need for comfort (M = 2.78, SD = 0.49) (Table 4-17). Two highest family needs were a praying room (M = 3.30, SD = 0.58), and bathroom near the waiting room (M = 2.95, SD = 0.65) (Table 4-20). Actually, a praying room and bathroom are provided by the hospitals but there are placed far from the waiting room. Nurses realized, as Muslims' families, they needed a special room for praying and reading the Qur'an, and as a part of Javanese families, nurses were aware that they needed a room to sit, and "sholat" (pray together) for whole families or visitors (Koentjaraningrat, 1985). Critical care nurses considered the meaning that comfort has for a specific individual or family cultural group (Leininger, 1991 as cited in Al-Hasan & hweidi, 2004). These could indicate that the nurses paid attention for privacy and spiritual aspect of family. In addition, nurses perceived that families also needed to feel accepted by the hospital staff (M =

3.17, *SD* = 0.63). Nevertheless, ICU and CCU policies have restricted visiting hours, and crowded and uncomfortable waiting rooms, and the hurried ICU atmosphere can make families unwelcome in the ICU and CCU rooms. With this nurses perceived that nurses in critical care units gave warm welcome, and created a good relationship with patients' family members so they felt accepted. This would reduce anxiety and enhance social comfort of family members (Al-Hasan & Hweidi, 2004).

3.5 Proximity needs

In general, nurses perceived that families moderately needed proximity needs (*M* = 2.68, *SD* = 0.75) (Table 4-17), but they perceived proximity needs as being of the lowest importance. As shown in Table 4-22, nurses perceived that families needed to be told about transfer plans (*M* = 3.35, *SD* = 0.54). Transfer out of the ICU may have a significant effect concerning family members so nurses need to inform them earlier during admission. Good communication starting at ICU admission is mandatory to empower family members for a possible future role as substitute decision maker and adequate patient care (Azoulay & Sprung, 2004).

In addition, nurses perceived that families needed to have visiting hours start on time (*M* = 3.11, *SD* = 0.57), and have a waiting room near the patient (*M* = 2.82, *SD* = 0.72). Nurses believed that by allowing visiting to start on time and providing a waiting room near the patients could promote closeness, and emotional support, bring about a reduction in the patient's feeling of isolation, and improve family satisfaction with critical care experience (Cullen et al., 2003).

On the other hand, nurses underrated that families moderately needed to be called at home about changes (*M* = 2.52, *SD* = 0.94), to visit at any time (*M* = 2.30,

SD = 0.93), and to see the patient frequently (*M* = 2.03, *SD* = 0.89). Nurses perceived that the visiting time provided is enough and flexible. Another reason was that patients' conditions were too critical or that they needed rest, doctor's rounds were in progress, and sometimes nurses found visitors rude or irritating (Holden et al., 2002). Even though, visiting time was generally concern, nurses still were aware of their needs (Plowright, 1998).

Part 4 The Mean Difference of Family Needs' Perceptions between Family Members and Nurses

One finding of this study is that the total family needs perceived by family members and nurses were significantly different (t = -5.72, p < .001) (Table 4-25). In general, family members perceived that the needs for assurance, information, proximity, and support were higher than nurses' perceptions. One explanation would be that critical illness of patients happens suddenly and unexpectedly for their family members. From the demographic characteristics of family members, the male family members tended to perceive family needs at a higher level than females, and those who had total reimbursement of the costs also perceived family needs at a higher level than there who were total self paying. Another explanation was that, with respect to daily practices at the five hospitals, family members were not provided adequate information, and time to meet their needs. During visiting hours, they did not have time to talk to family members. In addition, nurses focused on patients more than family members. Another factor was that nurses perceived that all family needs were not their responsibility but rather that of other health care team members.

Table 4-26 shows that the most important family needs perceived by both family members and nurses were needs for assurance, but family members gave higher ratings than nurses (M = 26.55, SD = 2.13 and M = 25.54, SD = 2.64, respectively). Family members rated needs for "hope" (mean difference = 0.84), "have questions answered honestly" (mean difference = 0.44), and "to die peacefully if there was no hope" (mean difference = 0.22) as more important than did nurse respondents (Table 4-27). These might be the result of family members appearing to be unable to face such a possibility at the critical period. Nurses on occasion felt that the nurses were not a member of the family, thus they might be unwilling to give hope to the family if they perceived that there was no hope. Nurses perceived that information about patient's progress, and condition were not their responsibility but rather that of the doctors. In this study, some hospitals have a regulation that doctors' responsibility/job is to explain information about possibility death and patient's condition, and nurses' jobs are for information about day to day changes and progress. As Nursing (2004) mentioned that nurses concern themselves with a patient's entire well-being, unlike doctors, who generally work to cure a specific ailment.

There were significant differences between proximity needs perceived by family members and nurses ($p< .001$) (Table 4-26). This finding completely supported the hypotheses of this study, which was that here are different perceptions between family members and nurses on proximity. Both nurses and family members perceived that the most important of proximity needs was for the family to be told about transfer plans to another unit, and have visiting time start on time (Table 4-27). Nurses undervalued family needs for seeing patient frequently, and visiting at any time. The

visiting hours are determined based on the hospitals' policies rather than family needs. Family members often complained about the restricted visiting hours. Kleinpell and Powers (1992) found that less restrictive visiting hour aided in the meeting of family needs. Another a higher mean difference was to talk to the nurse every day (0.58). The family members wanted to talk about the patients' progress but the nurses were very busy. They did not have time to talk to every family member. Nurses would have to discuss with the key caregiver or close family who looked after the patient for 24 hours. Vataneeyavate, (1998) reported that was difficult to manage information when there were many family members who were waiting near patients.

There were significant differences between family members' and nurses' perceptions of information needs ($p < .01$) (Table 4-26). This finding is similar to those previous of studies from the West (Hampe, 1975; Molter, 1979; Leske, 1991;) and from Asian (Thaipak, 2001; Leung et all, 2000). They found that family members rated the needs for information as being a higher level than did nurses. Whereas family members and nurses agreed on the importance ratings of information needs, family members rated several needs as more important than did nurses. These needs were the families' need to talk to the doctor every day, to have a specific person to call, and to know whom they can contact for religious help (Table 4-27). Although the nurses may have recognized the importance of the family members' need to know how the patient was being treated medically, why things were done, and what was being done at the same as family members, the nurses may have underestimated the families' need to have a specific person to call and to talk to the doctor every day. In fact, the doctors usually do not see patients at the visiting time, and the doctors may

difficult to see or talk to patients' family members if it is not needed. The study of Vataneeyavate (1998) supported the findings of the present study, which examined the different perceptions between families and nurses in Thailand. It found that between visiting time and doctors' visit was not match. In practice, critical care nurses provide significant amounts of information to families (Mitchell & Courtney, 2003). The nurses frequently interpret for the family information given by the medical staff (Meyer, 1992).

The mean scores of support needs perceived between family members and nurses were different ($p< .01$) (Table 4-26). Nurses had undervalued this need as compared to the family members in the items of "have nurse to remind praying time", "have another person to visit with families in ICU", and "have someone to join while praying" (Table 4-27). Leske (1991) found that families looked the nurses for their support. However, nurses felt a lack of support to assist them (Tracy &Ceronsky, 2001). The needs were not met due to inconsistent beliefs among nurses about their responsibilities in caring for families. To fulfill family needs mentioned above, nurses usually encourage family members to remind or do praying with their relatives at visiting time.

Unlike the other needs, comfort needs were perceived by family members and nurses no differently ($p > .01$) (Table 4-26). Both of them perceived comfort needs being at a moderate level. When families who had members admitted to critical care units were staying in the waiting room, they brought all their food, drink, mantras, and pillow to comfort them in the ICU or CCU. In other studies as well, families of critically ill patients and nurses ranked the need for comfort as less important (Al-

Hasan & Hweidi, 2004; Lee et al, 2000). Interestingly, both family members and nurses agreed that families needed to have a praying room near the waiting room was a very important need (Appendix 1). Religious and cultural background may explain the same perceptions between the Javanese family members and nurses in this need (Koentjaraningrat, 1985). In addition, Waters (1999) suggested that critical care nurses should support the need of all family members to feel connected during critical hours following the hospitalization of a critically ill adult client, regardless of their cultural, religious, and social backgrounds.

Hospitalization in an ICU is a stressful event for the patient and the family. By giving the family members assurance, information, support, comfort, and proximity, the ICU and CCU nurses can foster family acceptance of the critical care hospitalization of their family members. Indeed, it may be concluded that the perceptions of patients' family members and nurses differed.