

Accreditation Status and Other Factors Affecting Patient Satisfaction in Hospital

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ABSTRACT

Background: Hospital accreditation is a systemic assessment to measure service quality according to standards. Hospital services focus on meeting patient needs and satisfaction. This study aimed to determine the status of accreditation and other factors that influence the satisfaction of hospitalized patients in the hospital.

Subjects and Method: This was a cross sectional study conducted in four hospitals in Sleman, Yogyakarta, from March to April 2019. A sample 200 inpatients were selected for this study by proportional random sampling. The dependent variable was patient satisfaction. The independent variables were accreditation status, service quality, length of care, source of funds, employment, age, and gender. The data were collected by questionnaire and analyzed by path analysis.

Results: Patient satisfaction was directly and positively affected by age >18 years old ($b = 2.34$; 95% CI = 0.33 to 2.50; $p = 0.023$), gender ($b = 1.02$; 95% CI = 0.08 to 1.96; $p = 0.034$), length of care > 3 days ($b = 0.99$; 95% CI = 0.043 to 1.95; $p = 0.041$), independent funding sources ($b = 1.50$; 95% CI = 0.47 to 2.53; $p = 0.004$), good service quality ($b = 3.42$; 95% CI = 2.31 to 4.53; $p < 0.001$), and good accreditation status ($b = 3.33$; 95% CI = 2.12 to 4.54; $p < 0.001$). Satisfaction is directly and negatively influenced by work ($b = -1.37$; 95% CI = -2.32 to -0.41; $p = 0.005$). Patient satisfaction was influenced indirectly and positively by accreditation status through good service quality ($b = 0.70$; 95% CI = -0.04 to 1.96; $p = 0.037$). Patient satisfaction was influenced indirectly by age > 18 years through service quality ($b = 1.50$; 95% CI = 0.49 to 2.50; $p = 0.036$).

Conclusions: Patient satisfaction was influenced directly and positively by age > 18 years, male sex, length of care > 3 days, independent fund sources, good service quality and good accreditation status. Patient satisfaction is influenced directly and negatively by work. Patient satisfaction was indirectly affected by age > 18 years and good accreditation status.

Keywords: Patient satisfaction, accreditation status, path analysis

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BACKGROUND

Reform in the health sector is manifested in patient safety and patient-centered services (Brubakk et al., 2015). Health services are every effort organized in the form of an organization to improve public health through preventive, curative, and rehabilitative activities (Azwar, 2010). Based on Law Number 44 of 2009 concerning Hospitals, it is explained that the new paradigm of health services in Indonesia requires hospitals

to provide quality services that refer to the professional code of ethics and according to patient needs (Government of Indonesia, 2009).

Health services need to pay attention to quality and service quality that will determine patient satisfaction and loyalty. Patient satisfaction can be improved through facility hygiene, privacy arrangements, and interpersonal service providers (Adhikary et al., 2018). Hospitals need to pay attention

to the completeness of facilities and fulfillment of health human resources including medical personnel and non-medical personnel to service patients. Patient satisfaction can be determined from the quality of the treatment process, and the quality of patient interactions with hospital staff (Zarei et al., 2014).

Patient's complaints about hospital services in the form of dissatisfaction can cause patients to be disappointed and not continue treatment at the hospital. Patient satisfaction is influenced by many factors, namely the level of employees, infrastructure, and characteristics of patients, namely age, gender, and occupation (Holtmann et al., 2011).

Aliman and Mohammad's (2016) study concluded that more than 70% of patient satisfaction comes from service quality consisting of reliability, responsiveness, conviction, and empathy for medical staff.

The number of hospitals in Indonesia currently is 2,820 agencies and hospitals that have been accredited amounting to 1,032 (36%) hospitals (KARS, 2018). The number of hospitals in Yogyakarta in 2018 is 78 hospitals consisting of 55 general hospitals and 23 special hospitals. The number of hospitals in Yogyakarta that have been accredited is 53 (68%) hospitals and 25 (32%) have not been accredited. There are 28 hospitals in Sleman Regency and 22 accreditation hospitals (Yogyakarta Provincial Health Office, 2017).

Accreditation is an external assessment strategy to measure the quality of a health service. Hospital accreditation is needed as a systematic assessment of the overall organization of the organization including the performance of employees in performing services (Brubakk et al., 2015).

Hospitals will be encouraged to carry out quality services by applying accreditation standards. In addition, the hospital will

strive to continue to increase cooperation and discipline among employees in performing services (Oliveira et al., 2017). Camillo et al. (2016) reported that hospital staff supported an accreditation system that would benefit hospitals in terms of improving the quality of management and public health services. This is supported by the development of professional skills of hospital staff and improving the financing management system, organizational structure, complete medical facilities and infrastructure, assistance management, and perceptions of pride/ job satisfaction.

The Minister of Health Regulation No. 71 of 2013 concerning Health Services at the National Health Insurance states that first-rate health facilities must be accredited and hospitals must have accreditation certificates. Hospital accreditation held in Indonesia can encourage efforts to improve hospital service quality and patient safety. Accreditation is an external assessment strategy carried out by the Government's official institution namely the Hospital Accreditation Committee (KARS) to measure the quality of a health service (Ministry of Health RI, 2013). Preparations for facing accreditation assessments have seen a significant increase in service, which is 74%. Accreditation has a greater negative impact (48%) than positive effects (4%) on post-accreditation employee performance (Devkaran and O'Farrell, 2015).

Sacket et al. (2010) reported that accreditation status was not related to patient satisfaction but it could be a reference for improving the quality of hospital management. This will improve the quality of hospital services so that patient satisfaction will be fulfilled and hospital profits will rise. The study of Kennedy et al. (2014) found that the size of the hospital building, the completeness of facilities and infrastructure, the volume of medical operations performed,

and the low mortality rate of the hospital were much related and affected the satisfaction of patients who took medication.

This study aimed to determine the status of accreditation and other factors that influence hospital patient satisfaction.

SUBJECTS AND METHOD

1. Study Design

This was an analytic observational study with a cross sectional design. The study was conducted in four hospitals in Sleman, Yogyakarta, Indonesia, from March to April 2019.

2. Population and Samples

The target population of this study was all inpatients who were in 4 hospitals with different accreditation status in Sleman Regency, Yogyakarta. The hospitals were At-Turots Al Islamy Hospital, Queen Latifa Hospital, Sadewa Hospital, and Muhammadiyah Gamping Hospital. Total 200 inpatients were selected by proportional random sampling.

3. Study Variables

The dependent variable was patient satisfaction. The independent variables were accreditation status, service quality, length of care, source of funds, employment, age, and gender of the patient.

4. Operational Definition of Variables

Accreditation status was the status issued by the Hospital Accreditation Committee (KARS) after the hospital goes through accreditation assessment in the form of an official certificate signed by the KARS leadership. Data collection was done using hospital secondary data.

The quality of service was the assessment of patients on the actions given by the hospital both medical and non-medical in meeting the needs of patients supported by available facilities and infrastructure.

Duration of treatment was the time needed by patients while undergoing treat-

ment at the hospital from the first stay in the hospital as an inpatient.

The source of funds was the origin of the costs that will be used to pay for all the patient's needs while in the hospital.

Occupation was an activity carried out by respondents to earn income in order to meet their daily needs. The data collection was done using questionnaires. The measurement scale was dichotomy.

Age was the age of the patient at the time of hospitalization which was calculated from the year of birth until the study takes place.

Gender was a biological condition that exists from birth and becomes the patient's identity to distinguish women and men.

5. Study Instruments

Data obtained from hospital documents in the form of official certificates issued by the Hospital Accreditation Committee (KARS) after the hospital conducts accreditation assessments. Duration of treatment comes from medical records of inpatients. Satisfaction, service quality, source of funds, employment, age, and sex of respondents were collected by questionnaire.

6. Data Analysis

The data analyzed by univariate analysis with sample characteristics, bivariate analysis with Chi-Square, and multivariate analysis with path analysis with STATA program 14. The data management was done using Path analysis through path specifications, model identification, structural models, parameter estimation, and model respecification.

7. Research Ethics

Research ethics include approval sheets, anonymity, confidentiality, and ethical feasibility. The ethical feasibility in this study came from the Health Research Ethics Committee of the Regional General Hospital Dr. Moewardi Surakarta with number: 319 / III / HREC / 2019.

RESULTS

1. Samples Characteristics

Table 1 show that there are 177 patients (88.5%) who are > 18 years old. 103 patients (51.5%) were female and 104 patients (52%) did not work. The number of patients treated > 3 days was 102 patients (51%). Patients

who were hospitalized used insurance as much as 140 (70%). Patients who assessed the quality of hospital services as good as 128 (64%) and satisfied patients as many as 116 patients (58%). Hospitals that had good accreditation were 143 (71.5%).

Table 1. Sample Characteristics

Characteristics	N	%
Age		
< 18 years	23	11.5
≥ 18 years	177	88.5
Gender		
Female	103	51.5
Male	97	48.5
Occupation		
Not working	104	52
Working	96	48
Treatment duration		
< 3 days	98	49
≥ 3 days	102	51
Source of care funds		
Insurance	140	70
Personal cost	60	30
Service quality		
Poor	72	36
Good	128	64
Accreditation Status		
Poor	57	28.5
Good	143	71.5
Satisfaction		
Not satisfied	84	42
Satisfied	116	58

2. Bivariate Analysis

Table 2 showed the results of bivariate analysis of independent variables and dependent variables. Table 2 showed that age >18 years old (OR = 19; p <0.001), male gender (OR= 2.68; p= 0.001), duration of treatment > 3 days (OR = 2.08; p = 0.011), inde-

pendent funds source (OR= 2.60; p = 0.004), good service quality (OR= 9.80; p <0.001), and good accreditation status (OR= 13.46; p <0.001) increased patient satisfaction with hospital services. Patients who have jobs (OR= 0.38; p= 0.001) reduce satisfaction to hospital services.

Table 2. The results of bivariate analysis of factors that influence patient satisfaction

Variable	Patients Satisfaction				Total		OR	p
	Unsatisfied		Satisfied					
	n	%	n	%	N	%		
Age								
< 18 years	21	91.3	2	8.7	23	100.0	19	<0.001
≥ 18 years	63	35.6	114	64.4	177	100.0		
Gender								
Female	55	53.4	48	46.6	103	100.0	2.68	0.001
Male	29	29.9	68	70.1	97	100.0		
Occupation								
Not working	32	30.8	72	69.2	104	100.0	0.38	0.001
Working	52	54.2	44	45.8	96	100.0		
Treatment duration								
< 3 days	50	51.0	48	49.0	98	100.0	2.08	0.011
≥ 3 days	34	33.3	68	66.7	102	100.0		
Source of care funds								
Insurance	68	48.6	72	51.4	140	100.0	2.60	0.004
Personal	16	26.7	44	73.3	60	100.0		
Service quality								
Poor	54	75.0	18	25.0	72	100.0	9.80	<0.001
Good	30	23.4	98	76.6	128	100.0		
Accreditation Status								
Poor	47	82.5	10	17.5	57	100.0	13.46	<0.001
Good	37	25.9	106	74.1	143	100.0		

3. Path Analysis

Table 3 showed the results of path analysis. Patient satisfaction was directly and positively affected by age > 18 years old and it was statistically significant. Inpatients aged > 18 years old have logodds to be satisfied with hospital services by 2.34 units higher than inpatients who were < 18 years old ($b = 2.34$; 95%CI = 0.33 to 4.35; $p = 0.023$).

Patient satisfaction was influenced directly and positively by male gender and proved to be statistically significant. Male inpatients had logodds to be satisfied with hospital services by 1.02 units higher than female inpatients ($b = 1.02$; 95%CI = 0.08 to 1.96; $p = 0.034$).

Patient satisfaction was influenced directly and negatively by employment and it was statistically significant. Patients who work have logodds to be satisfied with hospital services by -1.37 units lower than inpatients who did not work ($b = -1.37$; 95%CI = -

2.33 to -0.41; $p = 0.005$).

Patient satisfaction was influenced directly and positively by length of treatment > 3 days and it was statistically significant. Patients who were hospitalized for > 3 days had logodds to be satisfied with hospital services by 0.99 units higher than patients who were hospitalized for < 3 days in hospital ($b = 0.99$; CI 95% = 0.04 to 1.95; $p = 0.041$).

Patient satisfaction was influenced directly and positively by independent funding sources and it was proven to be statistically significant. Patients who use independent funding sources have logodds to be satisfied with hospital services by 1.50 units higher than inpatients with health insurance ($b = 1.50$; 95%CI = 0.47 to 2.53; $p = 0.004$).

Patient satisfaction was influenced directly and positively by good service quality and it was statistically significant. Hospitals

that have good service quality have logodd by 3.42 units higher for inpatient satisfaction than hospitals with poor service quality ($b = 3.42$; 95%CI= 2.31 to 4.53; $p < 0.001$).

Patient satisfaction was influenced directly and positively by the status of the

hospital accreditation and it was statistically significant. The good status of hospital accreditation has logodd for increasing patient satisfaction by 3.33 units higher than hospitals that have poor accreditation status ($b = 3.33$; 95%CI= 2.12 to 4.54; $p < 0.001$).

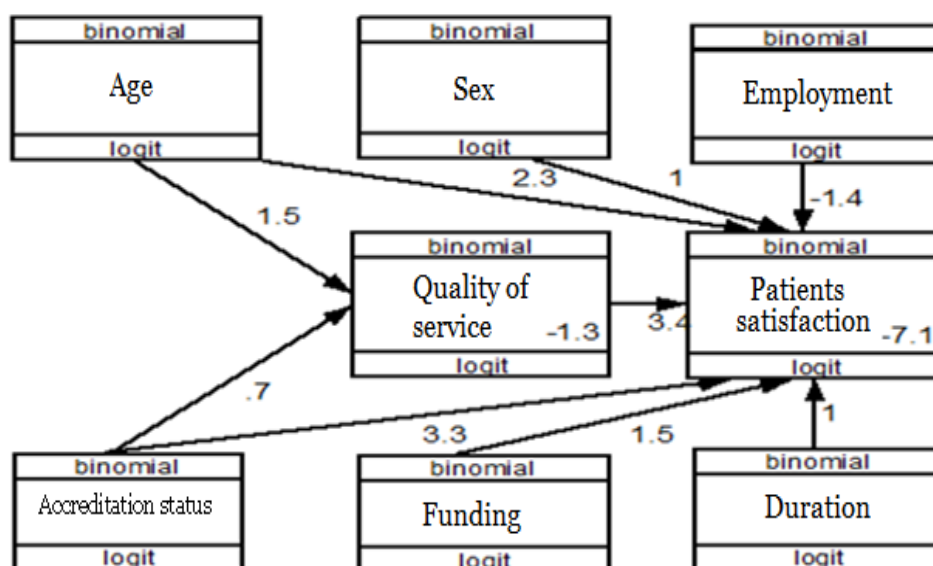


Figure 1. Path analysis model with estimation

Patient satisfaction was influenced indirectly and positively by accreditation status through service quality. Good accreditation status has logod for good service quality by 0.70 units higher than poor accreditation status ($b = 0.70$; 95%CI= -0.04 to 1.96; $p = 0.037$).

Patient satisfaction was influenced indirectly by age > 18 years old through the quality of hospital services. Ages > 18 years old have logods to assess the service quality by 1.50 units higher than patients aged <18 years old ($b = 1.50$; 95%CI= 0.49 to 2.50; $p = 0.036$).

Table 3. The results of path analysis of factors that influence patient satisfaction in the hospital

				95% CI		
Dependent Variable		Independent Variable	b	Lower limit	Upper limit	p
Direct Effect						
Patients satisfaction	←	Age ≥18 years old	2.34	0.33	4.35	0.023
Patients satisfaction		Male	1.02	0.08	1.96	0.034
Patients satisfaction		Employed	-1.37	-2.33	-0.41	0.005
Patients satisfaction		Length of treatment ≥3 days	0.99	0.04	1.95	0.041
Patients satisfaction		Personal funds source	1.50	0.47	2.53	0.004
Patients satisfaction		Good service quality	3.42	2.31	4.53	<0.001
Patients satisfaction		Accreditation status	3.33	2.12	4.54	<0.001
Indirect Effect						
Service quality	←	Accreditation status	0.70	0.04	1.96	0.037
Service quality		Age ≥18 years old	1.50	0.49	2.50	0.004
N observation = 200						
Log likelihood = -183.75						

DISCUSSIONS

1. The effect of age on patients satisfaction

The results of the analysis showed that age has a direct and positive influence on patient satisfaction and it was statistically significant. The older the patient, the higher his satisfaction. Age also has a direct and positive effect on service quality assessment. The older the patients, the better the quality of the service.

Study of Kurniawan et al. (2019) reported that the age of > 35 years old increased the level of satisfaction by 0.99 times compared to patients <35 years old. The enhancement of age can have an effect on health, which was deterioration in the structure and function of organs, so that older people tend to use health services more than young people.

Some older people who experienced chronic illnesses were more receptive to their physical limitations than younger people. This was because older people were generally more open, so older patients demand lower expectations from young patients. This caused older patients to be more satisfied than younger patients (Haj-Ali et al., 2014).

2. The effect of gender on patients satisfaction

The results of the analysis showed that gender had a direct and positive influence on patient satisfaction and it was statistically significant. Male patients had greater satisfaction than female patients.

A study by Oroh et al. (2014) showed that there was a relationship between genders with the level of patient satisfaction. Gender has an influence on patient satisfaction because the view of the services provided by hospitals between women and men was different.

Women see more appearance in detail, while men have views that tend to be

more indifferent to things around them so men were considered more flexible than women (Tjiptono, 2014).

3. The Effect of Employment on Patients Satisfaction

The results of the analysis showed that employment had a direct and negative influence on patient satisfaction and it was statistically significant. Patients who worked had lower satisfaction than patients who did not work.

This study was supported by Hidayati et al., (2014) who reported that there was a relationship between work and patient satisfaction. Job was a predisposing character and demographic characteristics of individuals that can affect the patient's perception in the process of healing the disease.

Individuals who worked have a habit to always focus on their work and service opinions according to their needs, so that perceptions of health services were different from individuals who did not work. Working individuals tend to be very dependent on health services while non-working individuals tend to be independent (Lupiyoadi, 2013).

4. The Effect of Funds Source on Patients Satisfaction

The results of the analysis showed that the source of funds had a direct and positive influence on patient satisfaction and it was statistically significant. Patients who use independent costs have higher satisfaction than patients with insurance.

The results of this study were supported by Sari (2015) who examined the differences in the level of satisfaction of BPJS patients with general patients at Dr. RSUD Soedirman Mangun Sunarso in Wonogiri who concluded that the level of satisfaction of general patients was 39.51% higher than BPJS Health patients. Tjiptono (2014) stated that there were several things that

make customers in the health sector or patients satisfied namely equipment or facilities, staff competency and the accuracy of handling patient complaints.

A study by Agheorghiesei and Copoeru (2013) showed that needs that were directly related to a person's condition such as the use of facilities, the quality of services and the relationship between patients and health personnels affected the patient's assessment of the quality of health services.

5. The Effect of Length of Treatment on Patients Satisfaction

The results of the analysis showed that the length of treatment has a direct and positive influence on patient satisfaction and it was statistically significant. The longer the treatment, the better the patient satisfaction.

The results of this study was supported by Oroh et al. (2014) who stated that the treatment duration of 2 to 6 days was related to the level of patient satisfaction. The duration of hospitalization in a hospital can be seen from two approaches, the first came from the type of disease suffered by the patient takes a long time and the second was the patient felt comfortable and satisfied in doing the treatment.

Patients who were hospitalized for longer had more interactions and frequency with health personnels than patients who were only briefly admitted to the hospital. This increased the attention and empathy of health staff to patients. The form of empathy from hospital staff was a special concern for patient and family complaints (Sumarwan, 2011).

Patient satisfaction can be influenced by the quality of health services, especially in the empathy dimension that would increase patient satisfaction by 0.496 times. Empathy from staff in caring for patients was needed to form closeness between patients and officers (Alghamdi, 2014).

6. The Effect of Service Quality on Patients Satisfaction

The results of the analysis showed that service quality has a direct and positive influence on patient satisfaction and it was statistically significant. The better the quality of service, the better patient satisfaction.

This study was supported by Widayati et al., (2018) who stated that patient satisfaction can be influenced by income, education, and quality of service. Another study by Fuad (2017) also reported that the speed of service increased the patient satisfaction by 1.91 units. The availability of medical facilities and the environment in the hospital has a direct effect on patient satisfaction, but the effectiveness of treatment given by the hospital has more influence on patient satisfaction (Kim et al., 2017). Study by Péfoyo and Wodchis (2013) stated that hospital performance indicators were directly related to patient satisfaction. The study also mentioned that there was a need to match the patient's social status and hospital level in evaluating patient satisfaction.

7. The Effect of Accreditation Status on Patients Satisfaction

The results of the analysis showed that the accreditation status has a direct and positive influence on patient satisfaction and it was statistically significant. The better the accreditation status, the better the patient satisfaction.

The results of the study were supported by Holtmann et al. (2011) who stated that good accreditation status both affected the satisfaction of inpatients by 0.98 times.

The results of the analysis also showed that the accreditation status has a direct and positive effect on service quality and it was statistically significant. The better the status of hospital accreditation, the better the quality of services provided.

Accreditation status was needed to guarantee the quality of patient health and

safety services. Hospital accreditation was an external assessment strategy for measuring the quality of a health service (Brubakk et al., 2015). Hospitals would be encouraged to carry out quality services by applying existing accreditation standards. In addition, the hospital would strive to continue to increase cooperation and discipline among employees in performing services (Oliveira et al., 2017)

Measurement of patient satisfaction at the hospital was needed in developing and implementing a hospital accreditation system. Accreditation was one of the determinants of patient satisfaction driven by the completeness of other facilities and infrastructure (Haj-Ali et al., 2014).

AUTHORS CONTRIBUTION

Siwi Anggraini Sulistyo, the main author, played a role in collecting and processing study data. Didik Tamtomo examined the conceptual framework and study methodology. Endang Sutisna Sulaeman reviewed the study manuscript.

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CONFLICT OF INTEREST

The author did not have any conflict of interest.

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