Building Patient Trust in the Era of National Health Insurance: Consequences of Healthcare Service Quality, Satisfaction and Health Conditions

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Abstract

This study aimed to develop a patient trust model that contributes to patient satisfaction and quality healthcare services by focusing on the role of patient health condition as a moderator. Data were collected from three regional general hospitals in East Java, Indonesia, using a questionnaire administered to patients or the families of patients. The proposed model consists of seven constructs. Four represent the quality of healthcare: quality of interaction (five variables), physical environment quality (four variables), outcome quality (three variables), and justice quality (six variables). One construct represents the patient's health condition (two variables), another represents patient satisfaction (six variables), and the last one is patient trust (six variables). The model was tested using structural equation modeling based on WarpPLS. The goodness-of-fit statistic supported the patient trust model. The hypothesis testing results indicated that physical environment quality, outcome quality, justice quality, and health conditions could predict patient satisfaction. The health condition construct was found to moderate the effect of justice quality on patient satisfaction. Moreover, interaction quality, outcome quality, health condition, and patient satisfaction had an influence on patient trust.

Keywords: healthcare service, health condition, patient satisfaction, patient trust, WarpPLS

1. Introduction

Beginning January 1, 2014, the Indonesian government imlemented the National Health Insurance (JKN) framework, as stipulated by act number 40, 2004, concerning the National Social Security Framework (SJSN). This framework aims to guarantee accessibility to quality healthcare for all Indonesians. A few years after its enactment, there were still many issues with the JKN, especially a lack of attention to quality markers in healthcare administrations. According to Ramadan and Arafeh (2016), there are six important dimensions of healthcare benefit quality that countries should aim to achieve: viability, proficiency, availability, security, opportuneness, and patient-centeredness. In Indonesia, the accessibility dimension is the one that is most often measured, and it is claimed to be successful; specifically, all Indonesians can register for healthcare. However, full access to health services is often a problem because of the limitations of human resources and other healthcare-related resources. Problems also exist in other quality dimensions, such as effectiveness, efficiency, security, timeliness, and patient-centeredness, the quality of which has never been measured.

Dalinjong & Laar (2012) found that health services provided to health insurance participants, especially the poor, often involve discriminatory treatment that harms patients. Hospitals prefer to serve patients who pay cash after treatment rather than those who participate in health insurance. Some JKN patients have been asked to buy drugs outside the hospital and are refused care on the grounds that the required services are not covered by the health plan. As a result, participants in JKN may become disappointed and no longer trust the system.

Trust can increase one's self-confidence and willingness to have confidence in others (Moorman, Zaltman, & Deshpande, 1992). Consumer trust in service providers can help reduce cognitive risk and insecurity and thus allow for the maintenance of long-term relationships (Laaksonen, Jarimo, & Kulmala, 2009). In healthcare services, trust is one of the central features of patient-physician relationships and is a determinant of patient satisfaction and treatment success (Kowalski et al., 2009). When a patient trusts a doctor, he or she will tend to give positive word-of-mouth feedback

(Gremler, Gwinner, & Brown, 2001). However, if a patient does not trust the doctor in the hospital, he or she is free to switch to another hospital.

Customer-employee interaction is needed in healthcare services, which are high-contact services. The assessment of healthcare services quality is usually based on an integrated hierarchical model. Service evaluation consists of three service dimensions: the quality of the interaction, the quality of the physical environment, and the quality of the outcome (Brady & Cronin, 2001). The quality of the interaction is the functional quality that assesses customer-employee interaction. Interpersonal interaction in high-contact services, such as health services, has an important influence on perceived service quality (Petzer, de Meyer, Svari, & Svensson, 2012). The physical environment of services plays an important role in shaping the customer service experience; thus, the quality of the physical environment is needed to measure the influence of the physical environment on customer service evaluation (Bitner, 1992). The quality of the outcome is the technical quality, and it is an important attribute for customers who are assessed after service delivery (Brady & Cronin, 2001). In the healthcare industry, it is a key determinant for assessing the perceived quality of patient care (McAlexander, Kaldenberg, & Koenig, 1994).

A vital element in exchange relationships is trust. Therefore, research has focused on the trust factor in social relations (Liang & Wang, 2008; Shao Yeh & Li, 2009). Gefen (2000) found that trust contributes to reducing transaction risk. Trust is also an important requirement for building a successful marketing relationship (Wu, Chen, & Chung, 2010). Trust, moreover, can help to reduce uncertainty in the relationships between people and improve transaction security.

Some studies, such as Chiou & Droge (2006), Cho & Hu (2009), and Alrubaiee & Alkaa'ida (2011), found that service quality has an effect on trust. Chiou and Droge (2006) reported that the quality of interactive services in the context of high-class luxury products can increase perceived trust. Cho & Hu (2009) also noted that consumer confidence in financial institutions is influenced by the quality of services offered. Harris & Goode (2010) suggested that consumer perceptions of environmental quality can increase consumer confidence. In the health industry, Alrubaiee & Alkaa'ida (2011) found that inpatients felt trust in hospitals as a result of the quality of healthcare they experienced.

The healthcare service quality model developed in this study is based on an integrated hierarchical model (Brady & Cronin, 2001). According to Brady and Cronin (2001), the overall perception of service quality is based on the evaluation of three dimensions: the quality of interaction, the quality of the physical environment, and the quality of outcomes. In addition, the present study's health service quality model promotes the principle of justice. Based on this background, this study aimed to analyze the effect of the quality of interaction, quality of physical environment, quality of outcomes, and quality of justice on patient satisfaction, which is moderated by the patient's health condition. This study also aimed to analyze the effects of the quality of interaction, quality of physical environment, quality of outcome, quality of justice, patient satisfaction, and patient health condition on patient trust.

2. Literature Review

2.1 Patient Trust

Trust can be understood as a desire that both parties will carry on normally (Grönroos, 2000). Moorman, Deshpande, & Zaltman (1993) characterized belief as an eagerness to depend on a trade accomplice in whom one has certainty. Rousseau, Sitkin, Burt, & Camerer (1998) suggested that bargains with "the deliberate to acknowledge powerlessness based upon positive desires of the eagerly or behaviors of another." Belief develops from judgment and certainty, in which shared belief emerges as positive and proactive behaviors toward the other party. Trust energizes both parties to work toward reducing speculation within the relationship. Shared participation is empowered by expanding resistance to tempting short-term choices; instead, there is an inclination toward long-term benefits, with the conviction that parties will not act deceptively (Morgan & Chase, 1994). Trust and commitment are critical to guaranteeing long-term prospects for the relationship, reducing the likelihood of opportunistic behaviors (Erdem, Swait, & Louviere, 2002). When there is a positive relationship between trust and commitment, both parties will develop sufficient esteem from their interaction and will be inclined to maintain their commitment. In the long term, trust provides rewards, which decrease the exchange costs related to shaping the connections. One party's ability to produce positive comes for the other party determines the commitment (Morgan & Hunt, 1994).

2.2 Service Quality

In this study, service quality was assessed based on an integrated hierarchical model (Brady & Cronin, 2001) and a fair service model (Holloway, Wang, & Beatty, 2009; del Río-Lanza, Vázquez-Casielles, & Díaz-Martín, 2009; Mattila, 2006; Ambrose, Hess, & Ganesan, 2007; Nikbin, Ismail, Marimuthu, & Armesh, 2012; Wibowo, Widiastuti, & Panglipursari, 2016). Healthcare services are high-contact services requiring a lot of customer-employee interaction (Lien, Wu, Chen, & Wang, 2014). The assessment of perceptions of quality of service in this study was based on an evaluation of four dimensions: interaction quality, physical environment quality, outcome quality, and justice quality. The quality of

interaction in high-contact services such as healthcare has an important role in perceived service quality (Petzer et al., 2012). The service quality of the physical environment plays an important role in shaping customer experience. The quality of the physical environment is commonly used to analyze the influence of the physical environment on customers' assessments of services (Lien et al., 2014). Outcome quality is the technical quality where relevant customer attributes are evaluated after service delivery (Brady & Cronin, 2001). In the healthcare industry, outcome quality is the main determinant in the assessment of patient service quality perceptions.

2.3 Quality of Justice

There has been a paradigm shift in the service assessment of organizations by customers (Wibowo et al., 2016). While the consumer evaluation of organizational service still follows the ServQual-based assessment of service quality developed by Parasuraman, Zeithaml, & Berry (1988), organizational justice is also assessed in the delivery of services to customers. According to Ting & Yu (2010), justice theory, deriving from the social psychology literature, is based on the individual's perception of justice in a situation or decision. Palmer, Beggs, & Keown-McMullan (2000) developed a conceptual framework based on justice theory to analyze the effect of the quality of justice-based services on repeat visits to restaurants. Their results showed that justice-based service had a significant effect on the occurrence of repeat visits. In other words, consumers want fair service.

The justice concept was first used in marketing management with regard to negligence by service providers and customer complaints (Tax, Brown, & Chandrashekaran, 1998). According to Whiteman & Mamen (2002), justice for the public should be ensured in all aspects of life without compromise. Justice is also interpreted as an evaluation of the fair treatment of one person compared to another (Huang & Lin, 2005).

2.4 Satisfaction

According to Chang & Tu (2005), customer satisfaction can be considered a customer assessment that arises after a certain amount of time. Tian-Cole, Crompton, & Willson (2002) suggested that satisfaction is the result of a client's mental appraisal of an encounter. Fulfillment can be measured straightforwardly through a pleasant/unpleasant feeling or being satisfied/dissatisfied. Since client fulfillment is an enthusiastic reaction to benefit quality, benefit data can be used to support retaining clients (Tian-Cole et al., 2002). Satisfaction can be seen as a mental state that is produced when a customer's desire is satisfied or exceeds what is expected (Alam & Khalifa, 2009).

2.5 Patient Health Conditions

While many studies have linked the health conditions of patients with patient satisfaction, they have shown inconsistent results (Badri, Attia, & Ustadi, 2009). Other medical care satisfaction studies have found 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 (Zapka et al., 1995). Hall, Milburn, & Epstein (1993) found that patients' health conditions were better predictors of satisfaction than their interactions with doctors. Meanwhile, Bertakis, Roter, & Putnam (1991) and Soh (1991) reported that health conditions are not related to satisfaction. Glynn, Byrne, Newell, & Murphy (2004) showed that patients with lower physical and mental health scores were significantly less likely to be satisfied.
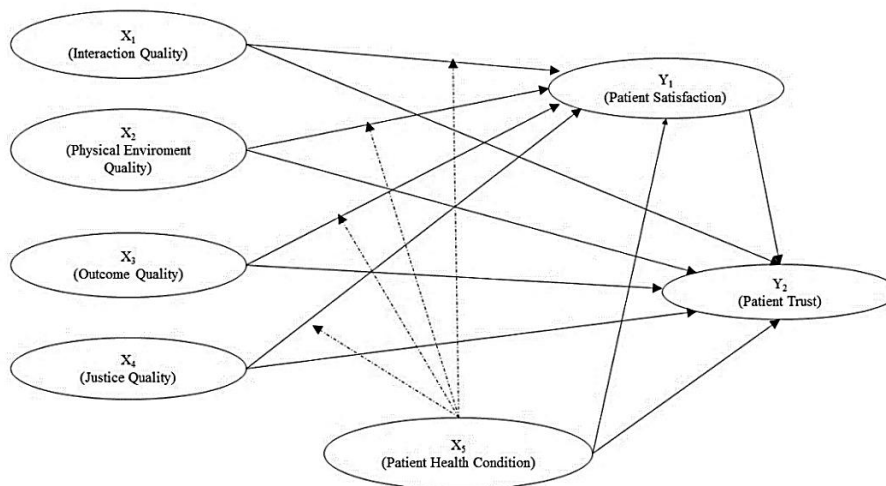
2.6 Model and Hypotheses

Figure 1. Hypotheses Model

Source. Analysis (2020)

Figure 1 illustrates the model developed in the study. There are seven constructs in the research model, including four constructs for healthcare quality, one for patient satisfaction, one for patient trust and one for the patient's health condition. Based on this research, we formulated fifteen hypotheses:

H_1: Interaction quality influences patient satisfaction.

H_2: Physical environment quality influences patient satisfaction.

H_3: Outcome quality influences patient satisfaction.

H_4: Justice quality influences patient satisfaction.

H_5: Patient health condition influences patient satisfaction.

H_6: Patient health condition moderates the effect of interaction quality on patient satisfaction.

H_7: Patient health condition moderates the effect of physical environment quality on patient satisfaction.

H_8: Patient health condition moderates the effect of outcome quality on patient satisfaction.

H_9: Patient health condition moderates the effect of justice quality on patient satisfaction.

H_{10}:   Interaction quality influences patient trust.

H_{11}: Physical environment quality influences patient trust.

H_{12}: Outcome quality influences patient trust.

H_{13}: Justice quality influences patient trust.

H_{14}: Patient health condition influences patient trust.

H_{15}: Patient satisfaction influences patient trust.

3. Methodology

3.1 Measures

To ensure content validity, the indicators used in this research were obtained from previous studies on healthcare service quality. Indicators of interaction quality, physical quality, and outcome quality were obtained from Brady & Cronin (2001) and Lien et al. (2014). Several indicators of the outcome quality variable were developed from Bautista & Tangsoc (2016). The indicators of justice quality were obtained from (Wibowo et al., 2016) and (Nikb in et al., 2012). The indicators of patient health condition were obtained from (Badri et al., 2009). The indicators of patient satisfaction were obtained from Badri et al. (2009). Each indicator was measured using a seven-point Li kert scale ranging from (1) "strongly not sure/polite/precise/clean/complete/safe/effective/good/appropriate/satisfied" to (7) "strongly sure/polite/precise/clean/complete/safe/effective/good/appropriate/satisfied."

Table 1. Validity and Reliability Scale

Construct	Indicators	Loading Factor	Cronbach's Alpha
Interaction quality (X_1)	Doctor's polite behavior toward patients ($X_{1.1}$)	0.786	0.830
	Nurses' polite behavior toward patients ($X_{1.2}$)	0.786	
	The accuracy of doctors providing healthcare services ($X_{1.3}$)	0.732	
	The accuracy of nurses providing healthcare services ($X_{1.4}$)	0.801	
	Patient-employee interaction quality ($X_{1.5}$)	0.753	
Physical environment quality (X_2)	Neatness and cleanliness of the hospital environment ($X_{2.1}$)	0.843	0.846
	Cleanliness and comfort of hospital facilities ($X_{2.2}$)	0.878	
	Completeness of hospital facilities ($X_{2.3}$)	0.805	
	Hospital environment safety ($X_{2.4}$)	0.782	
Outcome quality (X_3)	The effectiveness of drugs from doctors ($X_{3.1}$)	0.834	0.736
	The condition of patients after treatment ($X_{3.2}$)	0.809	
	Prioritizing the interests of patients ($X_{3.3}$)	0.783	
Justice quality (X_4)	Conformity between the service results and the patient wishes ($X_{4.1}$)	0.774	0.808
	There is no discrimination in service ($X_{4.2}$)	0.069	
	Service compliance with regulations or procedures ($X_{4.3}$)	0.734	
	The services provided are in the order ($X_{4.4}$)	0.742	
	Doctor's attention to patient's complaints ($X_{4.5}$)	0.761	
	Nurses' attention to patient's complaints ($X_{4.6}$)	0.828	
	Providing information by doctors/nurses about the patient's illness ($X_{4.7}$)	0.773	
Patient health Condition (X_5)	Conditions before getting service and care ($X_{5.1}$)	0.814	0.491
	Conditions after getting service and care ($X_{5.2}$)	0.814	
Patient satisfaction (Y_1)	Patient satisfaction with hospital services ($Y_{1.1}$)	0.864	0.901
	Patient willingness to go back to the hospital ($Y_{1.2}$)	0.764	
	Patient satisfaction with hospital care ($Y_{1.3}$)	0.779	
	The comfort of patients to recommend the hospitals to friends ($Y_{1.4}$)	0.899	
	Comparison of the hospital services with other hospitals ($Y_{1.5}$)	0.838	
	Patient willingness to recommend the hospital to family/relatives/ friends ($Y_{1.6}$)	0.759	

Source. Analysis (2020)

For construct validity, the indicators should have factor loading values above 0.5 (Hair Jr., Black, Babin, & Anderson, 2010). Indicators with factor loadings below 0.5 should be removed. For example, as shown in Table 1, indicator $X_{4.2}$ had a factor loading below 0.5 and was therefore removed. Then, reliability testing was carried out using Cronbach's alpha analysis.

From Table 1, it can be seen that each construct, except for patient health condition (X_5), has a Cronbach's alpha value above the generally used cut-off value of 0.6. We retained the constructs for patient health condition (X_5) for a number of reasons. First, we obtained the scale from previous research (Agung, 2011). Second, we followed previous studies that regarded this metric as important (Mehta, Lalwani, & Li Han, 2000; Sumaedi, Yarmen, & Yuda Bakti, 2016). Based on this procedure, we obtained 26 indicators (Table 1).

3.2 Sample

The sample for this research included patients at regional public hospitals (RSUD) in East Java, Indonesia. The sample selection was based on convenience sampling according to the representation of cultural areas in East Java. The 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.

Table 2. Demographic Profile of Respondents

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's	5.8
Other	2.1
Occupation	
Student	12.4
Government employee	3.3
Private employee	10.4
Entrepreneur	33.2
Farmers/fishermen	29.9
Other	10.8

Source. Analysis (2020)

Patient sampling was done using purposive sampling-in this case, patients who had been hospitalized for at least four days. Data were collected through questionnaire surveys. The respondents were patients or the families of patients. There were 241 respondents. A total of 53.9 of the respondents were female, and most were married (80.5). The largest proportion of respondents had a primary school education (36.5%). Table 2 presents the demographic profile of the respondents.

3.3 Data Analysis

Structural equation modeling (SEM) using WarpPLS was used to test the proposed model. The use of WarpPLS as a tool to test the hypotheses was intended to avoid the limitations associated with distributional properties, measurement levels, sample sizes, complexity models, and identification and factor determinants (Chin & Newsted, 1998; Wetzels, Odekerken-Schröder, & van Oppen, 2009). The WarpPLS approach is also very well suited to the research objectives because the theoretical objectives are explanation and prediction, and the research model is relatively complex, involving phenomena that are new or are changing (Chin & Newsted, 1998). Data analysis was carried out using WarpPLS 5.0.

4. Results

4.1 Assessment of the Measurement Model

Table 3. Combined Loadings and Cross-Loadings

Indicator	X_1	X_2	X_3	X_4	X_5	Y_1	p-value
$X_{1.1}$	0.786	-0.051	0.095	-0.049	0.242	-0.323	<0.001
$X_{1.2}$	0.786	0.077	-0.306	-0.312	-0.151	0.416	<0.001
$X_{1.3}$	0.732	-0.304	0.119	0.251	0.093	-0.234	<0.001
$X_{1.4}$	0.801	-0.044	0.081	0.048	-0.166	0.125	<0.001
$X_{1.5}$	0.753	0.315	0.019	0.082	-0.010	-0.003	<0.001
$X_{2.1}$	-0.145	0.843	-0.224	0.018	0.092	-0.186	<0.001
$X_{2.2}$	0.007	0.878	0.049	-0.427	-0.070	0.100	<0.001
$X_{2.3}$	0.063	0.805	0.053	0.233	-0.082	0.105	<0.001
$X_{2.4}$	0.083	0.782	0.132	0.220	0.064	-0.020	<0.001
$X_{3.1}$	0.088	0.039	0.834	0.048	0.189	-0.398	<0.001
$X_{3.2}$	-0.064	0.069	0.809	-0.110	-0.016	0.244	<0.001
$X_{3.3}$	-0.027	-0.113	0.783	0.062	-0.185	0.171	<0.001
$X_{4.1}$	-0.069	0.132	-0.255	0.775	-0.079	0.076	<0.001
$X_{4.3}$	-0.244	0.382	-0.156	0.732	0.176	0.098	<0.001
$X_{4.4}$	-0.095	-0.036	-0.229	0.744	0.088	0.408	<0.001
$X_{4.5}$	0.059	-0.083	0.246	0.762	0.123	-0.688	<0.001
$X_{4.6}$	0.094	-0.308	0.208	0.828	-0.259	0.102	<0.001
$X_{4.7}$	0.233	-0.047	0.159	0.773	-0.016	0.007	<0.001
$X_{5.1}$	0.031	0.089	0.036	-0.126	0.814	-0.486	<0.001
$X_{5.2}$	-0.031	-0.089	-0.036	0.126	0.814	0.486	<0.001
$Y_{1.1}$	0.067	0.038	0.007	0.158	0.085	0.864	<0.001
$Y_{1.2}$	-0.050	-0.148	0.437	-0.272	0.096	0.764	<0.001
$Y_{1.3}$	-0.040	0.066	-0.415	0.384	-0.206	0.779	<0.001
$Y_{1.4}$	0.047	0.111	-0.068	-0.218	0.004	0.899	<0.001
$Y_{1.5}$	-0.024	-0.018	-0.209	0.097	0.049	0.838	<0.001
$Y_{1.6}$	-0.014	-0.073	0.289	-0.149	-0.041	0.759	<0.001

Source. Analysis (2020)

Table 3 shows that all indicators have factor loadings > 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 the cross-loading.

Table 4. Composite Reliability and Cronbach's Alpha

Construct	Composite Reliability Coefficients	Cronbach's Alpha Coefficients
Interaction quality (X_1)	0.880	0.830
Physical environment quality (X_2)	0.897	0.846
Outcome quality (X_3)	0.850	0.736
Justice quality (X_4)	0.897	0.862
Patient health Condition (X_5)	0.797	0.491
Patient satisfaction (Y_1)	0.924	0.901
Patient trust (Y_2)	0.917	0.887

Source. Analysis (2020)

Table 4 shows that each construct has a composite reliability coefficient value above the generally used cut-off value of 0.7. Thus, all constructs meet composite reliability. The table also shows that each construct has a Cronbach's alpha coefficient above the generally used cut-off value of 0.6, except for patient health condition. However, we retained the constructs of patient health condition (X_5) for the reasons discussed in section 3.

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	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

Source. Analysis (2020)

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

Table 6. Path Coefficients

Relationship between Variables			Path Coefficient (>/<) p-value	Result
Interaction quality (X_1)	→	Patient satisfaction (Y_1)	$0.047 < 0.230$	H_1 is not supported
Physical environment quality (X_2)	→	Patient satisfaction (Y_1)	$0.130 > 0.020$	H_2 is supported in $p<0.05$
Outcome quality (X_3)	→	Patient satisfaction (Y_1)	$0.100 > 0.057$	H_3 is supported in $p<0.10$
Justice quality (X_4)	→	Patient satisfaction (Y_1)	$0.512 > 0.001$	H_4 is supported in $p<0.01$
Patient health condition (X_5)	→	Patient satisfaction (Y_1)	$0.191 > 0.001$	H_5 is supported in $p<0.01$
X_5*X_1	→	Patient satisfaction (Y_1)	$-0.023 < 0.358$	H_6 is not supported
X_5*X_2	→	Patient satisfaction (Y_1)	$0.052 < 0.206$	H_7 is not supported
X_5*X_3	→	Patient Satisfaction (Y_1)	$0.012 < 0.426$	H_8 is not supported
X_5*X_4	→	Patient satisfaction (Y_1)	$0.094 > 0.071$	H_9 is supported in $p<0.10$
Interaction quality (X_1)	→	Patient trust (Y_2)	$0.284 > 0.001$	H_{10} is supported in $p<0.01$
Physical environment quality (X_2)	→	Patient trust (Y_2)	$0.035 < 0.294$	H_{11} is not supported
Outcome quality (X_3)	→	Patient trust (Y_2)	$0.218 > 0.001$	H_{12} is supported in $p<0.01$
Justice quality (X_4)	→	Patient trust (Y_2)	$0.028 < 0.330$	H_{13} is not supported
Patient health condition (X_5)	→	Patient trust (Y_2)	$0.094 > 0.070$	H_{14} is supported in $p<0.10$
Patient satisfaction (Y_1)	→	Patient trust (Y_2)	$0.307 > 0.001$	H_{15} is supported in $p<0.01$

Source. Analysis (2020)

Table 6 shows that the quality of interaction (X_1) has no effect on patient satisfaction (Y_1). This is indicated by the path coefficient of 0.047 with a p-value of $0.230 > 0.05$. This condition indicates that changes in the quality of interaction have no effect on patient satisfaction. For JKN patients, doctors' politeness does not affect changes in patient satisfaction.

The quality of the physical environment (X_2) has an influence on patient satisfaction (Y_1). The path coefficient is 0.130 with a p-value of $0.020 < 0.05$. This indicates that changes in the physical environment (X_2) of the hospital have an effect on changes in patient satisfaction (Y_1). Thus, JKN patients feel that changes in the physical environment can improve their satisfaction. Some studies, such as Boller, Wyss, Mtasiwa, & Tanner (2003); Andaleeb (2000); Baltussen (2002); and Van Duong, Binns, Lee, & Hipgrave (2004), have also indicated that medical facilities belong to the quality dimension of inpatient services.

Table 6 shows that the quality of outcomes (X_3) has an influence on patient satisfaction (Y_1). This result is indicated by the path coefficient of 0.100 with a p-value of $0.057 < 0.10$. This condition indicates that the quality of outcomes (X_3) contributes to improving patient satisfaction (Y_1). The quality of outcomes is mainly an indicator of the effectiveness of drugs prescribed by doctors to control patients' conditions.

Regarding justice quality (X_4), fair service was found to influence patient satisfaction (Y_1). This is indicated by the path coefficient of 0.512 with a p-value of < 0.001. This condition indicates that JKN patients want equitable health services. Hospitals should provide health services based on principles that value justice; doctors and nurses should effectively respond to patients' complaints about their illness. This finding is in line with Wibowo et al. (2016), who found that informational and interactional justice affected patient satisfaction.

Table 6 shows that the health condition variable (X_5) has an effect on patient satisfaction (Y_1), with a path coefficient of 0.191 and a p-value of $0.001 < 0.05$. This indicates that changes in patients' health conditions affect patient satisfaction (Y_1).

The interaction variables $X_5 * X_1$; $X_5 * X_2$, and; $X_5 * X_3$ have no effect on patient satisfaction variables (Y_1) while $X_5 * X_4$ has an influence on satisfaction variables. These results indicate that the patient's health condition variable (X_5) is a moderator variable for the effect of fair service quality (X_4) on patient satisfaction (Y_1). As shown in Table 6, the path coefficient of the effect of the $X_5 * X_4$ interaction variable on patient satisfaction (Y_1) is 0.094 with a p-value of $0.071 < 0.10$. This means the health condition variable plays the role of strengthening the effect of fair service on patient satisfaction. This contrasts with the health condition variable, in which quality of interaction, quality of physical environment, and quality of outcomes were not found to be moderator variables.

Path analysis indicated that the quality of interaction and quality of outcomes contribute to the improvement of patient trust. This finding supports Chiou and Droge (2006), Cho and Hu (2009), Harris and Goode (2010), and Alrubaiee and Alkaa'ida (2011). Another important finding relates to the patient's health condition. Improving the patient as an outcome of the care provided by a hospital causes the patient to trust the hospital and its medical personnel. This study also found that patient satisfaction has implications for positive changes in patient trust. This finding supports Kantsperger and Kunz (2010), who found that customer satisfaction was important for developing consumer confidence.

5. Conclusion

Hypothesis testing showed that the quality of the physical environment influenced patient satisfaction. This indicates that the hospital environment and its facilities can influence a patient's sense of feeling satisfied or dissatisfied. The more clean, tidy, and home-like the environment, the more satisfied the patient feels. In addition, if there is an improvement in hospital facilities, patient satisfaction correspondingly increases.

The results also indicated that outcome quality influenced satisfaction. This condition is reasonable, given that patients who seek and receive treatment expect to recover. When a patient's expectations are met through the curing or improvement of his or her condition, it will improve patient satisfaction. A patient's recovery can be attributable to medication or rapid action taken by a doctor. Justice quality was found to affect patient satisfaction. More equitable health services in hospitals in the JKN era will thus have an effect on increasing patient satisfaction.

The hypothesis testing also indicated that patient health conditions influence patient satisfaction. This supports Hall et al. (1993), who found that patients' health conditions were better predictors of satisfaction than doctors characteristics. This study found that patient health condition moderates the influence of justice quality on patient satisfaction. This means justice quality will increase patient satisfaction if health conditions improve.

Other hypothesis testing indicated that the quality of interaction had no effect on patient satisfaction. Patient health condition was not shown to moderate the influence of quality of interaction, quality of physical environment, and quality of outcomes on patient satisfaction. Path analysis indicated that the quality of interaction and quality of outcomes contributed to the improvement of patient trust. Another important finding concerned patient health condition, which causes patients to trust hospitals and their medical personnel. The results of this study also suggest that patient satisfaction

has implications for positive changes in patient trust.

This research contributes to the literature by complementing the healthcare service quality model with a construct for justice quality. Another novelty of this study is that it elaborated the construct of patient health condition as a moderator variable in the research model. Patient health condition was shown to moderate the effect of justice quality on patient satisfaction.

A limitation of this study is that its scope was limited to government-owned hospitals. Moreover, since the research area was limited to East Java, the study could not fully illustrate Indonesian patients' confidence in the National Health Insurance program. Therefore, future studies should expand the research object to include not only regional hospitals but also private ones, in addition to broadening the research area beyond East Java.

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