Improving the satisfaction and loyalty of BPJS healthcare in Indonesia: a Sharia perspective

Alifah Ratnawati, Widiyanto bin Mislan Cokrohadisumarto and Noor Kholis

Department of Management, Universitas Islam Sultan Agung, Semarang, Indonesia

Received 8 January 2020
Revised 23 March 2020
24 April 2020
Accepted 27 April 2020

Abstract

Purpose – The purpose of this study is to analyze how to improve the satisfaction and loyalty of Badan Penyelenggara Jaminan Sosial Kesehatan (BPJS) health patients in Indonesia based on services in Islamic hospitals, where the service quality was analyzed from a Sharī'ah perspective.

Design/methodology/approach – The sample for this study was 470 Muslim patients from BPJS health, 248 from large Islamic hospitals and 232 from small Islamic hospitals in Central Java, Indonesia. Overall, the respondents were from five large hospitals and five small hospitals. The study used eight service quality variables that were modified from the SERVQUAL, PAKSERV and CARTER models. All the variables used indicators of Sharī'ah principles and tested their effects on satisfaction and loyalty.

Findings – The results of the study showed that the insurance system has been proven to significantly increase the satisfaction and loyalty of BPJS health patients. This means that the efforts of the Indonesian Government to improve the level of health by establishing BPJS can benefit the community. Satisfaction can also be increased through the variables of reliability, empathy and responsiveness, while the loyalty of BPJS Health patients is strongly influenced by satisfaction. The sincerity variable can increase the satisfaction and loyalty of BPJS health patients in small hospitals, but not in large hospitals. On the other hand, the variable of compliance can increase the satisfaction and loyalty of BPJS health patients in large hospitals, but not in small hospitals.

Originality/value – The insurance system implemented in Indonesia can influence the improvement of satisfaction and loyalty. Also, hospitals that are fair in serving patients and that apply amanah (trust), tabligh (responsiveness) and are fast in handling BPJS health patients' complaints are important indicators that need attention from BPJS health and hospitals. These indicators can form variables that can increase satisfaction and loyalty.

Keywords Satisfaction, Service quality, Loyalty, Sharia perspective, BPJS health

Paper type Research paper

1. Introduction

In early 2014, the Indonesian Government established the Badan Penyelenggara Jaminan Sosial Kesehatan (BPJS) Health (Social Security Organizing Agency). BPJS health is a state-owned enterprise specifically assigned by the government to organize health care guarantees for all Indonesians. In running its business, BPJS health collaborates with state and private hospitals, pharmacies, primary clinics and other health institutions.

BPJS health is health insurance which does not seek profit and is more concerned with protecting the wider community in Indonesia, both Muslim and non-Muslim. In Islam

This research was supported by "Kemenristekdikti Indonesia" (Ministry of Research and Technology of the Republic of Indonesia) in 2019. The authors thank for the grant given for this research.

1759-0833
DOI 10.1108/JIMA-01-2020-0005

insurance is known as *takaful*. Maiyaki and Ayuba (2015) suggested that Islamic insurance (*takaful*) is an insurance practice established based on belief/faith to provide risk management products for consumers who do not have confidence in the conventional insurance system. BPJS health, which is not based on the principles of any particular religion, is established by the government. However, the majority of BPJS health patients are Muslims.

Every Indonesian is expected to become the first BPJS health user. The consequence is that BPJS health must be able to accommodate the interests and expectations of citizens, as well as the expectations of the scholars who are members of the Majelis Ulama Indonesia [Indonesian Ulema Council (MUI)] and the expectations of the majority of BPJS users who are Muslims, given that the majority of Indonesia's population are Muslims. This research, therefore, aimed to examine the BPJS health services for Muslim patients using the Sharīʿah perspective as an approach.

This study is the continued development of a study that the authors conducted related to BPJS health services. The results of the study found that the communities were not satisfied with BPJS health services (Kholis *et al.*, 2018). In the study, a different test was used to test BPJS health service expectations and performance and the results showed that the highest satisfaction was in the dimension of empathy and the lowest satisfaction was in the dimension of the insurance system. In the study, there was no distinction between Muslim and non-Muslim patients of BPJS health and there was also no distinction between the Islamic and the non-Islamic hospitals that partnered with BPJS health. However, this study has made distinctions in these aspects and these are the differences between the present study and the previous study.

There are various parameters or indicators to assess the quality of health services. Patient satisfaction is the most important parameter for assessing the quality of health services provided (Gupta and Rokade, 2016). Other researchers Conga and Maib (2014) have found a relationship between the quality of health services and patient satisfaction in the public hospital. This is in line with the study by Hossain *et al.* (2019), who proved that patient satisfaction significantly affected loyalty. Therefore, it is very urgent for BPJS health and its partners (hospitals) to know patient satisfaction and loyalty. Moreover, loyalty will encourage customers to spread positive information to others (Kashif *et al.*, 2015).

In 2019, the Government of Indonesia enacted a regulation that BPJS health patients who need hospital services must follow a tiered referral system as follows: patients go to primary clinics or family doctors first and then they receive referrals to Types D or C hospitals. Next, they are directed to Type B hospitals and finally, they can go to Type-A hospitals. Large hospitals include Types C, B and A hospitals (most of the hospitals are Types B and A hospitals). Large hospitals are different from small hospitals in aspects such as the quality of medical and non-medical personnel, the quality of buildings and medical equipment.

Likewise, the application of BPJS health rules will be different between hospitals with Type D and higher-level types. Hence, this paper will conduct separate analyzes for large hospitals and small hospitals.

Based on the description above, the aim of this study was to conduct an analysis as to how to increase the satisfaction and loyalty of BPJS health users based on health services. Considering that most Indonesians are Muslims, the indicators used to measure service quality are adjusted to the Sharīʿah perspective, even though the indicators used to refer to the SERVQUAL, PAKSERV and CARTER models.

2. Literature review

2.1 Islamic service

Service is an important factor that needs to be considered in a successful business implementation, both related to the supply of products and services. Good service (which

can meet the expectations of customers) will have an impact on the sustainability of customers to interact and conduct business transactions with sellers as customers obtain satisfaction from the service they receive. Good service will bring trust to customers for the goods or services offered by the seller, which will then grow and maintain customer loyalty. Malinjasari Binti Ali *et al.* (2017) suggested that quality of service is important to attract customers and instilling Islamic values in the quality of business services is important to gain a good image and be trusted by the public, especially the Muslim community.

Studies on service quality have been developed by researchers (Othman and Owen, 2001; Parasuraman *et al.*, 1985; Parasuraman *et al.*, 1988; Raajpoot, 2004; Ratnawati and Kholis, 2019). The service quality or SERVQUAL model was developed by Parasuraman *et al.* (1985), who used 10 dimensions namely, reliability, responsiveness, competence, accessibility, courtesy, communication, credibility, security, understanding/knowing the customer and tangibles. Parasuraman *et al.* (1988) merged the SERVQUAL dimensions, which originally had 10 to 5 dimensions, namely, tangible, reliability, responsiveness, assurance and empathy. Meanwhile, Othman and Owen (2001) examined the service quality based on the Sharīʿah perspective. Benchmarks for assessing the quality of service to consumers from the point of view of Sharīʿah are based on standardization of Sharīʿah, therefore, the variables tested are not purely based on conventional theories, but use Sharīʿah perspective as a standard assessment of the theory. Othman and Owen (2001) developed a model for measuring the service quality in banking, which is run based on Sharīʿah principles that is the CARTER model. The CARTER model can also be used to measure the service quality at institutions that use Sharīʿah as the basis of their organization. The dimensions in the CARTER model consist of compliance, assurance, reliability, tangible, empathy and responsiveness. Continuing the research from Parasuraman on SERVQUAL, Raajpoot (2004) developed the PAKSERV model to measure service quality by taking three dimensions from the SERVQUAL model, namely, tangibility, reliability and assurance and added new dimensions such as sincerity, formality and personalization.

Complementing the studies conducted by previous researchers, Ratnawati and Kholis (2019) developed a measurement of service quality at BPJS health in Indonesia by modifying the SERVQUAL, PAKSERV and CARTER models. The results of the study concluded that the following 10 factors can be used to measure Sharīʿah-based service quality:

(1) factors of sincerity and formality;
(2) insurance system;
(3) tangible;
(4) responsiveness;
(5) assurance;
(6) location and information access;
(7) maintenance costs;
(8) Sharīʿah compliance;
(9) reliability; and
(10) availability of prayer rooms.

Regarding hospital services (case in Malaysia), Amin and Nasharuddin (2013) noted that admission services, medical services, overall services, return services and social responsibility have a direct relationship with service quality. Further findings from the study was that, overall service is a major determinant of service quality, social responsibility, medical services, return and admission service. This means that the five

dimensions are important factors to improve the service quality at the hospital and primarily the overall service.

Islamic hospitals have more specific services than public hospitals. There are three main principles of Islamic hospital operations and they are excellence, fear of Allah and responsibility (FIMA, 2017). Ismail *et al.* (2018) explain that in Indonesia, Islamic hospital operations are based on understanding Sharīʿah principles, *halal-haram*, *muamalat* principles, applying the concept of quality in Islam and establishing the core values of Islam. This is then interpreted into the operational management and services in the standard book. Hospitals are managed and the provisions of health services are adjusted according to Sharīʿah principles and practices, by upholding the universal values of Islam, the principles of justice, peace, freedom and equality in the daily operations. Some important characteristics of Islamic Hospitals are as follows:

- the existence of a Sharīʿah supervisory board appointed to oversee the hospital operations so that in its implementation, it does not deviate from Sharīʿah provisions;
- hospitals operate on the basis of laws, which also covers the Sharīʿah aspects;
- the mission and vision of the hospital to explicitly state the objectives of Islam;
- entering into Sharīʿah contracts (*aqad*) with staff, patients, logistic suppliers, financial institutions and others;
- human resource management applies Sharīʿah principles in practice;
- accounting and financial management using Sharīʿah principles;
- providing physical facilities and facilitating the performance of worship to patients, staff and visitors;
- providing spiritual guidance for patients and special spiritual training for seriously ill patients;
- ensuring that food and nutritional therapy is halal, hygienic and safe;
- guaranteeing to cover the nakedness of the patient's body and also services such as gender and *Ikhtilath* prevention (a mixture of men and women who are not *mahram*);
- infection control and prevention using the principle of *taharah* (cleanliness);
- conducting compulsory religious training for all staff;
- handling complaints, conflicts or differences of opinions in accordance with Sharīʿah;
- providing Islamic reproductive health services; and
- hospitals pay institutional zakat (mandatory alms), which is used to help patients in need.

The difference between Islamic hospitals and public hospitals is in the basic concept of service and Islamic hospitals are based on the concept that healing is only from God. This means that only Allah is the one who provides healing. Thus, the results of all efforts must be left to Allah. If the patients and health care providers understand this well, they will give their best efforts in healing.

Based on the discussion above, it can be concluded that from a Sharīʿah perspective, the whole process of service in a hospital must be based on the objectives of Sharīʿah (*Maqshid* Sharīʿah), which is to achieve *falah* (welfare). *Falah* consists of the aspects of religion, life,

resourcefulness, decency and *mal* (property). Islamic hospital services must be able to maintain the five aspects above by running it based on Sharīʿah provisions. Therefore, in general, Sharīʿah Hospital Certification standards incorporate the principles in hospital accreditation including the concepts of service quality, quality assurance, quality improvement and value-based medicines, *maqashid* Sharīʿah, halal guarantee, Islamic branding and Sharīʿah compliance.

Based on the description above, in this study, the service quality has been developed by modifying the dimensions of the SERVQUAL model, the CARTER model and the PARKSERV model. The dimensions of service quality used in this study include compliance, assurance, reliability, tangible, empathy, responsiveness, insurance system and sincerity.

2.2 Islamic satisfaction

Customer satisfaction (meeting one's expectations) has become an important concept in contemporary marketing thinking related to buyer behavior. Customers who are satisfied with a certain product or service offerings after their use, tend to repurchase (East, 1997) and they tend to tell others about their satisfaction and further, they will be involved in positive word of mouth advertisements (Richins, 1983; File and Prince, 1992). Conversely, dissatisfied customers will tend to switch brands and will be involved in negative advertising through word of mouth. Customer satisfaction is often described as the essence of success in today's highly competitive business world. In the literature related to customer satisfaction, much attention has been given to the confirmation paradigm, which concerns the comparison of expectations and evaluations of product or service performance (Goode and Moutinho, 1995). The confirmation model treats satisfaction as meeting customer expectations and is generally associated with product usage habits (East, 1997). However, research on customer satisfaction has moved toward the disconfirmation paradigm, which considers satisfaction with products and brands as a result of two cognitive variables, namely, *pre-purchase expectations and disconfirmation* (Peter and Olson, 1996). Furthermore, Peter and Olson (1996) state that pre-purchase expectations are beliefs about anticipated product performance, while disconfirmation refers to the difference between pre-purchase expectations and post-purchase perceptions. Service has several unique characteristics that make it different from physical products (Zeithaml and Bitner, 1996). Services are often characterized by intangibility, inseparability, heterogeneity and long-lastingness (Lovelock, 1995; Zeithaml and Bitner, 1996). These characteristics imply that customers often find it difficult to evaluate services at the pre-consumption, consumption and post-consumption stages in consumer decision-making (Legg and Baker, 1996). As a result of the intangible nature of services, it also becomes difficult for organizations to understand how customers perceive and evaluate their quality of services (Zeithaml, 1981). Besides, services exist in real-time, which means services are consumed when they are available to customers. Services cannot be stored and checked for quality such as a physical product. Therefore, every service production failure tends to be experienced by customers. As a result, dissatisfaction with services might be experienced most of the time that services are consumed (East, 1997), which may not apply to physical products.

In the service context, customer satisfaction is often associated with factors such as service quality and service features (such as comfort, competitiveness and location of service providers). In the service context, some describe customer satisfaction as an antecedent of service quality (Bitner, 1990; Cronin and Taylor, 1992). Anderson *et al.* (1994) state that improving service quality will have an impact on customer satisfaction. Likewise, Mubassir *et al.* (2015) convey the same thing. Hence, service quality is related to satisfaction. Service

quality is described as a form of attitude that results from a comparison of expectations with performance (Cronin and Taylor, 1992). Grönroos (1982) argues that when evaluating service quality, customers compare the service they expect with the perception of the service they receive. In the case of hospital services, Kazemi *et al.* (2013) revealed that service quality is to create value in hospitals and is a keyword that must be considered to achieve customer satisfaction. To achieve differences (with its competitors), hospitals must pay attention to patients' perceptions of service quality and make them as the priority of their activities because good service quality has an impact on customer satisfaction. The results of this study indicate that there is a positive influence on hospital service quality on patient satisfaction. Conga and Maib (2014) found a relationship between the quality of health services and public hospital patient satisfaction. There are three dimensions of quality which have been observed: tangibles, attitudes and medical ethics. These three dimensions have proven to have the strongest influence on patient satisfaction, attitudes and medical ethics and accessibility to health services. This shows the importance of tangible elements such as facilities, medical equipment and the physical environment of the hospital and are predicted to be the factors contributing to patient satisfaction. Moreover, this also shows the strong impact of the attitudes and ethics of medical staff and doctors on patient satisfaction and these two factors appear to be more prominent in the context of health care.

Meanwhile, Li *et al.* (2012) conducted a study to measure public satisfaction on health services in Shanghai China as a result of the reform of the health care system. The purpose of the study was to evaluate the effects of changes in health service system reforms. To evaluate this, an analysis of population satisfaction was used, which was measured by using four dimensions, namely, the health insurance system, the provisions of treatment, the primary health care clinic and general health services. All the dimensions show progress and increase the level of public satisfaction since the reform was carried out, but differences in satisfaction levels were found in all dimensions and groups. The public feel very satisfied with clinical services and public health services and feel less satisfied with the health insurance system and treatment provisions. The loss group (parents, unemployed, elementary school graduates and poor people) almost entirely felt dissatisfied with the health insurance system, medical provisions, primary health care clinics and general health services. This was examined and it was found that there was an increase in financial burdens and drug prices.

Ratnawati *et al.* (2016) examined public satisfaction on BPJS health in Indonesia. To measure people's satisfaction, they used five dimensions of SERVQUAL with 28 attributes. Based on the results, the 28 attributes showed a significant difference between the expectations of BPJS users and BPJS service performance that were truly felt by users. The highest satisfaction of BPJS users was on the dimension of empathy with the indicators of staff and medical staff who did not distinguish social status and the indicators of staff and medical staff friendliness. The lowest dimension of satisfaction was the insurance system. Almost all indicators of the dimensions of the insurance system show a low level of satisfaction.

Complementing the findings above, the other factors that influence customer satisfaction were found such as assurance (Akhtar and Zaheer, 2014), reliability and empathy of service providers (Junaid *et al.*, 2016). Furthermore, Mubassir *et al.* (2015) found that customer satisfaction also depended on product attributes. Religion is considered to be one of the factors that influence customer perceptions on service quality and product selection (Gayatri *et al.*, 2011; Naser *et al.*, 1999). For Muslim customers, they need products or services that adhere to Islamic rules. This contains specific requirements and guidelines that are not included in the framework of quality management that avoids this aspect (Yaacob, 2014). Islamic religious beliefs prove to be a significant factor for Muslim customers in choosing goods and services

(Shah Alam *et al.*, 2011) and Muslim communities also consider the halal services based on Islamic values (Eid, 2015; Eid and El-Gohary, 2015). This shows that Islamic values have become very important additional factors that can contribute to value creation related to Muslim customer satisfaction. Furthermore, Malinjasari Binti Ali *et al.* (2017) stated that customer satisfaction is important to ensure the survival of an organization. He suggested instilling Islamic values in the service quality to ensure high customer satisfaction. Therefore, understanding the unique expectations of Muslim customers is expected to be an interesting phenomenon for research, especially for practitioners in Islamic marketing (Yaacob, 2014). Based on the description above, the following hypotheses were developed:

H1a. Compliance has a positive effect on satisfaction.

H1b. Assurance has a positive effect on satisfaction.

H1c. Reliability has a positive effect on satisfaction.

H1d. Tangibility has a positive effect on satisfaction.

H1e. Empathy has a positive effect on satisfaction.

H1f. Responsiveness has a positive effect on satisfaction.

H1g. The insurance system has a positive effect on satisfaction.

H1h. Sincerity has a positive effect on satisfaction.

2.3 Islamic loyalty

Loyalty is a commitment to rebuy selected products or services consistently in the future, despite situational influences and marketing efforts to affect these behaviors (Moreira and Silva, 2015). According to Kotler (2000), long-term brand success is not influenced by how many consumers buy but is determined by the amount of repurchases. Loyalty, according to Astuti and Nagase (2014), is the extent to which customers engage in repetitive buying behavior, have a positive attitude toward service providers and only use providers when there is a need for service. Customer loyalty both attitude and behavior will direct customers to spread positive information to others (Kashif *et al.*, 2015).

Castañeda (2011) states that customer loyalty is very important in modern business today for two main reasons. *First*, customers are a scarce resource. It is much easier to get purchases from old customers than from new ones. *Second*, customer loyalty has a positive effect on profitability and corporate earnings. Customer loyalty becomes a benefit for increasing profits from cross-selling and up-selling, acquisition of new customers through word of mouth communication, cost reduction and price insensitivity to customers (Castañeda, 2011).

Kashif *et al.* (2015) developed a model for measuring customer satisfaction and loyalty by using the PAKSERV model to examine customer satisfaction and loyalty at the Islamic Bank of Malaysia. The results of the study show that all six dimensions of the PAKSERV model, except reliability, can be reliable in the context of the Islamic Bank of Malaysia. The dimensions of sincerity, personalization and formality must be considered when designing and implementing a quality service program for the Islamic Bank of Malaysia.

Saleem and Raja (2014) explain that loyalty is divided into two types, namely, behavioral loyalty and attitude loyalty. Behavioral loyalty means that the customer intends to buy back the brand or service from the service provider occasionally, while loyalty attitude is the attitude of a customer who intends to re-buy and then recommends other brands so that this

will be a good sign for customer loyalty. Both are very important to help an organization achieve long-term success. Furthermore, Zhou *et al.* (2017) state that in the health sector, loyalty contributes to economic and non-economic benefits. Besides being useful for increasing organizational profitability, developing and maintaining patient loyalty will bring benefits to patients by increasing health outcomes. Loyalty increases continuity of care, compliance with medical advice and better use of preventive services. Loyal patients will continue to use medical services, follow prescribed care plans and maintain relationships with certain health care providers. Continuing care and adherence to medical advice improve health services and patient outcomes (Zhou *et al.*, 2017). Nevertheless, the quality of service remains the main reason why customers are satisfied and loyal. Meesala and Paul (2018) suggest that service quality in the health sector such as, namely,

- timely service delivery;
- caring employees;
- billing accuracy;
- proper communication about service delivery time;
- accuracy service time; and
- employee willingness to help patients improve satisfaction, which also creates a high level of loyalty among users.

In the health sector, loyal patients become ambassadors (Moreira and Silva, 2015). Moreira and Silva (2015) state that patient loyalty is reflected because they are well-positioned to evaluate the results of services from others. Loyalty is shown through a willingness to recommend to others (Moreira and Silva, 2015). Meesala and Paul (2018) measure patient loyalty through several aspects such as satisfaction with services and faithfully using all services. Sudjianto and Japarianto (2017) used three main indicators to measure customer loyalty including the spreading of positive information about the product/service used, recommending the product/service to others and making continuous purchases of the product/service used. This is supported by Hu *et al.* (2011), which measures the loyalty of repurchase made by consumers.

Loyalty is often built through satisfaction and good quality service to customers. Several studies have proven this, such as the findings of Saleem and Raja (2014) regarding service quality that can affect customer satisfaction, which then has an impact on loyalty. Moreira and Silva (2015) also found that service quality can affect the order between satisfaction, trust and customer loyalty. Thus, it can be concluded that customer loyalty (in the hospital) arises because of the implementation of good service quality. From a Sharīʿah perspective, loyalty is often associated with services that are in accordance with Sharīʿah principles (as explained in the Islamic service sub-chapter). Loyalty increases continuity of care, compliance with medical advice and better use of preventive services. Sharīʿah-compliant services are an important factor that can awaken Islamic hospitals that have long been inactive. This becomes a good start to promote Islamic values to the public, especially in the health sector. Islam teaches its people to always call one another to do good and forbid from doing evil (Holy Qur'an Al-Baqarah verse 104). In addition, people are also commanded to do righteous deeds, advise one another to obey the truth and to be patient (Holy Qur'an Al-'Ashr verse 3). Therefore, the loyalty created will strengthen the spirit of preaching in the Muslim community such as advising each other and inviting hospitals to use services and operations in accordance with Sharīʿah principles.

Furthermore, related to consumer loyalty at the hospital, in addition to the results of services that are in accordance with Islamic values, loyalty will arise if the services provided

can help maintain the five things mentioned in the Sharīʿah principles, which is services at the hospital can help protect the five things, namely, protecting the religion, soul, intellect, decency and *mal* (treasure) of its consumers. Therefore, these five things are factors that need to be defined by the hospital in serving the community, especially the Muslim community. Also, these five things are symbols of the welfare of Muslim communities.

Based on the description above, the following hypotheses were proposed in Figure 1:

H2a. Compliance has a positive effect on loyalty.

H2b. Assurance has a positive effect on loyalty.

H2c. Reliability has a positive effect on loyalty.

H2d. Tangibility has a positive effect on loyalty.

H2e. Empathy has a positive effect on loyalty.

H2f. Responsiveness has a positive effect on loyalty.

H2g. The insurance system has a positive effect on loyalty.

H2h. Sincerity has a positive effect on loyalty.

H2i. Satisfaction has a positive effect on loyalty.

3. Research methodology

3.1 Sample and procedure

The population in this study were inpatients at the Islamic hospital in Central Java, Indonesia, which is run in collaboration with BPJS health. The total number of respondents was 470, 248 patients from five large Islamic hospitals (Types B and C) and 232 patients

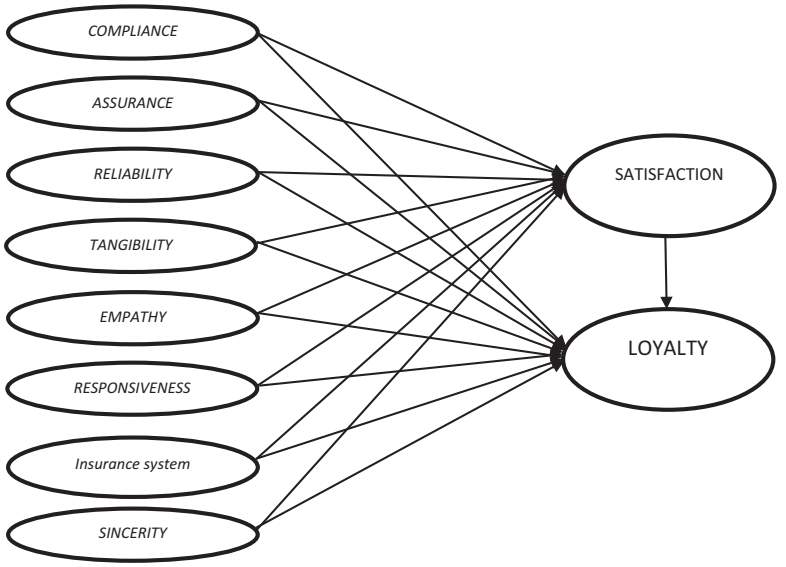

Figure 1.
Empirical model

from five small Islamic hospitals (Type D). Hospitals in Indonesia are classified into hospital Types A-D. The largest hospitals are called Type A hospitals. Large hospitals have different characteristics compared to small hospitals and these differences are in the aspects of the quality of medical and non-medical personnel, the quality of buildings and medical equipment. Likewise, the application of BPJS health rules will be different between hospitals with Type D and higher-level types. Hence, this paper will conduct separate analyzes for large hospitals and small hospitals.

In this study, data were obtained from questionnaires distributed by the research assistant to inpatients who were in the selected sample of this study.

3.2 Instrument

This work refers to the research and development of dimensions developed by Ratnawati and Kholis (2019), CARTER model (Othman and Owen, 2001), SERVQUAL model (Parasuraman *et al.*, 1988) and PARKSEV model developed by Kashif *et al.* (2015). The dimensions used in this study are, namely, compliance, assurance, reliability, tangibility, empathy, responsiveness, insurance system and sincerity. These dimensions were tested on the impact of satisfaction on the loyalty of the BPJS health participants. Four item questions were used to measure Compliance, five-item questions to measure assurance, four questions to measure reliability, six items to measure tangible, six questions to measure empathy, five-item questions to measure responsiveness, four-item questions to measure the insurance system, four-item questions to measure sincerity, four-question items to measure satisfaction and four questions to measure loyalty. All question items can be seen in Table 1.

3.3 Data analysis techniques

Regression analysis was used to test the empirical research model using data from Islamic hospital patients with BPJS health card. The data were divided into two, namely, data from small hospital patients (Type D) and data from large hospital patients (Types B and C). In Indonesia, small and large hospitals have different characteristics, including regulations relating to BPJS Health. Therefore, in this study, regression analysis was divided for small hospitals and large hospitals.

Regression analysis was examined by using SPSS software version 23. Two equation models were determined by using the following equation below:

Equation Model 1:

$$\begin{aligned}\text{Satisfaction} = {} & \beta\,\text{Compliance} + \beta\,\text{Assurance} + \beta\,\text{Reliability} + \beta\,\text{Tangible} \\ & + \beta\,\text{Empathy} + \beta\,\text{Responsiveness} + \beta\,\text{Insurance System} \\ & + \beta\,\text{Sincerity} + \text{e}\end{aligned}$$

Equation Model 2:

$$\begin{aligned}\text{Loyalty} = {} & \beta\,\text{Compliance} + \beta\,\text{Assurance} + \beta\,\text{Reliability} + \beta\,\text{Tangible} \\ & + \beta\,\text{Empathy} + \beta\,\text{Responsiveness} + \beta\,\text{Insurance system} + \beta\,\text{Sincerity} \\ & + \beta\,\text{satisfaction} + \text{e}\end{aligned}$$

Regression analysis was performed on the small hospital and the large hospital groups. Two models of regression were applied on each hospital group. In the first and second regression

Table 1.
Construct validity and reliability tests

Variable and indicator	Large hospital Correlation coefficient	*p*-value	Cronbach's alpha	Small hospital Correlation coefficient	*p*-value	Cronbach's alpha
Compliance			0.826			0.802
BPJS health rules that are applied in hospitals are in accordance with Islamic law	0.792	0.000		0.801	0.000	
Implementation of BPJS health in this hospital is in accordance with Islamic principles	0.844	0.000		0.824	0.000	
BPJS health applies product service provisions [food and medicines provided by BPJS health partner (hospitals)] with halal guaranteed	0.814	0.000		0.809	0.000	
As a BPJS health partner, this hospital provides Islamic services	0.797	0.000		0.760	0.000	
Assurance			0.862			0.828
BPJS doctors at this hospital are reputable/ famous	0.775	0.000		0.640	0.000	
BPJS doctors at this hospital can provide health services	0.772	0.000		0.729	0.000	
BPJS referral hospital has a good reputation (fame) as a place of treatment	0.776	0.000		0.639	0.000	
The hospital team that serves BPJS has extensive insight and is well experienced	0.819	0.000		0.648	0.000	
There is a guarantee of trust and safety in the service at this hospital	0.804	0.000		0.686	0.000	
Reliability			0.802			0.832
BPJS doctors are right in checking (diagnosing) my illness	0.741	0.000		0.791	0.000	
There are easy service procedures at BPJS referral hospitals	0.794	0.000		0.874	0.000	
There is an ease in managing BPJS health patient care costs	0.801	0.000		0.856	0.000	
BPJS health is able to provide promised services reliably	0.801	0.000		0.823	0.000	

(*continued*)

Table 1.

Variable and indicator	Large hospital Correlation coefficient	*p*-value	Cronbach's alpha	Small hospital Correlation coefficient	*p*-value	Cronbach's alpha
Tangible			0.842			0.850
The hospital building (BPJS partner) is comfortable	0.713	0.000		0.778	0.000	
The hospital (BPJS partner) is clean	0.724	0.000		0.772	0.000	
The waiting room at the hospital is comfortable	0.783	0.000		0.812	0.000	
There is a small prayer room in the hospital	0.502	0.000		0.632	0.000	
Sophisticated medical equipment facilities are available for BPJS health patients	0.684	0.000		0.769	0.000	
A fast and efficient transaction tool is available for BPJS health patients when confirming payment	0.628	0.000		0.708	0.000	
Empathy			0.924			0.914
Hospital staff and employees are friendly in providing services to BPJS participants	0.823	0.000		0.766	0.000	
Staff and medical staff/hospital employees provide services without differentiating the patient's social status	0.859	0.000		0.854	0.000	
BPJS health patients feel comfortable with the service provided by hospital staff	0.787	0.000		0.820	0.000	
The hospital pays attention to BPJS health patient complaints	0.845	0.000		0.788	0.000	
Hospitals are fair in serving BPJS patients	0.865	0.000		0.881	0.000	
The hospital can understand the needs of BPJS patients individually	0.802	0.000		0.789	0.000	
Responsiveness			0.916			0.909
The hospital implements tabligh (wise, right on target and communicative) in serving BPJS participants	0.816	0.000		0.842	0.000	
Hospital is trusted (amanah) in serving BPJS participants (responsible for completing tasks)	0.810	0.000		0.811	0.000	

(*continued*)

Table 1.

Variable and indicator	Large hospital Correlation coefficient	*p*-value	Cronbach's alpha	Small hospital Correlation coefficient	*p*-value	Cronbach's alpha
Hospital is quick in serving BPJS health patients	0.898	0.000		0.891	0.000	
Hospital is responsive in handling BPJS health patient complaints	0.879	0.000		0.893	0.000	
Hospitals are quick in handling BPJS patient complaints	0.890	0.000		0.858	0.000	
Insurance system			0.819			0.789
The amount of BPJS fees per month is affordable	0.763	0.000		0.709	0.000	
Information on the rights and obligations of BPJS users is clear	0.808	0.000		0.770	0.000	
I am free to choose BPJS referral hospital to check up	0.800	0.000		0.792	0.000	
Bureaucracy/procedure for medical treatment with BPJS cards is easy	0.854	0.000		0.809	0.000	
Sincerity of employees			0.936			0.925
Hospital staff are sincere in serving BPJS health patients	0.931	0.000		0.904	0.000	
Hospital staff are sincere in giving advice	0.920	0.000		0.900	0.000	
Hospital staff are polite in serving BPJS health patients	0.919	0.000		0.880	0.000	
Hospital staff give full attention to patients	0.899	0.000		0.915	0.000	
Satisfaction			0.883			0.828
I feel happy to check up using BPJS health in this hospital	0.809	0.000		0.809	0.000	
The service that I got from BPJS health at this hospital was as I expected	0.900	0.000		0.904	0.000	
Overall, I am satisfied to use BPJS health here	0.913	0.000		0.882	0.000	
I do not want to complain about the service for BPJS health users at this hospital	0.827	0.000		0.808	0.000	

(*continued*)

Table 1.

Variable and indicator	Large hospital Correlation coefficient	*p*-value	Cronbach's alpha	Small hospital Correlation coefficient	*p*-value	Cronbach's alpha
Loyalty			0.893			0.865
If checking up, I will use BPJS in this hospital again	0.854	0.000		0.779	0.000	
I would recommend others to use BPJS health in this hospital	0.905	0.000		0.779	0.000	
I will spread positive news about the quality of BPJS services at this hospital	0.877	0.000		0.775	0.000	
I do not want to review my BPJS membership in this hospital	0.849	0.000		0.713	0.000	

models, a goodness of fit model was used to explain whether variations in the independent variable could explain the variations in the dependent variable. A model has good goodness of fit model if the *F*-test produces *F*-sign that does not exceed 0.05. The coefficient of determination is then set to determine variations in the independent variables that can explain the variation of the dependent variable.

4. Finding

4.1 Reliability and validity

To recognize the internal consistency of latent variables, Cronbach's alpha was used, where the limit is 0.6, while the indicator validity test is done by correlating the score of the indicator with the total score. *P*-values, which is less than 0.05 indicate high validity.

The results showed that the value of Cronbach's alpha of all constructs showed 0.789-0.936. This means that the reliability results are very good. The results from the validity test show that the *p*-value of each indicator has a value of 0.00, suggesting that the validity of the indicator is very strong. Overall, the results of validity and reliability can be seen in Table 1.

4.2 Classical assumption test

Several assumptions criteria have been carried out for the regression analysis of large hospitals and small hospitals. In large hospitals, the multicollinearity test in Model 1 produces a variance inflation factor (VIF) value between 1.401 to 2.604, whereas in Model 2, VIF values range from 1.449 to 3.00. As all values are below 10, both models meet the assumption that there is no multicollinearity in the regression model. The Glejser test results show that Model 1 has a significant value between 0.074 to 0.97, while Model 2 has a significant value between 0.066 to 0.779. As the value is above 0.05, this means that in the regression model, Models 1 and 2 do not have heteroscedasticity. The Lagrange Multiplier test with the Breusch–Godfrey statistic (BG test) shows that Model 1 produces a significant value of 0.185 while Model 2 produces a significant value of 0.824. As the value is far above 0.05, it can be concluded that autocorrelation did not occur. In addition to the above tests, normality tests have also been carried out and the results show that the residuals have a normal distribution.

In the small hospital, Model 1 has a VIF value between 1.633 and 3.242, whereas, in Model 2, it has a VIF value of between 1,640 and 3,417. As the VIF value is below 10, it can be said that there is no multicollinearity in the two regression models. The heteroscedasticity test using the Glejser test shows that Model 1 has a significance value between 0.201 to 0.974, while Model 2 has a significant value from 0.095 to 0.926. As the values are above 0.05, it can be concluded that Models 1 and 2 do not have heteroscedasticity in the regression model. The Autocorrelation test used the Lagrange Multiplier test with the Breusch–Godfrey statistic (BG test). The results of Model 1 using the BG test show a value of 0.411, while Model 2 produced a significant value of 0.702. As the value is far above 0.05, it can be concluded that autocorrelation did not occur.

4.3 Test results

The results of the regression analysis of service quality variables on satisfaction and loyalty of BPJS health patients are summarized in Table 2. Regression analysis of the first and the second model, both for large and small hospitals, produced good goodness of fit models as the Anova test produces *F*-sign of 0.000.

In small hospitals, the coefficient of determination for the first model is shown by Adj. $R^2 = 0.594$. This means that 59.4% of the satisfaction variable variations can be explained by the variables of *compliance, assurance, reliability, tangibility, empathy, responsiveness,*

Model	Dependent variable	Variable	Small hospital Coefficient	*t*-value	Sig	Large hospital Coefficient	*t*-value	Sig
1	*Satisfaction*	Compliance	−0.072	−1.350	0.178	0.135	2.837	0.005*
		Assurance	0.054	1.013	0.312	0.039	0.699	0.485
		Reliability	0.141	2.215	0.028*	0.114	1.977	0.049*
		Tangibility	0.027	0.436	0.663	0.091	1.785	0.076**
		Empathy	0.262	3.472	0.001*	0.115	1.872	0.062**
		Responsiveness	0.135	1.795	0.074**	0.387	5.969	0.000*
		Insurance system	0.184	3.234	0.001*	0.127	2.458	0.015*
		Sincerity	0.202	2.730	0.007*	0.002	0.036	0.971
2	*Loyalty*	Compliance	−0.077	−1.532	0.127	0.116	2.332	0.021*
		Assurance	0.043	0.857	0.392	0.024	0.420	0.675
		Reliability	0.003	0.046	0.963	0.020	0.330	0.742
		Tangibility	0.043	0.751	0.453	−0.076	−1.453	0.148
		Empathy	0.140	1.932	0.055**	0.004	0.058	0.953
		Responsiveness	0.027	0.383	0.702	0.022	0.312	0.755
		Insurance system	0.142	2.605	0.010*	0.111	2.067	0.040*
		Sincerity	0.140	1.992	0.048*	0.008	0.130	0.897
		Satisfaction	0.466	7.435	0.000*	0.634	9.466	0.000*

Table 2. Standardized coefficients of the regression model

Notes: Model 1: Adj $R^2 = 0.594$, *F*-sign = 0.000; Adj $R^2 = 0.610$. *F*-sign = 0.000. Model 2: Adj $R^2 = 0.645$, *F*-sign = 0.000; Adj $R^2 = 0.590$, *F*-sign = 0.000, *$p < 0.05$; ** $p < 0.10$

insurance and sincerity, while the remaining 40.6% is explained by other variable variations outside the model. On the other hand, the coefficient of determination for the second model is shown by Adj. $R^2 = 0.645$. This means that 64.5% of the variation of the loyalty variable can be explained by the variables of *compliance, assurance, reliability, tangibility, empathy, responsiveness, insurance system, sincerity and Satisfaction*, while the remaining 35.5% is explained by variations of other variables outside the model.

Meanwhile, the coefficient of determination in large hospitals for the first model is shown by Adj. $R^2 = 0.610$. This means that61.0% of the satisfaction variable variations can be explained by the variables of *compliance, assurance, reliability, tangibility, empathy, responsiveness, insurance system and sincerity*, while the remaining 39.0% is explained by variations of other variables outside the model. The coefficient of determination for the second model is shown by Adj. $R^2 = 0.590$. This means that 59.0% of the loyalty variable variation can be explained by the variables of *compliance, assurance, reliability, tangibility, empathy, responsiveness, insurance system, sincerity and satisfaction*, while the remaining 41.0% is explained by variations of other variables outside the model.

4.4 Satisfaction and loyalty of patients in small hospital (Type D)

The results of regression analysis with SPSS show that the variables that can influence the satisfaction of BPJS health patients in small hospitals (Type D) are *reliability* ($\beta = 0.141$, sig = 0.028), *empathy* ($\beta = 0.262$, sig = 0.001), *responsiveness* ($\beta = 0.135$, sig = 0.074), *insurance system* ($\beta = 0.184$, sig = 0.001) and *sincerity* ($\beta = 0.202$, sig = 0.007), while the variables of *compliance, assurance and tangible* are not able to influence the satisfaction of BPJS health patients. The most influential variable for the satisfaction of BPJS health patients is *empathy*. Thus, *H1c-H1h* are accepted because they are proven to affect the

satisfaction of Muslim BPJS participants, while *H1a*, *H1b* and *H1d* are rejected because they cannot increase the satisfaction of Muslim BPJS health patients.

Nine service quality variables are used to test how they affect the loyalty of BPJS health patients in Islamic hospital Type D (small hospital). The results show that the variables that can increase the loyalty of BPJS health patients are *empathy* (β = 0.140, sig = 0.055), *insurance system* (β = 0.142 sig = 0.010), *sincerity* (β = 0.140, sig = 0.048) and *satisfaction* (β = 0.466, sig = 0.000), while the other service variables such as *compliance, assurance, reliability, tangibility and responsiveness* do not affect the loyalty of BPJS health patients. Hence, *H2e*, *H2g*, *H2h* and *H2i* are accepted because they have proven to increase the loyalty of Muslim BPJS health patients, while the other hypotheses are rejected because they are unable to increase the loyalty of Muslim BPJS health patients.

4.5 Satisfaction and loyalty of patients in large hospitals (Types B and C)

Based on the eight variables tested, it has been found that the variables that are able to influence the satisfaction of Muslim BPJS health patients for the services they receive at large hospitals (Types B and C) are compliance (β = 0.135, sig = 0.005), reliability (β = 0.114, sig = 0.049), tangibility (β = 0.091, sig = 0.076), empathy (β = 0.115, sig = 0.062), responsiveness (β = 0.387, sig = 0.000) and insurance system (β = 0.127, sig = 0.015), while assurance and sincerity did not affect the satisfaction of BPJS health patients. This means that *H1b* and *H1h* are rejected, while *H1a*, *H1c*, *H1d*, *H1e*, *H1f*, *H1g* are accepted.

The results showed that the variables that significantly affected the loyalty of Muslim BPJS health patients for the services they received in the Islamic hospital were *compliance* (β = 0.135, sig = 0.005), *insurance system* (β = 0.111 sig = 0.040) and *satisfaction* (β = 0.634, sig = 0.040). While the other service variables did not affect the loyalty of BPJS health patients. Hence, *H2a*, *H2g* and *H2i* are accepted and *H2b*, *H2c*, *H2d*, *H2e*, *H2f*, *H2h* are rejected.

5. Discussion

This study examined Muslim BPJS health patients in Types D, B and C Islamic hospitals. Since 2019, BPJS health patients had to follow a tiered referral system. Patients cannot directly use the facilities in Types A or B hospitals, but they can only use the higher-level types. If they have followed a tiered referral service, starting from the primary clinic, the Type D hospital, then into the higher-level types.

The variable of *compliance* used by Othman and Owen (2001) in developing the SERVQUAL dimension (Parasuraman *et al.*, 1985) in Islamic banking, was used to measure the quality of services at the Islamic Hospital. The variable of *compliance* as a dimension of service quality, in this study, has been proven to affect the variable of *satisfaction* for large hospitals but not for small hospitals. Most large Islamic hospitals in Indonesia have implemented Islamic principles in their operations, such as adapting BPJS health rules to Islamic law, enforcing BPJS health does not deviate from Islamic principles, ensuring food and medicines are guaranteed halal and extending Islamic services. These are not done in a small Islamic hospital.

Compliance as a dimension of service quality is a very important consideration. This is in line with Malinjasari Binti Ali (2017), who said the quality of service is important for getting customers and it is very important to instill Islamic values in the quality of business services to get a good image and be trusted by the community, especially by Muslims.

The variables of *reliability, empathy and responsiveness* developed by Parasuraman *et al.* (1988) and the *insurance system* developed by Li *et al.* (2012) can be used to measure the quality of services in Islamic hospitals and have proven to increase patient

satisfaction in large or small hospitals in Indonesia. This is in contrast to a study conducted by Kashf *et al.* (2015), which concluded that reliability cannot be relied upon to predict satisfaction and loyalty at the Islamic Bank of Malaysia.

The insurance system has been proven to be able to increase the satisfaction of BPJS health patients in Indonesia. This result is not consistent with the research conducted by Li *et al.* (2012), who stated that the health insurance system in Shanghai-China is not able to increase population satisfaction because it has an impact on increasing the financial burden and the high price of drugs.

The insurance system in Indonesia, called BPJS health, was implemented in early 2014. This insurance system was able to increase the satisfaction and loyalty of patients. Prior to the introduction of BPJS health insurance, many people were unable to seek treatment due to the lack of funds. With the BPJS, people can seek free treatment, even though they have to make monthly contributions. The insurance system can increase community satisfaction and loyalty if the BPJS contribution fees per month is affordable, there is clarity on the rights and obligations of BPJS health participants, there is freedom for the people in the community to choose hospitals and there is the ease of bureaucracy in the use of BPJS health card.

Satisfaction has an effect on loyalty. This is in line with the research conducted by Hossain *et al.* (2019) and Saleem and Raja (2014). Patients who are satisfied with seeking treatment using the BPJS health card and feel they have been served as expected show satisfaction with the hospital's standard of services. Furthermore, this satisfaction will have an impact on patient loyalty. The patients indicated that they will always use BPJS health cards and spread positive information about the quality of hospitals where they used BPJS health for a service.

The results showed that several variables have similarities and discrepancies, which can increase satisfaction and loyalty in small or large hospitals. Thus, these variables need to be improved or developed.

The variable that needs to be improved is the insurance system because it can affect the satisfaction and loyalty of Muslim patients of BPJS health both in small and large hospitals. This means that BPJS health patients are interested in the insurance system implemented by the Indonesian Government, which has guaranteed public health through the establishment of BPJS health. The insurance system improvement is related to:

- affordability of BPJS health contribution rates per month;
- clarity of BPJS health patients' information on rights and obligations;
- freedom of BPJS health patients to choose a hospital as a place for treatment; and
- ease of medical procedures using BPJS health card.

Other variables that need to be developed are the *reliability, empathy and responsiveness*. These variables need to be developed to increase the satisfaction of BPJS health patients who come from both small and large hospitals. The development can be done by looking at the indicators in each variable. In the reliability variable, BPJS health and BPJS health partners need to focus their attention on the accuracy of doctors in diagnosing diseases. For empathy variables, it is necessary to pay close attention to serving BPJS patients, meaning that hospitals do not discriminate BPJS health patients and non-BPJS patients. With respect to the responsiveness variable, it needs to pay attention on several aspects such as *amanah* (trust), *tabligh* (responsiveness) and the handling of BPJS health patients' complaints fast.

Types C or B hospitals have different facilities from the below level hospitals of the two such as building facilities, medical equipment and other resources. This condition

has an impact on patients' satisfaction, especially patients who have not followed the tiered policy, but who are used to Type B hospital services, but who must use Type D hospitals for now.

The satisfaction dimension needs to be developed to increase the loyalty of BPJS health patients. The satisfaction dimension is the most influential dimension for the loyalty of BPJS health patients in both small and large hospitals. Therefore, BPJS health and hospital managers should pay attention to BPJS health patient satisfaction.

BPJS health and its partners need to review/reform the dimensions of compliance, assurance and tangible in small hospitals because these dimensions cannot affect BPJS health patients' satisfaction. Reforming compliance with Islamic hospitals can be done by making improvements in the following aspects:

- BPJS health rules should be in accordance with Islamic laws;
- BPJS health implementation should be in accordance with Islamic principles;
- BPJS health applies product service provisions (food and medicines provided by BPJS health partner hospitals) must be guaranteed halal; and
- hospitals provide Islamic services.

Improving assurance for Islamic hospitals of Type D can be done by making improvements related to:

- improving the reputation of doctors;
- increasing the ability of BPJS health doctors in providing health services;
- BPJS referral hospitals have a good reputation;
- hospital teams that serve BPJS health patients have broad insight and are well experienced; and
- there is a guarantee of trust and safety in hospital services.

On the other hand, tangible improvement can be done by making improvements related to:

- the comfort of the hospital building (BPJS partners);
- hospital cleanliness (BPJS partners);
- comfortable waiting rooms in the hospital;
- the availability of prayer rooms in the hospital;
- sophisticated medical equipment facilities for BPJS health patients; and
- fast and efficient transaction tools for BPJS health patients to make their payments.

6. Conclusion

From the description above, it can be concluded that the variables that are able to influence the satisfaction of Muslim patients in BPJS health in Type D Islamic hospitals (small hospitals) are *reliability, empathy, responsiveness, insurance systems and sincerity*, while those who are able to influence the satisfaction of Muslim patients in BPJS health in Types B and C (large hospitals) Islamic hospitals are the variables of *compliance, reliability, tangibility, empathy, responsiveness and insurance system*.

The variables of compliance, insurance system and satisfaction have been shown to be able to significantly increase the loyalty of Muslim patients in BPJS health in Type D (small

hospital) Islamic hospitals while in large Islamic hospitals (Types B and C), the variables that can increase loyalty are *empathy, insurance systems, sincerity and satisfaction*.

In small and large Islamic hospitals, the assurance variable cannot affect the satisfaction and loyalty of Muslim patients in BPJS health, while the variables of reliability and responsiveness are able to influence the satisfaction of BPJS health patients, but they are unable to influence the loyalty of Muslim patients in BPJS health.

7. Managerial implications

BPJS health is an institution established by the Indonesian Government to run a program of public health. Furthermore, BPJS health and its partners (hospitals) must improve the quality of their services. Good quality service will be able to increase community satisfaction.

In this research, it has been proven that increasing patient satisfaction will lead to an increase in the loyalty of BPJS health patients. It is, therefore, very important for BPJS and its partners (hospitals) to know the satisfaction and loyalty of BPJS health patients to succeed in the health service sector. According to East (1997), customers who are satisfied with the offer of certain products or services are more likely to re-purchase. Thus, patients who are satisfied with hospital services will come back again. Satisfied patients will tend to tell others about their pleasant experiences so that they will be involved in positive word of mouth advertisements. Loyalty will direct customers to spread positive information to others, as stated by Kashif *et al.* (2015), Richins (1983) and File and Price (1992).

Hospitals and BPJS health insurance must pay attention to patients' perceptions of service quality and place it in the priority of their activities because the quality of service will have an impact on customer satisfaction. If the community is satisfied and loyal to the BPJS health facilities, the existence of BPJS health will benefit and further, the government's desire to improve the health of the Indonesian people will be achieved.

8. Limitations and future research

This study only used Muslim patients of BPJS health in the Islamic Hospital in Central Java, Indonesia as respondents. The results will likely be different if the respondents used are patients in all Islamic hospitals in Indonesia.

Almost all Indonesians have BPJS health card. BPJS Health has partnered with almost all hospitals in Indonesia. For future research, it needs to test whether there are differences in satisfaction and loyalty of BPJS health patients from Islamic Hospitals and other public hospitals. BPJS health has not been established for a long time, meaning that improvement is needed so that the satisfaction and loyalty of BPJS health patients from Islamic hospitals and other hospitals can be increased.

References

Akhtar, A. and Zaheer, A. (2014), "Service quality dimensions of Islamic banks: a scale development approach", *Global Journal of Management and Business Research: An Administration and Management*, Vol. 14 No. 5.

Amin, M. and Nasharuddin, S.Z. (2013), "Hospital service quality and its effects on patient satisfaction and behavioural intention", *Clinical Governance: An International Journal*, Vol. 18 No. 3, pp. 238-254, doi: 10.1108/CGIJ-05-2012-0016.

Anderson, E.W., Fornell, C. and Lehmann, D.R. (1994), "Customer satisfaction, market share, and profitability: findings from Sweden", *Journal of Marketing*, Vol. 58 No. 3, pp. 53-66, doi: 10.2307/1252310.

Astuti, H.J. and Nagase, K. (2014), "Patient loyalty to health care organizations: strengthening and weakening (satisfaction and provider switching)", *Journal of Medical Marketing: Device, Diagnostic and Pharmaceutical Marketing*, Vol. 14 No. 4, pp. 191-200.

Bitner, M.J. (1990), "Evaluating service encounters: the effects of physical surroundings and employee responses", *Journal of Marketing*, Vol. 54 No. 2, pp. 69-82.

Castañeda, J.A. (2011), "Relationship between customer satisfaction and loyalty on the internet", *Journal of Business and Psychology*, Vol. 26 No. 3, pp. 371-383.

Conga, N.T. and Maib, N.T.T. (2014), "Service quality and its impact on patient satisfaction: an investigation in Vietnamese public hospitals", *Journal of Emerging Economies and Islamic Research*, Vol. 2 No. 1, pp. 1-13.

Cronin, J.J. and Taylor, S.A. (1992), "Measuring service quality: a re-examination and extension", *Journal of Marketing*, Vol. 56 No. 3, pp. 55-68.

File, K.M. and Prince, R.A. (1992), "Positive word-of-mouth: customer satisfaction and buyer behaviour", *International Journal of Bank Marketing*, Vol. 10 No. 1, pp. 25-29.

Goode, M. and Luiz Moutinho, L.M. (1995), "The effects of free banking on overall satisfaction: the use of automated teller machines", *International Journal of Bank Marketing*, Vol. 13 No. 4, pp. 33-40. doi: 10.1108/02652329510082942.

Grönroos, C. (1982), "An applied service marketing theory", *European Journal of Marketing*, Vol. 16 No. 7, pp. 30-41, doi: 10.1108/EUM0000000004859.

Gupta, K.S. and Rokade, V. (2016), "Importance of quality in the health care sector: a review", *Journal of Health Management*, Vol. 18 No. 1, pp. 84-94, doi: 10.1177/0972063415625527.

Hossain, M.S., Yahya, S.B. and Khan, M.J. (2019), "The effect of corporate social responsibility (CSR) health-care services on patients' satisfaction and loyalty – a case of Bangladesh", *Social Responsibility Journal*, Vol. 16 No. 2, doi: 10.1108/srj-01-2018-0016.

Hu, H., Cheng, C., Chiu, S. and Hong, F. (2011), "A study of customer satisfaction, customer loyalty and quality attributes in Taiwans medical service industry", *African Journal of Business Management*, Vol. 5 No. 1, pp. 187-195. doi: 10.5897/AJBM10.951.

Ismail, S.A., Hamid, B., Sulistiadi, W. and Sagiran (2018), "Journey to shariah hospital: an Indonesian experience", *International Journal of Human and Health Sciences (IJHHS)*, Vol. 2 No. 2, p. 55, doi: 10.31344/ijhhs.v2i2.27.

Kashif, M., Wan Shukran, S.S., Rehman, M.A. and Sarifuddin, S. (2015), "Customer satisfaction and loyalty in Malaysian Islamic banks: a PAKSERV investigation", *International Journal of Bank Marketing*, Vol. 33 No. 1, pp. 23-40, doi: 10.1108/IJBM-08-2013-0084.

Kholis, N., Ratnawati, A. and Nur Farida, Y. (2018), "Customer satisfaction on the performance of social security administrator (bpjs) health in Central Java-Indonesia", *International Journal of Organizational Innovation*, Vol. 10 Nos 1/10, pp. 1-16, available at: www.ijoi-online.org/attachments/article/56/FINALISSUEVOL10NUM4APRIL2018SECTIONB.pdf

Kotler, P. (2000), "Marketing management, millenium edition", *Marketing Management*, Vol. 23 No. 6, pp. 188-193, doi: 10.1016/0024-6301(90)90145-T.

Legg, D. and Baker, J. (1996), *Advertising Strategies for Service Firms, in Lovelock, C.H. Service Marketing*, Prentice Hill, Englewood Cliffs, NJ.

Li, Z., Hou, J., Lu, L., Tang, S. and Ma, J. (2012), "On residents 'satisfaction with community health services after health care system reform in", *BMC Public Health*, Vol. 12 No. Suppl 1, p. S9, doi: 10.1186/1471-2458-12-S1-S9.

Lovelock, C. (1995), "Competing on service: technology and teamwork in supplementary services", *Planning Review*, Vol. 23 No. 4, pp. 32-47, doi: 10.1108/eb054517.

Maiyaki, A.A. and Ayuba, H. (2015), "Consumers' attitude toward Islamic insurance services (Takaful) patronage in Kano Metropolis, Nigeria", *International Journal of Marketing Studies*, Vol. 7 No. 2, pp. 27-34. doi: 10.5539/ijms.v7n2p27.

Malinjasari Binti Ali, N., Hamzah, S.F.M., Kamaruddin, K., Noor, H.M. and Borhanuddin, R.I. (2017), "Service quality from an Islamic perspective and its connection with customer satisfaction with public transportation sector in Terengganu", *Advances in Economics, Business and Management Research (AEBMR)*, Vol. 46, pp. 317-323, doi: 10.2991/ebic-17.2018.49.

Meesala, A. and Paul, J. (2018), "Service quality, consumer satisfaction and loyalty in hospitals: thinking for the future", *Journal of Retailing and Consumer Services*, Vol. 40, pp. 261-269, doi: 10.1016/j.jretconser.2016.10.011.

Moreira, A.C. and Silva, P.M. (2015), "The trust-commitment challenge in service quality-loyalty relationships", *International Journal of Health Care Quality Assurance*, Vol. 28 No. 3, pp. 253-266. doi: 10.1108/IJHCQA-02-2014-0017.

Mubassir, A.A.M., Rooly, M.S.A.R. and Nimsith, S.I. (2015), "The determinance of customer satisfaction in Islamic banking and finance in Sri Lanka: special reference to Amana Bank Plc in Kurunegala district", *Second International Symposium, FIA, SEUSL*, pp. 79-85.

Othman, A. and Owen, L. (2001), "Adopting and measuring customer service quality (SQ) in Islamic banks: a case study in Kuwait finance house", *International Journal of Islamic Financial Services*, Vol. 3 No. 1, pp. 1-26.

Parasuraman, A., Zeithaml, V. A. and Berry, L.L. (1985), "A conceptual model of service quality and its implications for future research", *Journal of Marketing*, Vol. 49 No. 4, pp. 41-50, doi: 10.2307/1251430.

Parasuraman, A., Zeithaml, V. and Berry, L. (1988), "SERVQUAL: a multiple-item scale for measuring consumer perceptions of service quality", *Journal of Retailing*, Vol. 64 No. 1, pp. 12-37, doi: 10.1016/S0148-2963(99)00084-3.

Peter, J.P. and Olson, J.C. (1996), *Customer Behavior and Marketing Strategy*, 4th ed., Irwin, Chicago.

Raajpoot, N. (2004), "Reconceptualizing service encounter quality in a non-Western context", *Journal of Service Research*, Vol. 7 No. 2, pp. 181-201, doi: 10.1177/1094670504268450.

Ratnawati, A. and Kholis, N. (2019), "Measuring the service quality of BPJS health in Indonesia: a sharia perspective", *Journal of Islamic Marketing*, doi: 10.1108/JIMA-07-2018-0121.

Ratnawati, A., Kholis, N. and Nur Farida, Y. (2016), "The optimization of good governance of BPJS (social security administration) health in Central Java", *Presented in 4th ASEAN International Conference on Islamic Finance (4th AICIF), Malacca*.

Richins, M.L. (1983), "Negative word-of-mouth by dissatisfied consumers: a pilot study", *Journal of Marketing*, Vol. 47 No. 1, pp. 68-78. doi: 10.2307/3203428.

Saleem, H. and Raja, N.S. (2014), "The impact of service quality on customer satisfaction, customer loyalty and brand image: evidence from the hotel industry of Pakistan", *Middle-East Journal of Scientific Research*, Vol. 19 No. 5, pp. 706-711.

Shah Alam, S., Mohd, R. and Hisham, B. (2011), "Is religiosity an important determinant on Muslim consumer behaviour in Malaysia?", *Journal of Islamic Marketing*, Vol. 2 No. 1, pp. 83-96, doi: 10.1108/17590831111115268.

Sudjianto, E.Y. and Japarianto, E. (2017), "Pengaruh perceived service quality Terhadap customer loyalty Dengan customer satisfaction Sebagai variable", *Jurnal Manajemen Pemasaran*, Vol. 11 No. 2, pp. 54-60. doi: 10.9744/pemasaran.11.2.54.

Yaacob, Y. (2014), "The link between quality management and Muslim customer satisfaction", *International Journal of Business and Society*, Vol. 15 No. 1, pp. 81 -96.

Zeithaml, V.A. (1981), "How consumer evaluation processes differ between goods and services", in Donnelly, J. and George, W. (Eds), *Marketing of Services*, American Marketing, Chicago, IL, pp. 186-190.

Zeithaml, V.A. and Bitner, M.J. (1996), *Services Marketing*, McGraw Hill, New York, NY and London.

Zhou, W.J., Wan, Q.Q., Liu, C.Y., Feng, X.L. and Shang, S.M. (2017), "Determinants of patient loyalty to healthcare providers: an integrative review", *International Journal for Quality in Health Care*, Vol. 29 No. 4, pp. 442-449.

Further reading

Bitran, G. and Lojo, M. (1993), "A framework for analysing the quality of the customer interface", *European Management Journal*, Vol. 11 No. 4, pp. 385-396.

Corresponding author

Alifah Ratnawati can be contacted at: alifah@unissula.ac.id