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Submission date: 22-Apr-2021 03:54PM (UTC+0700)
Submission ID: 1566458127
File name: 5._prosiding_3rd_ICEEBA_International_Confe_2018.pdf (391.73K)
Word count: 7259
Character count: 38408

KnE Social Sciences
3rd ICEEBA
International Conference on Economics, Education, Business and Accounting
Volume 2019

Knowledge E
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Healthcare Quality and Justice Quality: Its Effects on Patient Satisfaction in the National Health Insurance Era

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Abstract

The purpose of this article is to explain the model of healthcare quality which consists of interaction, physical environment, outcomes, and justice quality associated with patient satisfaction by considering the patient's health condition before and after hospital treatment. The authors aim to examine the effect of healthcare quality (interaction, physical environment, outcome, and justice quality) on the patient satisfaction which is moderated by health conditions. Data were collected using a questionnaire with patients or patients' families as respondents in three Regional Public Hospitals in East Java, Indonesia. The proposed research model consists of six constructs. They represent healthcare quality as follows: interaction quality (five variables); physical environment quality (four variables); outcome quality (three variables) and justice quality (six variables). There is also one construct that represents the patient's health condition (two variables – health conditions before and after treatment). Finally, there is one construct that represents patient's satisfaction (six variables). Testing the hypothesis model of this study used structural equation modeling (SEM) with the WarpPLS approach. The results of SEM analysis with the WarpPLS approach show that the goodness of fit statistics supported the model of healthcare quality-health conditions-patient's satisfaction. The results of hypothesis testing found that quality of physical environment, quality of outcomes, quality of justice were proven as constructs that could predict patient's satisfaction. Another important finding is the construct of health conditions proved to be a moderator on the effect of justice quality on patient's satisfaction.

Keywords: healthcare, health condition, patient's satisfaction, East Java, Indonesia

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Received: 29 January 2019
Accepted: 27 February 2019
Published: 24 March 2019

Publishing services provided by Knowledge E

Selection and Peer-review under the responsibility of the 3rd ICEEBA Conference Committee.

1. Introduction

Starting January 1, 2014 the Indonesian Government has implemented the National Health Insurance (JKN) system as mandate of the act number 40, 2004 concerning the National Social Security System (SJSN). This system is designed to ensure the availability of healthcare services quality for all Indonesians without exception. In the period of three years of JKN enactment, there were still many problems, especially

in the absence of quality aspects in healthcare services. Based on [1], there are six dimensions of healthcare service quality that need to be realized by each country, namely effectiveness, efficiency, accessibility, safety, timeliness, and patient-centreness. In Indonesia the accessibility dimension is most often measured and claimed success among others is that all Indonesians can register for BPJS Health. But further access to health services is often a problem because of the limitations of health human resources and other resources. Other problems also exist in other quality dimensions such as effectiveness, efficiency, security, timeliness, and patient-centeredness, whose quality has never been measured.

As of June 1, 2017 JKN participants reached 177.4 million participants with 61.4% were participants of the Contribution Assistance Recipients (PBI) who were none other than the poor and needy people whose premium payments came from ABPN and ABPD. This condition shows that JKN participants are dominated by the poor. Apart from the JKN participants from PBI (the poor) or not, ideally JK.4 participants as much as 177.4 million people must get quality health services in accordance with the mandate of the law. But the reality in the field shows that health services for the poor (PBI) and non-PBI are often not in line with expectations. This condition is supported by the results of the study by [2] found that health services provided to poor families often occur discrimination treatment that is detrimental to poor family patients. The hospital prefers to serve patients who pay cash after treatment rather than serving poor families or other JKN participants. Several JKN participant patients were known to be asked to buy drugs outside the hospital, subtly rejected at the hospital on the grounds that the required services were not covered by BPJS Kesehatan, until they were not optimally served in the hospital. If this incident continues, it is not impossible that participants will be disappointed and no longer trust the JKN system. Also in the Public Health Centre (Puskesmas), it is not uncommon for people to feel unsatisfactory services. The results of research by [3] in the Puskesmas in East Java showed that the procedures for puskesmas services, the clarity of information provided by the officers, the accuracy of prescription drugs, the quality of drugs received by patients, and the availability of medicines at the puskesmas had not been able to demonstrate an increase in patient satisfaction in the Puskesmas.

Based on the description above, it can be said that health services provided by providers in terms of hospitals and puskesmas in the era of JKN have not been able to meet the expectations of the community, especially JKN participants. At the level of health facilities (health facilities) both first level and referral there needs to be quality control of health services that not only maintain quality consistency but also pay attention to aspects of fair service as suggested by [4–7].

Healthcare quality and patient satisfaction have gained increasing attention in recent years [8]. Health service quality is an indicator that can be used to compare differences in health service programs [9], evaluate the quality of health services [10], and identify the needs of service aspects that can be developed to improve patient satisfaction [11].

Many studies emphasize patient care as an important tool for monitoring and at the same time improving service quality. Many hospitals adopt patient-centered service quality measures [12]. As a result, many studies analyze patient satisfaction using a broader range of measurements based on the definition of patient satisfaction.

Although the attention of researchers is aimed at the quality of health services, the amount of empirical research that analyzes the model as a whole is limited [8], and very few studies have examined this phenomenon from the point of view of inpatients, moreover inpatients who have completed care. There is evidence that some constructs form a quality model and overall patient satisfaction [11]. Some researchers have done a lot of cross-cultural research on health services and patient satisfaction [11], but there is still a research gap to develop and test models in a comprehensive manner to describe causal relationships between several constructs [11].

Healthcare model has been developed and applied to government institutions including hospitals and health centers is a model of excellent service based on the Decree of Minister of Administrative Reform No.63 of 2003 concerning the principles of excellent service. The excellent service model adopted the ServQual model developed by [13]. The excellent service model is still general and has not identified in detail the dimensions of justice.

The healthcare service quality model developed in this study is based on an integrated hierarchical model from [14]. According to [14], the overall perception of service quality is based on evaluation of three dimensions, namely the quality of interaction, the quality of the physical environment and the quality of outcomes. In addition, the health service quality model in this study also promotes the principles of justice. Based on this background, this study aims to develop a model of quality health care by basing integrated hierarchical models and service quality justly. This study also aims to analyze the effect of the quality of interaction, the quality of the physical environment, the quality of outcomes and quality on patient satisfaction which is moderated by the patient's health condition.

2. Literature Review

2.1. Health care service quality

Service quality has become a concept that is widely discussed in the service management literature [15]. Many researchers try to define the service quality construct and they agree that customers will evaluate service quality [16]. Clearly [17] states that service quality is an overall advantage of service perceived by customers. Thus the more superior a service perceived by the customer, the better the service quality perceived by the customer and vice versa.

Service quality has a close relationship with customer satisfaction [13]. However, both constructs have two important points of difference. First, service quality is only related to the assessment of service aspects, while satisfaction is not only related to the assessment of service aspects but also other factors such as price, image and other situational factors [18, 19]. Second, service quality and customer satisfaction are a form of attitude from customers [13]. Service quality is a form of customer attitude based on cognitive while satisfaction is a form of affective customer behavior [20].

Many researchers have stated that service quality is a multidimensional construct but there is no agreement on how much and what dimensions of service quality [16]. [21] proposed a service quality model called the Nordic Model. This model focuses on three dimensions of service quality consisting of functional quality, technical quality and image [21]. Functional quality related to service outcomes while technical quality is related to service delivery process [14, 21]. On the other hand [13] proposed the SERVQUAL model. This model is called the American model emphasizing functional quality [14]. In detail [13] this service quality consists of five dimensions, namely responsiveness, empathy, assurance, tangible and reliability. Many researchers and practitioners use this American Model to measure service quality [22]. But this model has been widely criticized regarding its dimensional stability and its functional quality focus [23].

Both the American and Nordic models failed to explain that customer assessment of service quality is a complex process and customers tend to divide the service quality dimension into subdimensions [14]. This encourages other research to propose other service quality models [24]. [25] states that service quality consists of three levels: overall service quality, main dimensions, and sub dimensions. [25] is supported by [14] who found that the three main dimensions of service quality include interaction quality, outcome quality, and environment quality.

The assessment of service quality in this study refers to an integrated hierarchical model [14] and a fair service model [4, 7, 26–29]. Healthcare services are high-contact

services requiring a lot of customer-employee interactions [30]. Assessment of perceptions of service quality in this study is based on an evaluation of four dimensions of service quality, namely interaction quality, physical environment quality, outcome quality and justice quality. The quality of interaction in high contact services such as health services has an important role in perceived service quality [31]. The service quality of the physical environment plays an important role in shaping the customer experience of the services it receives. The quality of the physical environment is commonly used to analyze the influence of the physical environment on the assessment of services by customers [30]. Outcome quality is technical quality and relevant customer attributes that are evaluated after service delivery [14]. In the healthcare industry, the outcome quality is the main determinant in the assessment of patient service quality perceptions.

2.2. Justice quality

There is a paradigm shift in service assessment of an organization by customers [29]. The tendency to evaluate organizational service by consumers does not depart from the assessment of service quality developed by [13] with a ServQual model and later developed by other researchers, but also assesses the aspect of organizational justice to deliver these services to all customers. According to [32], justice theory comes from the social psychology literature based on an individual's perception of justice in a situation or decision. [33] developed a conceptual framework based on justice theory to analyze the effect of failure and services repairmen to restaurant patrons. Their results show that justice based service has a significant effect on intensity of repeat visits. In other words, consumers want a fair service.

The justice concept was first used in marketing management relating to negligence of services provider and customer complaints [34]. According to [35], justice is ensured to the public in all aspects of life without compromise and reason. Justice is also interpreted as an evaluation of fair treatment of a person against another [6].

2.3. Patient satisfaction

According to [36], customer satisfaction is a customer evaluation after behaving in a certain time and place. [37] explain satisfaction as a result of a customer psychological assessment of direct experience. The satisfaction can be measured directly, for example through a pleasant/not pleasant feeling or satisfied/dissatisfied. Customer satisfaction is an emotional response to service attributes and service information is the basis to

retain customers [37]. Satisfaction can be seen as a psychological state that is generated when customer's expectation is fulfilled or exceeds his or expectations and dispel the preconceived negative feelings about the consumption experience [38].

2.4. Patient health conditions

How many researchers have linked the health conditions of patients with patient satisfaction, but the results show inconsistent results [39]. [40] link between poor health conditions and dissatisfaction. Other medical care satisfaction studies show that people with poor health have stronger feelings in both directions (satisfied and dissatisfied) and that the most satisfied groups are those who have good health or those who suffer from chronic diseases [41]. [42] found that patients' health conditions were better predictors of satisfaction than doctors. Whereas [43] and [44] reported that health conditions are not related to satisfaction. [45] showed that patients with lower physical and mental health scores were significantly less likely to be satisfied.

2.5. Model and hypotheses

The model developed in the study is illustrated in Figure 1. There are six constructs in this research model, namely four constructs of healthcare quality, one construct of patient satisfaction and one construct of the patient's health condition. According to the Research Model, we formulate nine hypotheses:

H1. Interaction quality influences patient satisfaction

H2. Physical environment quality influences patient satisfaction

H3. Outcome quality influences patient satisfaction

H4. Justice quality influences patient satisfaction

H5. Patient health condition influences patient satisfaction

H6. Patient health condition moderates the effect interaction quality on patient satisfaction

H7. Patient health condition moderates the effect physical environment quality on patient satisfaction

H8. Patient health condition moderates the effect outcome quality on patient satisfaction

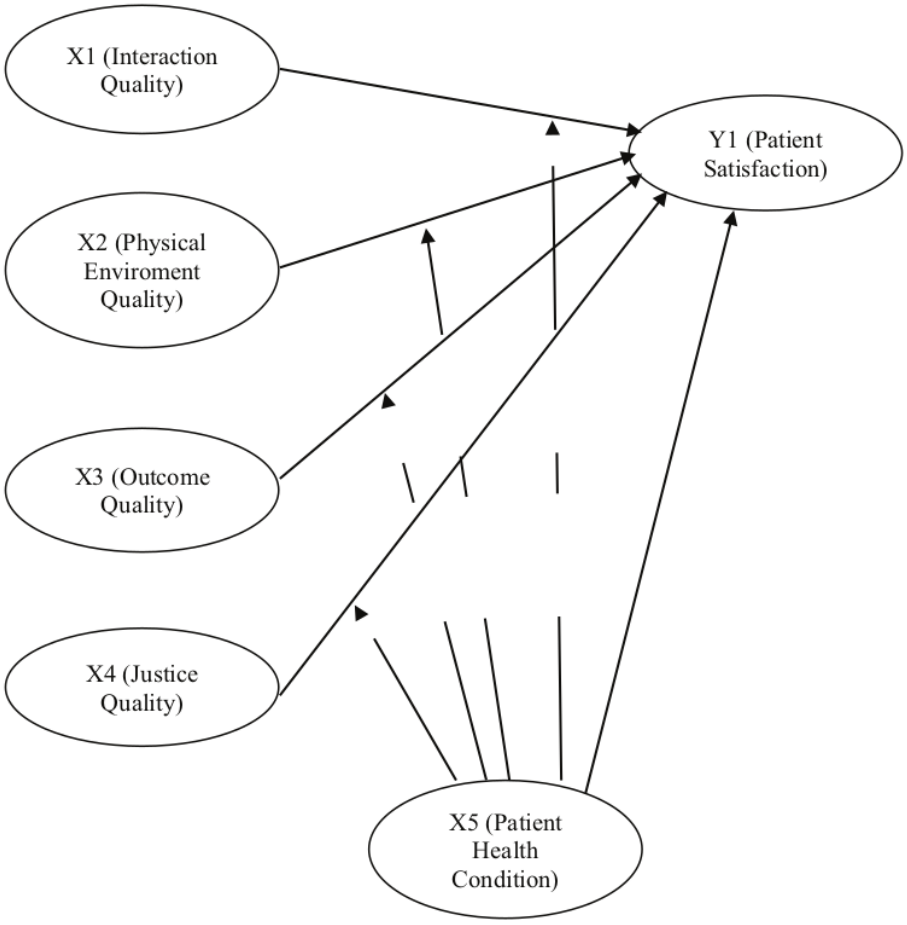

Figure 1: Research model.

H9. Patient health condition moderates the effect justice quality on patient satisfaction

3. Research Methodology

3.1. Measure

To ensure content validity, the indicators used in this research were obtained from the previous studies on healthcare service quality. Indicators of interaction quality, physical quality and outcome quality were obtained from [14, 25, 30]. The indicators of justice quality were obtained from [29] and [4]. The indicators of patient health condition were obtained from [39]. The indicators of patient satisfaction were obtained from [39]. Each indicators was measured using seven-point Likert scale ranging from 'strongly

not sure/polite/precise/clean/complete/safe/efective/good/appropriate/satisfied (1)" to "strongly sure/polite/precise/clean/complete/safe/efective/good/appropriate/satisfied (7)."

To ensure construct validity, the indicators should have factor loading values above 0.5 [46]. The indicators with factor loading values below 0,5 should be removed. Appear in Table 2 indicator X4.2 has a loading factor below 0.5, so it must be removed. Then, reliability testing was carried out by using Cronbach alpha analysis.

From Table 2, it can be seen that each construct has an alpha Cronbach alpha values above the cut off value generally used, i.e. 0.6, except for patient health condition (X5). However, we still retained the contracts for patient health condition (X5) for a number of reasons. First, we obtained the scale from previous research [47]. Second, we followed the previous researchers (e.g. [24, 48]). Based on the procedure, we obtained 26 indicators used for this research as can be seen in Table 2.

3.2. Sample

The population of this research is the patients at the Regional Public Hospital (RSUD) in East Java – Indonesia. The sample selection of RSUD in East Java by convenience sampling was based on the representation of cultural areas in East Java. Madura cultural area is represented by RSUD Dr. H. Slamet Martodirdjo, Pamekasan Regency, Mataraman culture is represented by RSUD Ngudi Waluyo Blitar Regency, and Arek culture is represented by RSUD Ibnu Sina, Gresik Regency.

The population of this research is the patients at the Regional Public Hospital (RSUD) in East Java – Indonesia. Pemilihan sampel RSUD di Jawa Timur dengan cara purposive sampling didasarkan pada keterwakilan daerah budaya di Jawa Timur. Daerah budaya madura diwakili oleh RSUD Dr. H. Slamet Martodirdjo Kabupaten Pamekasan, budaya mataraman diwakili oleh RSUD Ngudi Waluyo Kabupaten Blitar, dan budaya arek diwaliki RSUD Ibnu Sina Kabupaten Gresik.

Patient sampling was done by purposive sampling, i.e. patients who were hospitalized for at least 4 days. Data was collected through questionnaire surveys. Respondents in this study were patients and families of inpatients who were hospitalized for at least 4 days. Based on this, there were 241 respondents.

Fifty three point nine of respondents are female. The majority of the respondents are married (80.5%). Further, the majority of the respondent's education background is primary school graduation (36.5%). More completely, the demographic profile of the respondents can be seen in Table 2.

TABLE 1: Scale validity and reliability.

Construct	Indicators	Factor Loading	Cronbach Alpha
Interaction quality (X1)	Doctor's polite behavior to patients (X1.1)	0.786	0.830
	Nurses' polite behavior to patients (X1.2)	0.786	
	The accuracy of doctors providing healthcare services (X1.3)	0.732	
	The accuracy of nurses' providing healthcare services (X1.4)	0.801	
	The Interaction quality of patient-employee (X1.5)	0.753	
Physical Environment quality (X2)	Neatness and cleanliness of the hospital environment (X2.1)	0.843	0.846
	Cleanliness and comfort of hospital facilities (X2.2.)	0.878	
	Completeness of hospital facilities (X2.3)	0.805	
	Hospital environment safety (X2.4)	0.782	
Outcome quality (X3)	The effectiveness of drugs from doctors (X3.1)	0.834	0.736
	The condition of patients after treatment (X3.2)	0.809	
	Prioritizing the interests of patients (X3.3)	0.783	
Justice Quality (X4)	Conformity between the service results and the patient wishes (X4.1)	0.774	0.808
	There is no discrimination in service (X4.2)	0.069	
	Service compliance with regulations or procedures (X4.3)	0.734	
	The services provided are in the order (X4.4)	0.742	
	Doctor's attention to patient's complaints (X4.5)	0.761	
	Nurses' attention to patient's complaints (X4.6)	0.828	
	Providing information by doctors/nurses about the patient's illness (X4.7)	0.773	
Patient Health Condition (X5)	Conditions before getting service and care (X5.1)	0.814	0.491
	Conditions after getting service and care (X5.2)	0.814	
Patient Satisfaction (Y1)	Patient satisfaction for hospital services (Y1.1)	0.864	0.901
	Patient willingness to go back to the hospital (Y1.2)	0.764	
	Patient satisfaction for hospital care (Y1.3)	0.779	
	Comfort of patients to recommend the hospitals to friends (Y1.4)	0.899	
	Comparison of the hospital services with other hospitals (Y1.5)	0.838	
	Patient willingness to recommend the hospital to family/relatives/friends (Y1.6)	0.759	

TABLE 2: Respondent's demographic profile.

Characteristics	Percentage (%)
Sex	
Male	46.1
Female	53.9
Age	
≤ 17 years old	10.0
18-25 years old	12.0
26-35 years old	12.0
36-45 years old	24.5
46-55 years old	16.6
≥ 56 years old	24.9
Marital Status	
Married	80.5
Single	19.5
Education	
Primary School	36.5
Junior High School	21.6
Senior High School	33.2
Diploma	0.8
Bachelor	5.8
Other	2.1
Occupation	
Students	12.4
Government employee	3.3
Private employee	10.4
Entrepreneur	33.2
Farmers/fishermen	29.9
Other	10.8

3.3. Data analysis

To test the proposed research model, we use the analysis of structural equation modeling (SEM) with the WarpPLS approach. The use of the WarpPLS approach as a tool to test hypotheses in this study is to avoid the limitations associated with distributional properties, measurement levels, sample sizes, complexity models, identification and factor determinants [49]. The WarpPLS approach is also very well suited to the research objectives because the theoretical objectives are explaining and prediction and the research model is relatively complex and the phenomena studied are new or changing [50]. Data analysis was carried out using the WarpPLS 5.0 software.

4. Findings and Discussions

4.1. Assessment of the measurement model

TABLE 3: Combined loading and cross-loadings.

Indicator	X1	X2	X3	X4	X5	Y1	P-value
X1.1	0.786	−0.051	0.095	−0.049	0.242	−0.323	< 0.001
X1.2	0.786	0.077	−0.306	−0.312	−0.151	0.416	< 0.001
X1.3	0.732	−0.304	0.119	0.251	0.093	−0.234	< 0.001
X1.4	0.801	−0.044	0.081	0.048	−0.166	0.125	< 0.001
X1.5	0.753	0.315	0.019	0.082	−0.010	−0.003	< 0.001
X2.1	−0.145	0.843	−0.224	0.018	0.092	−0.186	< 0.001
X2.2	0.007	0.878	0.049	−0.427	−0.070	0.100	< 0.001
X2.3	0.063	0.805	0.053	0.233	−0.082	0.105	< 0.001
X2.4	0.083	0.782	0.132	0.220	0.064	−0.020	< 0.001
X3.1	0.088	0.039	0.834	0.048	0.189	−0.398	< 0.001
X3.2	−0.064	0.069	0.809	−0.110	−0.016	0.244	< 0.001
X3.3	−0.027	−0.113	0.783	0.062	−0.185	0.171	< 0.001
X4.1	−0.069	0.132	−0.255	0.775	−0.079	0.076	< 0.001
X4.3	−0.244	0.382	−0.156	0.732	0.176	0.098	< 0.001
X4.4	−0.095	−0.036	−0.229	0.744	0.088	0.408	< 0.001
X4.5	0.059	−0.083	0.246	0.762	0.123	−0.688	< 0.001
X4.6	0.094	−0.308	0.208	0.828	−0.259	0.102	< 0.001
X4.7	0.233	−0.047	0.159	0.773	−0.016	0.007	< 0.001
X5.1	0.031	0.089	0.036	−0.126	0.814	−0.486	< 0.001
X5.2	−0.031	−0.089	−0.036	0.126	0.814	0.486	< 0.001
Y1.1	0.067	0.038	0.007	0.158	0.085	0.864	< 0.001
Y1.2	−0.050	−0.148	0.437	−0.272	0.096	0.764	< 0.001
Y1.3	−0.040	0.066	−0.415	0.384	−0.206	0.779	< 0.001
Y1.4	0.047	0.111	−0.068	−0.218	0.004	0.899	< 0.001
Y1.5	−0.024	−0.018	−0.209	0.097	0.049	0.838	< 0.001
Y1.6	−0.014	−0.073	0.289	−0.149	−0.041	0.759	< 0.001

Based on Table 3 it can be seen that all indicators have a factor loading value greater than 0.5. This means that all indicators meet convergent validity. All indicators also meet discriminant validity because the loading factor for all indicators is greater than cross loading.

From Table 4, it can be seen that each construct has a composite reliability coefficients values above the cut off value generally used, i.e. 0.7. Berarti semua contruct memenuhi reliabilities composite. It can be seen at the table that each construct has a Cronbach's alpha coefficients above the cut off value generally used i.e. 0.6 except for patient health

TABLE 4: Composite reliability and Cronbach alpha.

Construct	Composite reliability coefficients	Cronbach's alpha coefficients
Interaction Quality (X1)	0.880	0.830
Physical Environment Quality (X2)	0.897	0.846
Outcome Quality (X3)	0.850	0.736
Justice Quality (X4)	0.897	0.862
Patient Health Condition (X5)	0.797	0.491
Patient Satisfaction (Y1)	0.924	0.901

condition. However, we still retained the contracts for patient health condition (X5) for a number of reasons. First, we obtained the scale from previous research [47]. Second, we followed the previous researchers (e.g. [24, 48]).

4.2. Assessment of the structural model

TABLE 5: Model fit and quality indices.

No.	Indicator Fit	Fit Criteria	Value	Assessment of Model
1	Average path coefficient (APC)	$p < 0.05$	0.119 ($p < 0.015$)	Model Fit
2	Average R-Squared (ARS)	$p < 0.05$	0.768 ($p < 0.001$)	Model Fit
3	Average adjusted R-squared (AARS)	$p < 0.05$	0.759 ($p < 0.001$)	Model Fit
4	Average block VIF (AVIF).	Acceptable if <= 5, ideally <= 3.3	3.306	Model Fit
5	Average full collinearity VIF (AFVIF).	Acceptable if <= 5, ideally <= 3.3	3.426	Model Fit
6	Tenenhaus GoF (GoF).	Small >= 0.1, medium >= 0.25, large >= 0.36	0.656	Model Fit
7	Sympson's paradox ratio (SPR)	Acceptable if >= 0.7, ideally = 1	0.778	Model Fit
8	R-squared contribution ratio (RSCR).	Acceptable if >= 0.9, ideally = 1	0.997	Model Fit
9	Statistical suppression ratio (SSR).	Acceptable if>= 0.7	1.000	Model Fit
10	Nonlinear bivariate causality direction ratio (NLBCDR).	Acceptable if >= 0.7	0.556	Not Model Fit

Table 5 shows that out of 10 indicators fit, 9 of them show a fit model. Based on the parsimony principle, it can be concluded that this research model belongs to the fit model category.

Based on Table 6 it can be seen that the quality of interaction (X1) has no effect on patient satisfaction (Y1). This is indicated by the path coefficient of 0.047 with a *p*-value of

TABLE 6: Path coefficients.

Relationship between variable	Path coefficient	p-value	Result
Interaction Quality (X1) → Patient Satisfaction (Y1)	0.047	0.230	*H1* is not supported
Physical Environment Quality (X2 → Patient Satisfaction (Y1)	0.130	0.020	*H2* is supported
Outcome Quality (X3) → Patient Satisfaction (Y1)	0.100	0.057	*H3* is supported in $p \leq 0.10$
Justice Quality (X4) → Patient Satisfaction (Y1)	0.512	< 0.001	*H4* is supported
Patient Health Condition (X5) → Patient Satisfaction (Y1)	0.191	0.001	*H5* is supported
X5*X1 → Patient Satisfaction (Y1)	-0.023	0.358	*H6* is not supported
X5*X2 → Patient Satisfaction (Y1)	0.052	0.206	*H7* is not supported
X5*X3 → Patient Satisfaction (Y1)	0.012	0.426	*H8* is not supported
X5*X4 → Patient Satisfaction (Y1)	0.094	0.071	*H9* is supported in $p \leq 0.10$

0.230 greater than 0.05. This condition reflects that changes in the quality of interaction have no impact on patient satisfaction. JKN patients see and feel that doctor's politeness in patients does not affect changes in patient satisfaction.

It is seen that the quality of the physical environment (X2) has an influence on patient satisfaction (Y1). The path coefficient is 0.130 with a *p*-value of 0.020 smaller than 0.05. This illustrates that changes in the physical environment (X2) of the hospital have an impact on changes in patient satisfaction (Y1). JKN patients feel that changes in the physical environment can improve patient satisfaction.

Table 6 shows that the quality of outcomes (X3) has an influence on patient satisfaction (Y1). This result is indicated by the path coefficient of 0.100 with *p*-value 0.057 smaller than 0.10. This condition reflects that the quality of outcomes (X3) has a contribution to improving patient satisfaction (Y1). The quality of the outcome is mainly on the indicator of the effectiveness of the drug from the doctor to control the condition of the patient which causes the patient to feel satisfied.

The same results are also the justice quality (X4). The findings of the study indicate that the quality of fair service has an influence on patient satisfaction (Y1). This is indicated by the path coefficient of 0.512 with a *p*-value smaller than 0.001. This condition shows that equitable health services are something that is desirable for JKN patients. The hospital has provided health services with principles on the values of justice. The nurses have worked well by responding to patients' complaints about their illness. The doctor has also done the same thing.

It appears in Table 6 that the health condition variable (X5) has an effect on patient satisfaction (Y1) with a path coefficient of 0.191 with *p*-value 0.001 smaller than 0.05. These findings indicate that changes in the patient's health condition have an impact on patient satisfaction (Y1).

Interaction variables X5 * X1, X5 * X2, and X5 * X3 have no effect on patient satisfaction variables (Y1) while X5 * X4 has an influence on satisfaction variables. These results indicate that the patient's health condition variable (X5) proved to be positioned as a moderator variable the effect of fair service quality (X4) on patient satisfaction (Y1). Based on Table 6 the path coefficient of the effect of the X5 * X4 interaction variable on patient satisfaction (Y1) is 0.094 with *p*-value 0.071 less than 0.10. This means that the health condition variable has a role to strengthen the effect of fair service on patient satisfaction. Whereas in the path of the influence of the quality of interaction, the quality of the physical environment and the quality of outcomes on patient satisfaction, the health condition variable was not proven to be a moderator variable.

5. Conclusions

Hypothesis testing shows that the quality of the physical environment has an influence on patient satisfaction. This reflects that the environment and hospital facilities can influence the patient's perception to feel satisfied or dissatisfied. The better the clean and tidy the home environment, the patient feels more satisfied. In addition, if there is an increase in hospital facilities, patient satisfaction also increases. Some research results such as those conducted by [51–54] managed to identify that medical facilities are part of the quality dimension of inpatient services.

The results also found that outcome quality had an influence on poor satisfaction. This condition is reasonable, given that patients who seek treatment and are treated with ill health will expect to recover. When the patient's expectations are proven to heal or improve the patient's condition, then this will improve patient satisfaction. It could be that the patient's recovery was due to medication or rapid action given by the doctor.

Justice quality is proven that can affect patient satisfaction. The more equitable in health services in hospitals in the JKN era will have an impact on increasing patient satisfaction. This finding is in line with the research by [29] which found that informational and interactional justice had an impact on increasing patient satisfaction.

The results of hypothesis testing also concluded that patient health conditions have an influence on patient satisfaction. This finding supports the research of [42] who found that patients' health conditions were better predictors of satisfaction than doctors. It was

proven that patient health condition as a moderator on the influence of justice quality on patient satisfaction. This means that justice quality will be able to increase patient satisfaction if the health conditions are getting better.

Testing other hypotheses shows that the quality of interaction has no effect on patient satisfaction. Patient health condition is not proven as a moderator on the influence of the quality of interaction, the quality of the physical environment and the quality of outcomes on patient satisfaction.

Acknowledgment

The authors would like to thank the Director of Research and Community Services, Ministry of Research and Higher Education for providing research funding to undertake this study.

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