

## **CHAPTER IV**

### **RESEARCH RESULT**

This chapter presents the result of the survey. This is a cross-sectional survey. The respondents were patients at Inpatient Department of Kantang hospital. The samples sampling were selected stratified sampling from three wards, Female ward, Male ward and Postpartum ward. The sample size was calculated giving 380 respondents. The samples were allocated to three wards, 182 respondents from Female ward, 161 respondents from Male ward and 37 respondents from Postpartum ward. The data were collected between June 15, to August 31, 2003. The data was analyzed by descriptive statistics such as frequency, percentages, mean, and standard deviation, as appropriate. Inferential statistics was used for Spearman Rank's Correlation. The data were presented into four parts to provide the reader with as much information as possible.

- Part 1 The characteristics of respondents of Inpatients Department of Kantang hospital.
- Part 2 Customer's satisfaction, accessibility to care, quality of services in Customer's perception of respondents of Inpatient Department separated in sides and items.

Part 3 The correlation between accessibility, quality of services in customer's perception and customer's satisfaction of Inpatient Department at Kantang hospital.

Part 4 The explanation problems and suggestions.

## **Part 1 The Characteristics of Respondents of Inpatients Department of Kantang Hospital.**

The data were obtained from three wards of 380 respondents: 47.9% from Female ward, 42.4% from Male ward, and 9.7% from Postpartum ward. 93.7% were ordinary occupied beds and 6.3% were extra occupied beds. Most of the respondents were female at 68.9%. The respondents' age ranged between 36 – 55 years old at 31.1%. The average age of the sample was 40 years, the youngest was 15 years and the oldest was 88 years. The couple status was 73.2%, 14.2% was single. The majority (92.9%) was graduated from high school and lower, 7.1% higher high school. The respondents' occupation: 60.8% were agriculture and employee, 25.5% were government worker and private company. The income of respondents ranged between 2,001 – 6,000 Baht at 63.4%, average income at 3,816 Baht per month, lowest income at 800 Baht, the highest income at 30,000 Baht per month. The number of visits: 41.1% of respondents were at the first time visit, and 37.6% at three times and over. The detail is shown in Table 3.

**Table 3: Number and percentage classified by socio-demographic characteristics of respondents**

Socio-demographics	Number	Percentage
Total	380	100
1. Gender		
Female	262	68.9
Male	118	31.1
Male: Female = 1: 2.2		
2. Age (year)		
15 – 35	84	22.1
36 – 55	118	31.1
56 – 75	105	27.6
75 and over	73	19.2
Min = 15, Max = 88, Mean = 44		
3. Status		
Couple	278	73.2
Single	54	14.2
Widow/separated	48	12.6
4. Educational level		
High school and lower	353	92.9
Higher than high school	27	7.1
5. Occupational		
Agriculture and employee	231	60.8
Self business and trade	97	25.5
Government worker and private company	52	13.7

**Table 3: (Cont.) Number and percentage classified by socio-demographic characteristics of respondents**

Socio-demographics	Number	Percentage
6. Income per month		
2,000 and lower	99	26.1
2,001 – 6,000	241	63
6,001 – 10,00	38	10.5
10,001 and over	2	4.0
Min = 800, Max = 30,000, Mean = 4,000		
7. Wards		
Female ward	182	47.9
Male ward	161	42.4
Postpartum ward	37	9.7
8. Number of visit		
1 time	156	41.1
2 times	81	21.3
3 times or more	143	37.6
9. Admitted day		
1 – 2 days	217	57.1
3 – 5 days	125	32.9
5 days or more	38	10.0
10. Kinds of privilege's card		
Health insurance card (30 Baht pay)	155	40.8
Health insurance card (30 Baht not pay)	152	40.0
Social security card	23	6.1
Traffic accident assurance Act	7	1.8
Support by the government	18	4.7
Other	25	6.6

**Table 3: (Cont.) Number and percentage classified by socio-demographic characteristics of respondents**

<b>Socio-demographics</b>	<b>Number</b>	<b>Percentage</b>
11. Occupied bed		
Regular bed	356	40.8
Extra bed	24	40.0
12. The most important the respondents' to shoos service place		
Convenience to go	304	80.0
Examine by physician	13	3.4
Rapidly of process	6	1.6
Old patient at here	31	8.2
Modern equipment	2	0.5
Cost of care fairly	6	1.6
Comfortable setting of place	17	4.5
The employer shoos it	1	0.3
13. Time of service		
In officer hour	266	70.0
Out of officer hour	114	30.0

## Part 2 The customer's satisfaction, accessibility, quality of service at Inpatient Department of Kantang hospital.

### 2.1 The level of customer's satisfaction toward service

From the result of data analysis, most of customers satisfied in all of service at 99.8% (43.7% was high satisfaction and 56.1% was moderate) and low level at 0.3%. When we considered each item, customer satisfied in convenience at 98.9%, co-ordination, courtesy, medical information and quality of care which customer satisfied equally at 99.5%.

**Table 4: Percentage of customer's satisfaction toward service at Inpatient Department of Kantang hospital.**

Satisfaction (n = 380)	Percentage		
	High	Moderate	Low
	<b>43.6</b>	<b>56.1</b>	<b>0.3</b>
- Convenience (4 items)	46.3	52.6	1.1
- Co-ordination (4 items)	47.1	52.4	0.5
- Courtesy (4 items)	46.8	52.7	0.5
- Medical information (4 items)	46.8	52.7	0.5
- Quality of service (4 items)	46.8	52.7	0.5

Considerations by items are as follows:

**Convenience:** 96 % of the customers were satisfied with the comfortable atmosphere in the patient room. 94.7% of customers were satisfied with convenience to contact with staff. 93.4% of customers were satisfied with convenience in admission to

the Inpatient Department. 91.5% of customers were satisfied with comfortable registration at the Register room and the doctor satisfied 88.8% with convenience in examination. Only a little group of 11.6 % was dissatisfied with this item.

**Co-ordination:** 97.7 % of the customers were satisfied with co-ordination at pharmaceutical room. 96.6% of customers were satisfied with co-ordination for extra examinations such as blood investigation or other examinations. 96% of respondent were satisfied with co-ordination in admission to Inpatient Department. 94.8 % were satisfied with co-ordination of nurses on duty and 92.6% satisfied with co-ordination of doctor. Only a little group of 7.4 % was dissatisfied with co-ordination of doctor.

**Courtesy:** 96 % of the customers were satisfied with willingness of staff to serve. 95.3% of customers satisfied with staff paying attention to patients. 95.0% satisfied with the staff's respect to customer. 94.7% were satisfied with the characteristics of staff expression to patient, and 93.7 % with courtesy to patients. There were 6.3% of customers dissatisfied on the courtesy to patients.

**Medical information:** 99.2 % of customers were satisfied with explanation about self care after discharged. On explanation about disease and treatment at 98.1%. The customer satisfaction on explanation about steps of service at 96.1, and on explanation about regulation of hospital at 95.3%. 5.8 % of customers were dissatisfied with explanation in prevention of accident in hospital, and 4.8 % dissatisfied with explanation about regulation of hospital.

**Quality of service:** 98.4 % of the customers were satisfied with the quality service, and 98.2 % satisfied with the result of treatment. The customers' satisfaction with process of service at 97.7% equals the satisfaction in item on doctor taking time to ask about disease or treatment. 97.6 % were satisfied with quality of medicine that they receive. The Table 5 shows the details.

**Table 5: Percentage of satisfaction level of customers at Inpatient Department, Kantang hospital (n = 380 cases)**

Customer's satisfaction In health care service	Percentage				Mean
	Very Satisfied (4)	Satisfied (3)	Dis satisfied (2)	Very dissatisfied (1)	
<b>Convenience</b>					
- convenience to register	19.7	71.8	8.2	0.3	3.11
- Rapidly to meet doctor	21.3	67.1	11.1	0.5	3.09
- convenience to admit	31.3	62.1	5.3	1.3	3.25
- comfortable of patient room	31.8	64.2	3.2	0.8	3.27
- convenience to connect to personnel	29.2	65.5	5.0	0.3	3.24
<b>Co-ordination</b>					
- co-ordinate to admit	33.9	62.1	3.4	0.5	3.29
- co-ordinate to doctor	29.2	63.4	7.1	0.3	3.22
- co-ordinate to examine	28.4	68.2	3.2	0.0	3.25
- co-ordinate of nurses	25.3	69.5	5.3	0.0	3.20
- co-ordinate to phamarcuetical room	28.2	69.5	2.1	0.3	3.26



**Table 5: (Cont.) Percentage of satisfaction level of customers at Inpatient Department, Kantang hospital (n = 380 cases)**

Customer's satisfaction In health care service	Percentage				Mean
	Very Satisfied (4)	Satisfied (3)	Dis satisfied (2)	Very dissatisfied (1)	
<b>Courtesy manner</b>					
- characteristics of personnel that express to patient	27.9	66.8	4.5	0.8	3.22
- courtesy to patient	20.8	72.9	5.5	0.8	3.14
- greeting and willing serve to care	29.2	66.8	3.7	0.3	3.25
- respect to patient	26.1	66.8	3.9	1.1	3.20
- pay attention	25.3	70.0	4.2	0.5	3.20
<b>Medical information</b>					
- Explanation about step of service	28.7	67.4	3.9	0.0	3.25
- Explanation about hospital's regulation	24.5	70.0	4.5	0.3	3.19
- Explanation about disease and treatment	38.9	59.2	1.8	0.0	3.37
- Explanation about selfcare after discharged	34.5	64.7	0.8	0.0	3.34
- Explanation about prevention accident in hospital	26.3	67.9	5.3	0.5	3.20

**Table 5: (Cont.) Percentage of satisfaction level of customers at Inpatient Department, Kantang hospital (n = 380 cases)**

Customer's satisfaction In health care service	Percentage				
	Very Satisfied	Satisfied	Dis satisfied	Very dissatisfied	Mean
	(4)	(3)	(2)	(1)	
<b>Quality of service</b>	<b>33.04</b>	<b>64.8</b>	<b>1.68</b>	<b>0.36</b>	<b>3.30</b>
- The doctor have time to ask about disease and treatment	37.4	60.3	1.8	0.5	3.34
- The result of this treatment	35.0	3.2	1.8	0.0	3.33
- You get a good quality of medicine	33.3	63.9	2.4	0.0	3.31
- All of quality of service	32.1	66.3	0.3	0.3	3.30
- Process of service	27.4	70.3	2.1	0.3	3.25

## 2.2 Accessibility to service at Kantang hospital

Most of customers had access to service at 98.2%. When we consider by items we found that the customers acceptance to personnel at 95.5%, convenience to connect at 82.6%, availability of hospital at 76.3%, and ability to access resources at 81.1%. The Table 6 shows the details.

**Table 6: Percentage of accessibility at Kantang hospital**

	Percentage		
	High	Moderate	Low
<b>Accessibility</b>	<b>79.2</b>	<b>18.9</b>	<b>1.8</b>
- Availability (5 items)	76.3	20.3	3.4
- Ability to access (5 items)	81.1	17.1	1.8
- Convenience to connect service (5 items)	82.6	15.3	2.1
Acceptability (5 items)	95.5	3.4	1.1

The consideration of accessibility by items showed that;

**Availability:** 91.1 % of customers agreed with the adequacy of staff, 89.7 % agreed with that the hospital had adequate available seats for sitting while waiting for examination, and in other items over 70 % of customers agreed.

**Ability to access:** 95.2 % of customers gave their opinion that the distance was not so great. 91.6% of customers accepted that it was convenient to go to the hospital. In other items, over 80.0 % of customers agreed with the ability to access.

**Convenience to service:** Over 80 % of the customers agreed with convenience to connect service in every item, except the connection for service by telephone at 61.2% only.

**Acceptability:** 95% of customers accepted the provider's manner, but they believed that the new practicing nurses had a good competence at 87.4%. The Table 7 shows the details.

**Table 7: Percentage of accessibility in Items of Kantang hospital.**

<b>Accessibility to care</b>	<b>Number</b>	<b>Percentage</b>
Number of subject	380	100
<b>Availability</b>		
- Adequate seat	341	89.7
- Provider available adequate	346	91.1
- Examining room available adequate	300	78.9
- Equipment available adequate	268	70.5
- Restroom and bathroom available adequate	332	87.4
<b>Ability to access resource of service</b>		
- Convenience to go to the hospital	348	91.6
- The traveling to hospital not so long	336	88.4
- You know this hospital by yourself	364	95.2
- You go there by your friend suggested	88	23.2
- You can go and comeback within a day	347	91.3
<b>Convenience to connect service</b>		
- convenience to connect to provider	344	90.5
- convenience connection by telephone	235	61.2
- convenience your relative at ward	350	92.1
- convenience to connect to nurses	353	92.9
- convenience to require information	353	92.9
<b>Acceptability</b>		
- You believed that provider's suggestion is correct	363	95.5
- You have trust on doctor who treat you	372	97.9
- You have trust on nurse who give nursing care to you	372	97.9
- You confident with the competence of nurse	367	96.6
- You believed that the nurse who just graduated have been a good practice	332	87.4

### 2.3 The customer's perception on health care service at Kantang hospital

The customer's perception on health care service was high at 95% and moderate at 4.5%. The item the customer had a good perception was the outcome of care at 95.8%. The item of perception in explanation to care and perception in continuity service at 91.6% and 91.3% respectively. The item on which the customer perception was at low level of only 3.4% was the art of care. The Table 8 shows the details.

**Table 8: Percentage of customer perception in the quality of service, Kantang hospital.**

	Percentage		
	High	Moderate	Low
<b>Customer perception</b>	<b>95.0</b>	<b>4.5</b>	<b>0.5</b>
- Physical environment (5 items)	83.4	15.5	1.1
- Technical skill (5 items)	89.7	8.4	1.8
- Art of care (5 items)	86.3	10.3	3.4
- Explanation of care (5 items)	91.6	6.8	1.6
- Continuity of care (5 items)	91.3	8.2	0.5
- Outcome of care (5 items)	95.8	3.9	0.3

Considering by items it was found that;

**Physical environment:** 98.4 % of the customers agreed that there was adequate light in patient room, and the facilities in ward were arranged properly and easy to use. 90.8 % of the customers agreed that patient room was clean and 73.4 % agreed that the patient room was noisy.

**Technical skill:** 94.7 % of the customers agreed that the doctor examination was precise and 94.5% agreed that nurses took care carefully. The customers agreed with enthusiastic nurses taking care.

**Art of care:** 92.9 % of the customers agreed that doctors and nurses made the patients trust them. 90.8% agreed that the nurses were willing to help. For other items, the customers agreed with at least 86%.

**Explanation of care:** 98.4 % of the customers agreed with the explanation about self care after discharge, 96.1 % accepted doctor's explanation about treatment, and 92.4 % accepted nurses explaining about steps of nursing service.

**Continuing of care:** 95.2 % of the customers agreed that the doctor told the result of care, and the nurses and doctor had followed up the care equally.

**Outcome of care:** Over 88.5 % of customers agreed with a good result in every item. The best outcome of care was the illness recovered after getting service at 97.9%. 96.3% of customers knew their symptom and their illness condition. 95.5% would be suggesting their relatives to take care here when they are ill. The details are shown in Table 9

**Table 9: Percentage of customer perception in quality of service at Kantang hospital (n = 380 cases)**

<b>Customer perception</b>	<b>Number</b>	<b>Percentage</b>
<b>Physical environment</b>		
- Patient room was clean	345	90.8
- Patient room is not closely packed and sultry	317	83.4
- It have not noisy within patient room	279	73.4
- It has suitable light in patient room	374	98.4
- There are a arrangement of facilities for easy to use	363	95.5
<b>Technical skill</b>		
- The doctor examine precise	360	94.7
- The nurse take care carefully	359	94.5
- The doctor and nurses willing to answer the patient's question	333	87.6
- The doctor have friendly and polite	358	94.2
- The nurse has enthusiated	345	90.8
<b>Art of care</b>		
- All of personnel at ward smile and welcome to service	332	87.4
- You feel comfort when you got a consulting	335	88.2
- You feel the doctor and nurse make you to trust and confident on them	353	92.9
- The smiling face of nurse show you to willing to help you	345	90.8
- You have not worry about you are lonely	329	86.6
<b>Explanation of care</b>		
- You get a good advice for self care after discharged	374	98.4
- The doctor tell you about what you get	365	96.1
- The nurse advice the step of nursing care you get	351	92.4
- You receive the introduction the step of service when you come first	342	91.6
- You receive the suggestion as well to your symptom	312	82.1

**Table 9: (Cont.) Percentage of customer perception in quality of service at Kantang hospital (n = 380 cases)**

Customer perception	Number	Percentage
<b>Continuing of care</b>		
- The doctor explain the result of care	364	95.2
- The nurse follow up your symptom	359	94.5
- The doctor have appointment for care	359	94.5
- You received physical exam by the same doctor as the first	339	89.2
- The doctor follow up by a appointment after discharge	336	88.4
<b>Outcome of care</b>		
- When you get ill in the next, you will come back again	373	98.2
- After got a treatment, you feel better	372	97.9
- You know your illness condition	366	96.3
- You feel relax after you got service every time	363	95.4
- When your relative get ill in the next, you will suggest to come here	337	88.7

### **Part 3 Correlation between accessibility, quality perception of care and satisfaction.**

#### **3.1 Correlation**

From the result of analysis between accessibility, quality perception of care and satisfaction, the researcher analyzed by Spearman's Rank Correlation. The variable of accessibility found that availability, ability access to resource service, convenient to connect to service and acceptability were tested and the result showed a significant positive relationship ( $r = .336, .188, .245, .206$ , and  $p < 0.01$ )



Satisfaction with the customer perception of quality of service in physical environment, technical skill, art of care, explanation of care, continuing of care and outcome of care was tested for their relationships the associated were significant value ( $p < 0.01$ ) and positive direction ( $r = .189, .342, .281, .251, .262, .128$ ) these mean if we improve quality of service, the more patient was satisfied.

**Table 10: Spearman's Rank correlation coefficient between customer perception of quality of service and accessibility and satisfaction**

	Satisfaction	
	r	p
<b>Accessibility</b>		
- Availability	0.336**	< 0.01
- Ability access to resource of service	0.188**	< 0.01
- Convenient to connect for service	0.245**	< 0.01
- Acceptability	0.206**	< 0.01
<b>Customer perception</b>		
- Physical environment	0.189**	< 0.01
- Technical skill	0.342**	< 0.01
- Art of care	0.281**	< 0.01
- Explanation of care	0.251**	< 0.01
- Continuing of service	0.262**	< 0.01
- Outcome of care	0.128**	< 0.01

The comparison satisfaction with gender, wards and occupation found that the different of satisfaction at  $p = 0.004, 0.034$  and  $0.008$  in order. The socio-demographic such as occupied bed, time of service, age, education level and status were not different satisfaction at  $p=0.163, 0.682, 0.48, 0.849$  and  $0.426$  in order. The Table 11 showed the detail.

**Table 11: Comparison between satisfaction and socio-demographic characteristics**

<b>Socio-demographic Characteristics</b>	<b>Number (n)</b>	<b>Mean score</b>	<b>p-value</b>
<b>Sex</b>			<b>0.004<sup>a</sup></b>
Male	118	2.65	
Female.	262	2.56	
<b>Occupied Bed</b>			<b>0.163<sup>a</sup></b>
Ordinary bed	356	2.60	
Extra Bed	24	2.50	
<b>Time of service</b>			<b>0.682<sup>a</sup></b>
Officer time hour	266	2.60	
Out of officer time hour	114	2.57	
<b>Wards</b>			<b>0.034<sup>b</sup></b>
Female ward	182	2.54	
Male ward	161	2.65	
Postpartum ward	37	2.56	
<b>Age (year)</b>			<b>0.48<sup>b</sup></b>
15 – 35	84	2.60	
36 – 55	118	2.55	
56 – 75	105	2.68	
75 and over	73	2.52	
<b>Educational level</b>			<b>0.849<sup>a</sup></b>
Secondary school and lower	353	2.59	
Over secondary school	27	2.62	
<b>Status</b>			<b>0.426<sup>b</sup></b>
Single	54	2.64	
Couple	278	2.59	
Widow/Separate	48	2.54	
<b>Occupation</b>			<b>0.005<sup>b</sup></b>
Agriculture	231	2.62	
Private business	97	2.49	
Governor officer/ company official	52	2.65	

p-value by Mann-Whitney U test (a) and Kruskal-Wallis test (b)

### 3.2 Comparison satisfaction among three wards

The association of satisfaction among three wards found that respondents of Female ward satisfied on service at high and moderate level at 54.9% and 45.1%. The respondents of Male ward satisfied at 62.2% high and 34.2 at moderate and Postpartum ward satisfied 56.2% at high and 43.2% moderate. The Table 12 showed the detail.

**Table12: Comparison satisfaction among three wards**

Wards	Satisfaction		chi-square	P- value
	High(%)	Moderate(%)		
Female	54.9	45.1	3.886	0.145
Male	62.2	34.2		
Postpartum	56.2	43.1		

## Part 4 Other Recommendations from the Customers.

In addition to offering their opinion and following the questionnaire provided, respondents stated what they needed to further improve health care service from a total of 380 respondents, some of them showed dissatisfaction towards the service of each section. 64 recommendations were received.

### 4.1 Cure and care

Comments on cure and care were also received. One suggestion was that the doctor who examined patient at first should be the same one who examined at ward. Two respondents claimed long waiting time for the doctor. Ten respondents also thought that the health care staff should improve on courtesy more than now. Two

respondents suggested that the nurse should have enthusiasm and one of them offered to add the nurse to take care.

#### **4.2 Tools and medical equipment for cure and care**

One respondent suggested that there should be more nebulizers than now because the pediatric patients needed to be nebulized often.

#### **4.3 Diet for patients**

The seventeen respondents suggested that, menu should be changed from daily tofu to other kinds of food, because the same daily diet made patients lose their appetite. One of them complained of too slow serving of breakfast. Three of them suggested that there should be separate diet for Islam patients from Buddhist patients, including the cooks. Two respondents complained that diet for extra-occupied bed was the same as for ordinary occupied bed except the container only. Some of them suggested that it should be given time for each meal more than now, because sometimes they ate already.

#### **4.4 Building and place**

Recently, patients' motorcycles were stolen while they had been admitted in hospital. Therefore they wanted the hospital to provide safety for their properties too. Twelve of respondents complained the toilet and bathroom were not clean, and there was not enough hooks for hanging intra-venous fluid. If possible, there should be toilets for aging group of patients. Four respondents suggested that they wanted to have public telephone in front of or nearby ward and easy to connect with relatives. Seven

respondents complained that patient room was disturbed by mosquitoes and very old air conditioner in extra room. Because the extra room was placed near the ordinary room it was very noisy. Others recommended there should be separate place for pediatric patients from adult patients because pediatric patients made loud noises all night, thus adult patients were not able to sleep. In addition, the wards should have more ceiling fans than now. The Table 13 shows the details.

**Table 13: Problem and recommendations**

Suggestion and recommendation	Number(%)
<b>Cure and care</b>	
1. Long waiting time for doctor	2(3.13)
2. At IPD, customers wanted the same doctor who examined at the OPD.	1(1.56)
3. The health care staff should be improved in courtesy more than now.	10(15.62)
4. The nurse should have more enthusiastic	2(3.13)
5. The nurse should have more for care	1(1.56)
<b>Tool and medical equipment</b>	
1. It should be add the nebulizer more than now.	1(1.56)
<b>Dietary</b>	
1. It should be change menu from tofu to other kind of food.	17(26.56)
2. The breakfast provided too slow, so patient hungry.	1(1.56)
3. It should be separate for Islam diet from Buddhist diet both kitchen and the cook.	3(4.68)
4. The diet for extra room as the same ordinary room, but different container only.	1(3.13)
5. It should be give more time to eat meal because they eat already yet	1(1.56)

**Table 13: (Cont.) Problem and recommendations**

Suggestion and recommendation	Number(%)
<b>Building and place</b>	
1. The patient wanted to provide a safety for their properties.	2(3.13)
2. The toilet and the bathroom were not clean, and not enough and no hook for hang intra venous fluid and should have specific for aging patient.	12(18.75)
3. It should be setting the public telephone in front of ward, it is easy to connect relatives.	4(6.25)
4. Mosquitoes disturbed patient.	1(1.56)
5. In extra room, air conditioner decayed and noisy.	1(1.56)
6. It should be separate pediatric patient from adult patient.	2(3.13)
7. The ceiling fan was not enough.	2(3.13)

Out of 326 respondents, 324 respondents (99.38%) replied that if they are ill the next time they will come back to see the doctor here.