



Analysis of perceived health care quality on patient satisfaction

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Abstract

Background: Perceived health care is influenced by patient satisfaction favorable to the hospital and positive impact on patient satisfaction. This study aimed to make recommendations for increasing admissions for Inpatient room based on the result of the analysis of perceived health care quality, customer voice and satisfaction.

Methods: This research used cross-sectional method. The sampling technique used proportionate stratified random sampling. The data obtained were then analyzed using descriptive and regression methods.

Results: The results obtained indicated that perceived health care quality had a significant positive effect on patient satisfaction. The Quality Interaction ($b = 0.273$) had a stronger influence on patient satisfaction. The results showed physical environment quality ($p = 0.008$, $b = 0.199$), interaction quality ($p = 0.000$, $b = 0.471$), and outcome quality ($p = 0.005$, $b = 0.238$).

Conclusion: Perceived health care quality has a strong effect on patient satisfaction.

Keywords: patient satisfaction, perceived health care quality, hospital

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INTRODUCTION

Customer satisfaction is the customer response to the mismatch between the level of interest previously perceived and actual performance after using the service (Liao 2007). Customer satisfaction is influenced by the perception of service quality and based on the customers' needs and expectations. Inpatient treatment is a combination of several functions of health services at the hospital. Inpatients can be categorized as patients who need intensive care or strict observation for illness (Udo, Bagchi, & Kirs 2010). A study suggests that patients who get into inpatient care experience the level of the transformation process, the process are Admission Phase, Diagnosis Phase, and Treatment Phase; Inspection Phase and Control Phase (Angelova & Zekiri 2011).

Efforts to meet the customers' needs and accuracy in delivering what it is expected by the customers is central to the quality of service. The main factor affecting the image and credibility of a company's product is the quality of service; good quality of service can make a hospital remain in the competition (Black, 2013). Brady & Cronin suggest the form of service quality model based on hierarchical design of the Perceived Service Quality A Hierarchical Approach. Adopting the view of Hierarchical models, the perception of the quality of service is based on the customer evaluations on the

three dimensions. The first is interaction quality, service quality related to service process provided for the customers. This can be seen from the interaction process of staff service providers to their customers. The second is physical environment quality, quality existing in the environment in which the service process occurs. The last is outcome quality, the quality of the outcomes/results customers get when the process of producing services and interactions between the customers and service providers is complete (Brady & Cronin 2001).

Poor healthcare service results in loss of customers, existence, jobs, financial capital, time, values, staff, appreciation, trust and gratitude (Brady & Cronin 2001). In individual and communities' apathy towards health services, all of which contribute to lowered effectiveness and efficiency. Improving the attitude of health personnel towards patients is said to enhance perceived quality of care. Effective interpersonal relationships build trust and reputation through loyalty, secrecy, courtesy, compassion, and empathy (Turkson, 2010; Maziya, et al. 2016). One indicator of the quality of health services is the satisfaction of the primary service users, in this

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case, the patients. Patient satisfaction is the patient's response to a significant aspect of his or her health care experience. In the implementation of health services, the state is obliged to maintain the quality of health services to the community (Akbar & Ayuandyka 2018; Masuku, et al. 2016). To provide health services to patients who need health care on demand or the occurrence of sudden health problems, it must be ascertained the actions that must be taken or the actions of the doctor as the management of the decision maker. The need to provide quality health care can be maximized against patients, and it is possible to reduce health care costs and overcome the problem of lack of limited nursing staff resources (Pardede, et al. 2019).

All organizations that want success today definitely need employees who act beyond their public work duties, which will deliver performance beyond estimates (Saragih, 2019). Keeping customer satisfaction over time will not only build good links but will also impact the company's profitability. Hence, the company can run and widen their business for the future (Indrayani, et al. 2019). As a measure of care efficiency, customer satisfaction is important because it offers knowledge about a provider's progress in fulfilling the patient's standards and desires, while the patient is the highest priority. In health care, patient satisfaction is how much the individual considers health care services or how they are useful, effective, and beneficial. It includes the levels of general health needs and specific needs, and evaluates patient clinical satisfaction rates for health care, as satisfied patients are more likely to adhere to treatment and are active in their own care (Samad, et al. 2018). This study aimed to make recommendations for increasing admissions for inpatient room at Muji Rahayu Hospital, Surabaya, Indonesia based on the result of the analysis of perceived health care quality and customer voice, including need and expectation and satisfaction.

MATERIALS AND METHODS

Research Design, Population, Samples, and Variables

This study used cross-sectional design. The population was the inpatients in treatment in Muji Rahayu Hospital, Surabaya, East Java, Indonesia. The sampling technique used was random proportionate stratified sampling with sample size of 116 patients. The independent variable was the perceived health care quality. The dependent variable in this research was the patients' satisfaction.

Instruments

The instrument used in this study was a questionnaire (self-administered questionnaire). Questionnaire is a research tool that contains question answered by respondents or statements that must be chosen by research respondents filled in by the research respondents themselves.

Research Procedures and Analysis

Data collection tools in this study was a questionnaire. The respondents were given an explanation and then they signed an inform consent. This study has had ethical approval with number: 058/HRECC.FODM/II/2019 issued by Health Research Ethical Clearance Commission, Faculty of Dental Medicine, Universitas Airlangga, Indonesia. Techniques and secondary data collection on the profile, the number of inpatients, and the treatment room facility were done with the study profiles documentation and annual reports on the number of visits from 2015 to 2017 in Muji Rahayu Hospital, Surabaya, Indonesia. A questionnaire was used to identify variables—Perceived Health Care Quality. The data processing in this study was conducted by examining, evaluating, and presenting the data collected. The data analysis in this study used the statistical analysis. The statistical analysis used in this study was in the form of univariate and multivariate statistical analysis.

RESULTS

Most patients were accompanied by family with a percentage of 73.3%. The age of most respondents who were hospitalized were at the age of 1 month - ≤ 15 years old, with a percentage of 37.9%. Female respondents were more than male respondents, which was 50.9%. Most respondents' education compared to the others was high school graduates with a percentage of 37.9%. The respondents' occupation was dominated by students or private sector with the same percentage equal to 29.3%. From the length of stay, most of inpatients were treated/hospitalized for 2 days with a percentage of 42.2% (**Table 1**).

Patient satisfaction is said to be high if the percentage of answers $>20\%$. Based on **Table 2**, it was obtained that the result of the assessment of patient satisfaction on the physical environment quality was still low, with the percentage score of 14.4, with the overall sub variables of the physical environment quality were also low. Indicators that got the lowest score was the ambient satisfaction, with a percentage of 14.7%. Based on the results in **Table 2**, it was obtained that score of patient satisfaction of overall interaction quality with the nurses was already high with the strongly agree response percentage of 21.3%, but the indicator of nurse expertise was still low with the percentage of 19.8%. **Table 2** shows that the patient satisfaction with the outcome's quality is still low with the percentage value of 1/8%. Most indicators were also considered low. Only the satisfaction of waiting time for the nurses got high scores of 20.7%, while the lowest assessment indicators were tangibles with a percentage of 14.7%.

Table 2 shows that the overall patient satisfaction on quality interaction with the doctors are already high with the strongly agree response percentage of 20.7%.

Table 1. Characteristics of Inpatient Customers in 2019 at Inpatient Room, Muji Rahayu Hospital

Characteristics	Total	
	n	%
Respondent Status		
Patient	31	26.7
Patient accompanied by family	85	73.3
Total	116	100.0
Age (years old)		
1 month - ≤ 15	44	37.9
16 - ≤ 30	25	21.6
31 - ≤ 45	28	24.1
46 - ≤ 60	11	9.5
> 60	8	6.9
Total	116	100.0
Sex		
Male	57	49.1
Female	59	50.9
Total	116	100.0
Education		
None	18	15.5
Junior High School	25	21.6
Middle High School	19	16.4
Senior High School	44	37.9
College	10	8.6
Total	116	100.0
Occupation		
None	23	19.8
Student	34	29.3
Private	34	29.3
Entrepreneur	3	2.6
Civil servant/Retiree	5	4.3
Housewife	17	14.7
Total	116	100.0
Duration of treatment/hospitalized		
2 days	49	42.2
3 days	46	39.7
≥ 4 days	21	18.1
Total	116	100.0

Table 2. Distribution of the result of the assessment of perceives quality health care satisfaction in Muji Rahayu Hospital inpatients room in 2019

Variables	Value									
	(1) SD		(2) D		(3) A		(4) SA		Total	
	N	%	n	%	N	%	n	%	n	%
Physical Environment Quality										
Ambient Condition	4	3.4	13	11.2	82	70.7	17	14.7	116	100.0
Design	0	0.0	4	3.4	89	76.7	23	19.8	116	100.0
Social Factor	1	0.9	9	7.8	96	82.8	10	8.6	116	100.0
Average PEQ	2	1.4	9	7.5	89	76.7	17	14.4	116	100.0
Interaction quality of doctor										
Attitude of doctor	1	0.9	7	6.0	81	69.8	27	23.3	116	100.0
Behavior of doctor	1	0.9	5	4.3	89	76.7	21	18.1	116	100.0
Expertise of doctor	1	0.9	1	0.9	90	77.6	24	20.7	116	100.0
Average IQ of doctor	1	0.9	4	3.7	87	74.7	24	20.7	116	100.0
Interaction quality of nurse										
Attitude of nurse	0	0.0	6	5.2	83	71.6	27	23.3	116	100.0
Behavior of nurse	0	0.0	2	1.7	90	77.6	24	20.7	116	100.0
Expertise of nurse	0	0.0	2	1.7	91	78.4	23	19.8	116	100.0
Average IQ of nurse	0	0.0	3	2.9	88	75.9	25	21.3	116	100.0
Outcome Quality										
Waiting time of doctor	1	0.9	8	6.9	87	75.0	20	17.2	116	100.0
Waiting time of nurse	0	0.0	3	2.6	89	76.7	24	20.7	116	100.0
Tangibles	0	0.0	2	1.7	97	83.6	17	14.7	116	100.0
Valence	1	0.9	1	0.9	97	83.6	17	14.7	116	100.0
Average Outcome Quality	1	1	0.4	4	3.0	93	79.7	20	16.8	100.0

However, there was indicator that was still low, i.e., the doctor behavior with a percentage of 18.1%.

Table 3 shows the variable of Perceived Health Care Quality has a p-value >0.05. The p-value of > 0.05 and the value (of) b = 0.785 indicate that there is a strong influence between the variable of Perceived Health Care Quality to the patients' satisfaction. Perceived Health

Care Quality with the value of b = 0.785 indicates that the good Perceived Health Care Quality will improve the patients' satisfaction in inpatient section at RSMRS.

Table 4 shows that sub variable of Perceived Health Care Quality affects on the variable on overall patient satisfaction. Sub variable of the Quality Interaction (b = 0. 273) had a stronger influence on patient satisfaction

Table 3. The result of the influence of perceived health care quality sub variables on patient satisfaction in the inpatient section of RSMRS in 2019

Independent Variables	Dependent Variable	B	p	Explanation
Perceived Health Care Quality	Patient Satisfaction	0.785	0.000	Significant
Physical Environment Quality		0.187	0.007	Significant
Interaction Quality of Doctor		0.231	0.010	Significant
Interaction Quality of Nurse		0.273	0.006	Significant
Outcome Quality		0.248	0.009	Significant

Table 4. The Results of the effect of perceives health care quality dimension on RSMRS in 2019

Independent Variables	Dependent Variable	b	p	Explanation
Physical Environment Quality	Patient Satisfaction			
Ambient Condition		0.033	0.635	Not Significant
Design		0.192	0.004	Significant
Social Factor		0.028	0.659	Not Significant
Interaction Quality of Doctor				
Attitude		0.025	0.765	Not Significant
Behavior		0.288	0.002	Significant
Expertise		0.001	0.990	Not Significant
Interaction Quality of Nurse				
Attitude		0.179	0.009	Significant
Behavior		0.107	0.325	Not Significant
Expertise		0.127	0.097	Not Significant
Outcomes Quality				
Doctor Waiting Time		0.039	0.640	Not Significant
Nurse Waiting Time	-0.121	0.166	Not Significant	
Tangibles	0.151	0.042	Significant	
Valence	0.222	0.001	Significant	

compared to sub variable of the Physical Environment Quality ($b = 0.187$).

DISCUSSION

Each quality of service will essentially be evaluated by the customers with their expectations. Customers will feel very satisfied if the quality of service received is same or even better than their expectations (Malik, 2012). This statement is supported that service quality has a direct impact to customer satisfaction. The services marketers pay special attention to the service quality, as it is controlled by the service provider and its consequences can be improved by improving service quality, which may influence the intention of the customer to buy the service. Performance service delivery is also a key to satisfaction. As the commodity is created and used concurrently, policies that understand the interest of the customer will be incorporated into the healthcare system (Padma, & Lokachari 2010). This study found that the Perceived Health Care Quality had a significant positive effect on patient satisfaction in inpatient section at Muji Rahayu Hospital, Surabaya. Three sub variables of Perceived Health Care Quality, i.e., physical environment quality, interaction quality (doctors and nurses), and the outcomes quality, had significant positive effects on the patients' satisfaction in hospitalization. The results of this study is in line with those in studies proving that the quality of service has a significant positive effect on patients' satisfaction (Permana et al. 2019).

Interaction quality is obtained from the doctors' behavior and nurses' attitude proving to significantly affect patients' satisfaction in inpatient section at Muji Rahayu Hospital, Surabaya. The interaction quality is an

important part of the customer experience. If the interaction goes well, it will not only make the customer feel satisfied but also happy. Conversely, if the interaction is poor, it will lead to frustration. The aspect of nurses' attitudes still obtained poor ratings because patients felt that the nurses provided less support or were less concerned with the condition of the patients who felt sad and anxious due to their illness. The understanding of consumers of encounters with service providers (e.g., employees and staff) during the service delivery often relies on the level of interaction. Previous study shows that behavioral experiences greatly influence consumer understanding of the level of service (Choi & Kim 2013).

The dimensions of the outcome's quality affecting patient satisfaction only in the dimensions of valence, while doctors' and nurses' waiting time and tangibles proved ineffectual. Valence which is an impression of the patient experience on service outcomes received during hospitalization was still not good. This is due to vote on the experience of patients to unfavorable treatment rooms facilities. Bad inpatient room conditions may adversely affect the patient such as the length of stay of the patient while being hospitalized. Also, aspects of inpatient room conditions need to be taken into account as the customers have a tendency to switch to any other provider because of getting uncomfortable environment (Negi, 2009).

Hospital must provide safe, quality, nondiscriminatory, and effective services by prioritizing the interests of patients under hospital service standards. The most crucial goal in health care is beneficial outcomes for patients and communities. The desired outcomes depend on the quality of health or

hospital services. The most crucial goal of health services is to provide beneficial outcomes for patients, providers, and communities depending on the quality of health services in the hospitals (Dewi, 2019). Meeting the patients' needs, the paramedics should have the ability of "caring" as mutually nurturing relationships among individuals based on a sense of commitment and responsibility. In developed countries in particular, patient satisfaction is more significant. This is both as a service quality indicator and a quality component. A stable health care system allows healthcare providers to provide customers with higher service and efficiency (Puspitasari, 2019).

This study examined the factors influencing patient satisfaction to improve patient visits in inpatient section

at RSMS, Surabaya, consisting of environmental factors, organizational factors, and customer factors. This study is limited to the organizational factor of Perceived Health Care Quality.

CONCLUSION

Perceived Health Care Quality has positive and significant impacts on patient satisfaction in inpatient section.

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