



A Systematic Review on Hospital's Patient Satisfaction and Loyalty in Indonesia

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Abstract

BACKGROUND: Customer loyalty is identified as a critical component of a company's success and profitability including in hospitals. Customer loyalty can only be accomplished if the company can provide high-quality services.

AIM: The purpose of this study was to understand the influence or factors behind patient loyalty.

METHODS: Systematic literature review methods were used to process articles found from various journals and databases such as Elsevier, NCBI, Lancet, Springer, Nature, Taylor and Francis, ProQuest, Emerald, JSTOR, Web of Science, and GARUDA SINTA (the Science and Technology Index of expertise in Indonesia).

RESULTS: The initial search resulted in 1.174 (one duplicated) and 1.173 was screened based on title and abstract. Finally, 29 articles were included for review regarding inclusion and exclusion criteria. The finding shows that concern of medical staff, perceived value, price, trust, treatment effectiveness, service quality, interaction, infrastructure, process, and brand image consequently affect patient satisfaction and loyalty. Those factors act as an intervening variable to patient loyalty.

CONCLUSION: In general, hospital health workers' competency, tangible factors (facilities), communication, punctuality in work (responsiveness), patient waiting time (facility satisfaction and responsiveness), queuing system, drug availability (price factor, facility satisfaction), providing information to clients (trust and communication, guarantees), equal treatment for uninsured patients, and complaint system for clients (hospital image) impact patient loyalty directly or indirectly.

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Introduction

One of the primary strategies for hospitals to enter the industry is by providing high-quality services and delivering high-quality products, as well as enhancing competitive advantage, namely, customers' loyalty. When competitive pressure among health-care practitioners' increases, the establishment of relationships with patients which focus on their satisfaction could indeed make the patient come back to a certain health care institution and will stimulate the formation of a concept called loyalty [1].

Customer loyalty is identified as a critical component of a company's success and profitability. Customer loyalty can only be obtained if the company has earned customer satisfaction and trust, which implies that it can only be accomplished if the company can provide high-quality services [2]. Consumer satisfaction refers to a situation in which the outcomes of a person's actions are appropriate and fulfill their expectations. Consumer satisfaction will enable the development of loyal customers because it is a combination of expectations and perceptions of actions or outcomes of activities [3].

Throughout the development and evaluation of health-care services, good health capabilities are essential. Patients who are impressed with the health service seem to be more willing to recommend their family or friends to medical providers such as hospitals [4]. One strategy to assess hospital performance is to evaluate how transparent patients' advice and input are. This is an excellent thing to accomplish to assure the hospital's quality in accordance with its purpose of providing outstanding service to patients [5]. The patient's track record on their perception regarding the quality of the medical services they receive can be considered as the comments and feedback from patients. The organization will work on improving the service delivery process based on comments and feedback obtained [6]. The results of the patient's input or survey are usually displayed in a specific assessment indicator and calculated as the average score of the survey. One example of this assessment is on the study [7] which conducts the evaluation regarding the assistance of health workers in providing information and treatment.

The purpose of this study was to determine what factors influence patient happiness and loyalty. The findings will reveal specific factors that influence

a hospital's ability to provide high-quality and well-structured services.

Service quality

According to Kotler and Keller, service quality characteristics determine the hospital's ability to satisfy expressed and implied needs [8]. Parasuraman in Fasocah found that service quality is a concept that actually represents the core of the performance of a service which is a comparison of reliability made by consumers [9]. According to Tjiptono, quality is a condition term relating to products, services, people, processes, and the environment that exceeds expectations [10]. Several factors including reliability, responsiveness, assurance, empathy, and physical evidence are the most valuable assessments.

Customer satisfaction

Customer satisfaction is a key factor that drives when the performance of a product or service exceeds expectations. Satisfaction is a post-purchase consumer's state of mind that reflects how much consumers like or dislike a service after experiencing it. Another definition states that consumer satisfaction is the consumer's response to the evaluation of the perceived discrepancy between previous expectations and the actual performance of the product or service after consumption [11]. Patient satisfaction can be defined as an assessment of the perceived value and ongoing response by the patient to a service-related stimulus either before, during, or after the consumption of medical service. Patient satisfaction is important for hospitals because they continue to use medical services from the same provider and recommend the hospital to others [12]. Patient satisfaction also influences other dimensions of health care, including retention, which is a key factor determining their willingness to return to the same center [13].

Customer satisfaction will occur if the perceived product performance is equal to or greater than customer expectations [14]. Patient satisfaction is the level of patient feeling that appears compared to what the patient expects of the health service performance results obtained by the patient. If the results are considered equal or exceed expectations, the patient gets a sense of satisfaction. On the other hand, if the results are not as expected, the patient will feel disappointed or dissatisfied [1].

Oliver in Chang & Wang suggested that customer satisfaction in general means the reaction of the customer in the context of meeting his needs and the evaluation of the customer on the state of his needs being met [15]. It concluded that the satisfaction of a person is a feeling of pleasure or disappointment arising from comparing the perceived benefits or performance

of a product with his/her expectations. Tjiptono suggested that customer satisfaction is a person's feeling of pleasure or disappointment that arises after comparing the perception of the performance (results) of a product with his expectations [16]. In addition, Kotler and Keller found that what makes customers feel satisfied and loyal is one of the main considerations for sellers of products or services today and in the future [17]. Based on the previous research results, the indicators to measure customer satisfaction are the suitability of customer expectations, perceptions of work results, and customer ratings.

Customer loyalty

Customer loyalty has become the main focus of discussion in the market. Customer loyalty is part of the organization's priorities because a fair level of profit margin is obtained from loyal customers [1]. Consumers who return several times to purchase services from the same company are loyal customers. However, customer defection is not the opposite of customer loyalty and vice versa for several reasons such as availability or lack of choice [11]. In a health-care setting, revisit intention can be used as a substitute for patient loyalty [12]. A desire to suggest, ready to visit again and a constructive Word of Mouth (WOM) goal can be considered as loyalty [18]. It is important to determine the driving forces influencing patients' willingness to return for more services to implement effective strategies to maintain their loyalty [13].

Loyalty is generally assessed based on the willingness to reuse a product, and in the field of medical services, the intention to revisit a hospital or recommend a facility to others is measured [19]. Loyal patients provide economic value and are an invaluable asset for hospitals because they show loyal characteristics when they continue to repurchase product and service lines, refer others, and show resistance to competitors [1].

Oliver in Kotler & Keller defines loyalty as a deeply held commitment to buy or support a preferred product or service in the future despite situational influences and marketing efforts having the potential to cause customers to switch [8]. According to Griffin, loyalty is defined as a non-random purchase expressed from time to time by several decision-making units [20]. Based on this definition, it can be assumed that loyalty refers more to the behavioral manifestation of the decision-making unit to purchase goods or services continuously from the selected company. Tjiptono stated that so far, customer loyalty is often associated with repeat purchase behavior [16]. The two are related but actually different. Based on the research results, indicators to measure customer loyalty are making regular purchases, buying between product and service lines, recommending others, and immunity to competitors.

Satisfaction to loyalty

Customer satisfaction can be a guide for monitoring and improving current and potential business performance. Customer satisfaction leads to customer loyalty, recommendations, and repeat purchases [11]. Consumer satisfaction can have a potential direct influence on customer loyalty. Positive patient tendencies will frame beliefs that can give a positive assessment to the hospital [18].

One of the most important things in choosing a hospital is patient satisfaction. Satisfaction is considered as a complex cognitive and affective construct capable of mediating the influence of customer value perceptions on repeat purchase behavior and other outcomes such as customer loyalty. There have been many studies conducted on customer loyalty testing, based on the model in which satisfaction is the only antecedent of loyalty [14]. Further studies show that customer loyalty is an important outcome of the relationship between service quality and customer satisfaction [21].

Service quality and loyalty

Service quality in the production of services is the main parameter indicating customer satisfaction. This thing that refers to the interests of customers is a very dominant factor in patient loyalty [12]. Hospital services will directly have an impact on the emergence of customer satisfaction and if the quality of services improvement is carried out consistently and continuously it will have an impact on the loyalty of consumers. The suitability of several previous studies is also supported by the theory of Kotler and Armstrong 2008, which states that there is a positive relationship between service quality and consumer loyalty. So that indirectly, the quality of service will have an impact on consumer loyalty [13].

Materials and Methods

The researchers used the Preferred Reporting Items for Systematic Reviews (PRISMA) 2020 criteria to generate article reviews.

Source of information and search strategy

The researchers systematically searched on multiple electronic databases (Elsevier, NCBI, Lancet, Springer, Nature, Taylor and Francis, ProQuest, Emerald, JSTOR, Web of Science, and GARUDA) which cover the published article from 2006 and 2021. We identified peer-reviewed articles written in English and Indonesian. To identify as many eligible studies as possible, we broadened search terms and strategies.

Search terms were modified together with informatics and combined with Boolean operators as follows: The terms "Loyalty" AND "Satisfaction" AND "Hospital" AND "Patient" OR "Customer." The reference lists of the eligible articles included after the electronic search were also manually searched.

Eligibility criteria

The following are the inclusion criteria in the article reduction process:

Table 1: Inclusion criteria in the article reduction process

Inclusion criteria	
	1. Peer-reviewed original articles published in national and international databases between 2006 and 2021
	2. Full-text articles in Indonesian or English regarding the topic of factors that are appropriate with patient loyalty in hospitals
	3. Discussion of articles on patient satisfaction and patient loyalty in hospitals

Selection process

wData extraction and analysis

In line with the agreed data extraction table, the following variables were extracted: Research references (title and author), research objectives, research location, population and sample, patient satisfaction, the relationship between patient satisfaction and loyalty, method of measuring satisfaction and loyalty, and research results. All relevant results were extracted, including from univariate analysis. If a study has multiple results for different interventions (or different categories within those interventions), all results are extracted. Extracted data from these studies were then analyzed using qualitative synthesis methods software called ATLAS.ti [22].

Results

Study selection

The selection process as well as the related inclusion criteria are shown in Figure 1. For the first screening, a total of 1174 studies were identified. After being identified as duplicates, one study was removed. The titles and abstracts of 1173 studies were analyzed. Following that, 288 studies were selected for a full-text review. A total of 259 studies have been excluded based on the full-text assessment. Finally, 29 studies were included in the review (Figure 1).

Study characteristics

The characteristics of included studies in this review describe in Table 2. The majority design of the

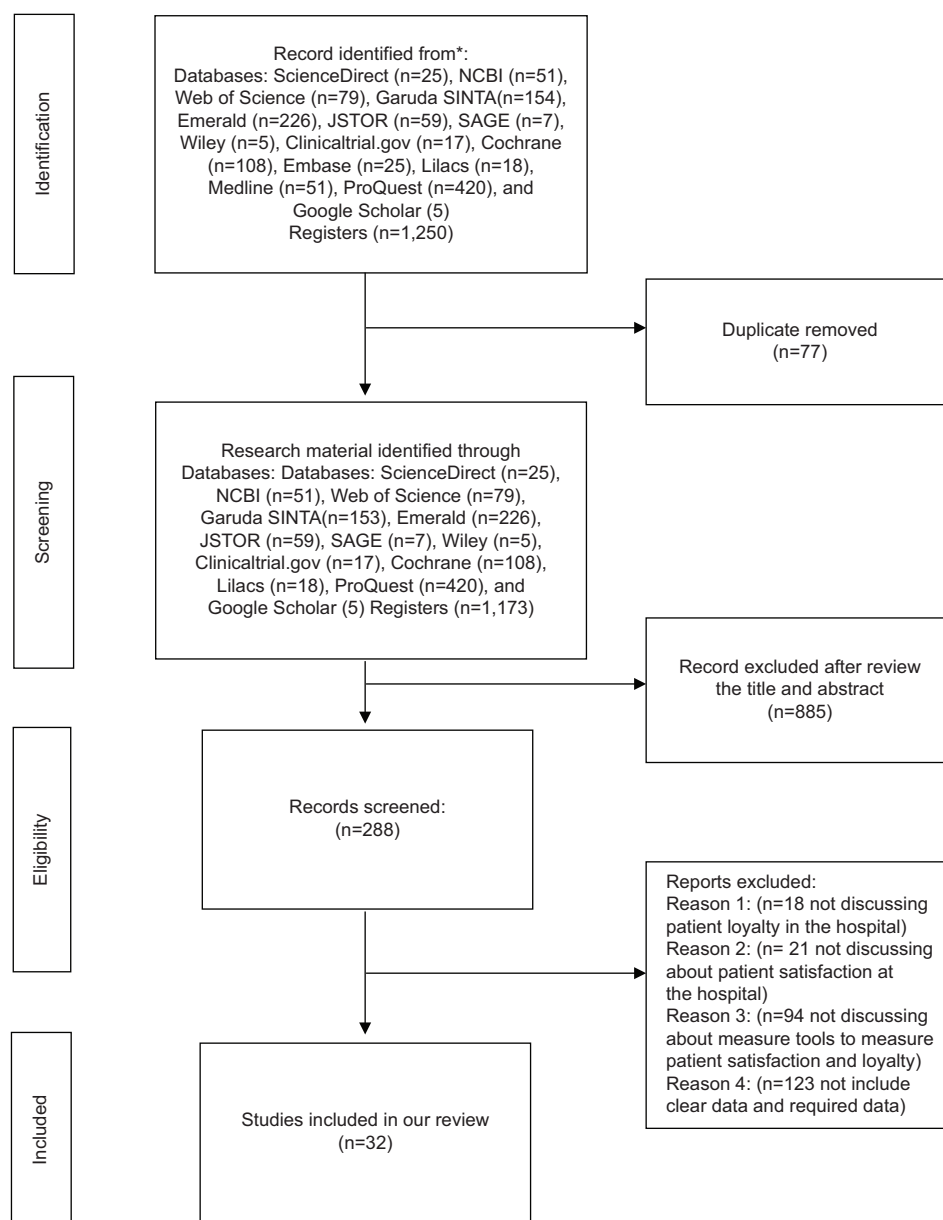


Figure 1: PRISMA flowchart

article was using quantitative methods which include cross-sectional, quantitative analysis, causal design, explanatory quantitative, descriptive, descriptive causality, and verify quantitative. All population included in this review covers patients who receive the service including inpatient and outpatient from small or large hospitals.

Coding data analysis

The results of coding data articles by year of publication found that most articles were published from the past 6 years (2015-2020), Figure 1. Based on the coding results, there are several satisfaction factors that are significant to patient loyalty. Service quality which includes tangible, reliability, responsiveness, assurance, and empathy has a positive effect on patient satisfaction. In addition, the quality of health workers

also affects patient satisfaction. A clear explanation regarding the procedure and intensive interaction with patients is very important because it will affect patient satisfaction and affect loyalty. Hospital service delivery training should be provided by hospitals to improve the quality of skills of health workers.

Moreover, physical things which include facilities, infrastructure, room cleanliness, and food quality are also positively correlated to patient loyalty which is mediated through patient satisfaction. Giving directions in hospital hallways should be marked as clearly as possible so that patients can easily determine the direction of the road. Completeness of infrastructure including medical equipment is able to support the patient's sense of loyalty to return to the hospital. The use of technology to speed up the hospital administration process will reduce patient waiting time. Patients will feel satisfaction if they get service without

Table 2: Summary of included studies

Authors, year	Study aim	Study design	Participant and sample size	Key findings	Limitations
Rinaldi, 2018	To analyze the effect of marketing mix relationship on patient customer loyalty in the Outpatient Service Unit of Kartini hospital	Cross sectional	100 respondents of outpatient polyclinic at Kartini Hospital	Product marketing mix with patient loyalty is a weak positive correlation and statistically significant in the Outpatient Service Unit of Kartini Hospital	Not reported
Shoffan et al., 2017	To determine the effect of health service quality on patient satisfaction and loyalty of Surgery hospital Surabaya	Cross sectional	100 respondents of Surgery Hospital Surabaya	The effect of the quality of health services on the process of patient satisfaction and loyalty has a significant effect	Not reported
Wahyuningsih et al., 2021	To analyze the relationship between satisfaction variables (product, process, and after-sales) with the loyalty of inpatients of Cut Meutia hospital, Langsa City	Cross sectional	300 respondents were inpatient class I, class II, class III RSUD Cut Meutia, Langsa City	There is an effect between patient satisfaction on the product variable and patient loyalty, where the more dissatisfied the respondent with the hospital facilities is, the more disloyal the attitude of the respondent will be	Not reported
Susilowati, 2017	To analyze the effect of satisfaction on patient loyalty at the polyclinic of Kartini Maternity Hospital, South Jakarta	Cross sectional	115 respondents are outpatients at the polyclinic of Kartini Maternity Hospital, South Jakarta	The assurance factor gives the biggest contribution to the formation of satisfaction, followed by the dimensions of tangibles, empathy, responsiveness, and reliability	Not reported
Reski et al., 2019	To find out the relationship between access, displacement barriers, service quality, and patient loyalty	Cross sectional	154 respondents were patients from the General Polyclinic of Public Hospital Kendari city	There is a relation between access; moving barriers; Reliability; Responsiveness; Guarantee (Assurance); with patient loyalty There is no relation between physical appearance (Tangible); Empathy with patient loyalty	Not reported
Gusmanely et al., 2016	The study provides a model of patient loyalty at dr. Rasidin Public hospital Padang using SEM techniques	Cross sectional	150 respondents of dr. Rasidin Public Hospital Padang	Service quality has contributed to and affected the level of community satisfaction. While the level of satisfaction also impacts the loyalty of the community quite large	Not reported
Harnoto, 2013	To analyze whether there is an effect of Trust and Service Quality on Customer Loyalty and whether Consumer Satisfaction as a mediating variable between the effects of the two	Cross sectional	100 respondents from the Darul Istiqomah Hospital, Kaliwungu Kendal	Service quality, patient satisfaction have a direct effect on loyalty, while trust has an indirect effect on loyalty	Variable coverage is lacking, such as relevant variables such as image, price, competitor factors, and so on.
Armalinda et al., 2020	To determine and analyze the effect of service quality on patient satisfaction, the effect of service quality on patient loyalty, and patient satisfaction as an intervening variable between service quality and patient loyalty at the Lahat public hospital	Cross sectional	60 respondents were class III in patients seeking treatment at Lahat public hospital	Service quality affects patient satisfaction and patient loyalty	Research results are limited to numerical data and graphs
Hakim, 2019	To determine the impact of service quality on patient satisfaction and loyalty in the outpatient installation of Dr. Soebandi Public Hospital Jember	Cross sectional	93 respondents were patients in the Outpatient Installation of Dr. Soebandi Public Hospital, Jember	Patient satisfaction affects patient loyalty	There are limitations of research using questionnaires, namely sometimes filling out questionnaires in a hurry and the answers given online by respondents do not match the real situation, this happens when the patient is filling out the questionnaire, suddenly the patient gets an examination and medical action
Murharyati et al., 2014	To identify nurse responsiveness, as well as patient loyalty	Cross sectional	183 respondents were patients from Sukoharjo Public hospital	There is a relationship between responsiveness to patient loyalty	Not reported
Sari et al., 2020	To find out the relationship between patient satisfaction and patient loyalty at RSGM IIK Bhakti Wiyata Kediri	Cross sectional	91 patient respondents of RSGM IIK Bhakti Wiyata Kediri	Patient satisfaction will affect patient loyalty in dental and oral health services	Not reported
Haryeni et al., 2019	To find out: (1) The effect of the dimension of service quality assurance on patient satisfaction at private hospitals in Padang, (2) The effect of the dimensions of service quality on empathy on patient satisfaction in private hospitals in Padang, (3) The effect of the dimensions of service quality on reliable patient satisfaction in private hospitals in Padang, (4) The effect of the service quality dimension Responsiveness on patient satisfaction at a private hospital in Padang, (5) The effect of the Tangible service quality dimension on patient satisfaction at a private hospital in Padang, (6) The effect of patient satisfaction on patient loyalty at a private hospital in Padang	Cross sectional	150 respondents were patients who had undergone treatment more than twice at three private hospitals in the city of Padang consisting of Yos Sudarso Hospital, Semen Padang Hospital, and BMC Hospital	Assurance and responsiveness have no significant effect on patient satisfaction, empathy, and reliability have no significant effect on patient loyalty, tangible has a significant effect on patient satisfaction, satisfaction has a significant effect on patient loyalty	Not reported

(Contd...)

Table 1: (Continued)

Authors, year	Study aim	Study design	Participant and sample size	Key findings	Limitations
Nurrahmi <i>et al.</i> , 2018	To determine the effect of service quality on patient satisfaction and the effect of patient satisfaction on patient loyalty at Muhammadiyah hospital Palembang	Cross sectional	100 respondents of Muhammadiyah Hospital Palembang	Patient satisfaction has a significant effect on patient loyalty, because specialist doctors, doctors/nurses serve quickly and responsively, doctors/nurses serve patients professionally and doctors/nurses listen to satisfied patient complaints given by Muhammadiyah Palembang hospital so that patients will become loyal to the patient	Not reported
Hasan <i>et al.</i> , 2018	To analyze patient loyalty from the perspective of service quality, image, value, and patient satisfaction in hospitals in Makassar City	Cross sectional	296 respondents are inpatients at type B hospitals in Makassar city	Service quality affects patient loyalty through patient satisfaction, while the image of the hospital does not affect patient loyalty	Not reported
Mahyardiani <i>et al.</i> , 2020	To analyze the effect of the marketing mix on old patient satisfaction at Budi Kemuliaan RSIA and the effect of satisfaction on old patient loyalty at RSIA Budi Kemuliaan; Formulate managerial implications that can increase customer satisfaction and loyalty to RSIA Budi Kemuliaan	Cross sectional	225 respondents Patients RSIA Budi Kemuliaan	Marketing mix variables that affect patient satisfaction and loyalty are price, people, process, and physical evidence. Another result showed that patient satisfaction has a significant influence on patient loyalty of Budi Kemuliaan Hospital	Not reported
Murharyati, 2016	To identify nurse empathy and patient loyalty and analyze the effect of empathy on patient loyalty	Cross sectional	183 respondents were patients from RSUD Kabupaten Sukoharjo	There is an effect of empathy on patient loyalty	Not reported
Vebnia <i>et al.</i> , 2013	To determine the effect of facilities, location, rates, patient satisfaction on loyalty	Cross sectional	100 respondents from poly patients Rs. Roemani Muhammadiyah Semarang	Facility variables affect loyalty by 76.7%, location variables affect 77.1% to loyalty, price variables affect 75.2% to loyalty, satisfaction variables to loyalty are 79.5% and facilities, location and tariff variables to loyalty through satisfaction of 88.8%	Not reported
Prasetyo, 2017	To determine the simultaneous, partial and dominant effect of the variables Trust, Brand image, and Satisfaction on Loyalty in inpatients at the Melati Husada, mother and Child Hospital Malang	Cross sectional	80 respondents were inpatients at the Melati Husada, mother and child hospital, Malang	there is a significant effect between the variables of trust, brand image and satisfaction on loyalty in inpatients at the Melati Husada Mother and Child Hospital, Malang, while the dominant variable is satisfaction	Not reported
Nurlitasari <i>et al.</i> , 2016	To determine the effect of service quality on patient satisfaction and loyalty in inpatients at Medika Permata Hijau hospital	Cross sectional	170 respondents who are inpatients at Medika Permata Hijau Hospital Jakarta Barat	Service quality has a positive and significant effect on patient satisfaction, patient satisfaction has a positive and significant effect on patient loyalty, and service quality has no direct effect on patient loyalty	Not reported
Pertiwi <i>et al.</i> , 2019	To analyze the effect of health service quality on satisfaction and loyalty of BPJS patients in the outpatient unit of RSP	Cross sectional	96 respondents were RSP outpatient unit patients in June 2018	Patient satisfaction has a positive and significant effect on loyalty. Service quality has a positive influence on patient loyalty through satisfaction	Not reported
Suarjana, 2015	To analyze: (1) The effect of service quality on patient satisfaction, (2) The effect of service quality on patient loyalty, (3) The effect of patient satisfaction on patient loyalty, and (4) The effect of service quality on patient loyalty mediated by patient satisfaction at the RSUD Sanjiwani Kabupaten Gianyar	Cross sectional	100 respondents were inpatients at the RSUD Sanjiwani Gianyar	Service quality has a positive and significant effect on patient loyalty. Patient satisfaction has a positive and significant effect on patient loyalty. Service quality has a positive and significant effect on patient loyalty mediated by patient satisfaction	Not reported
Wahyuti <i>et al.</i> , 2017	To find out and provide evidence that: (1) Reliability affects the satisfaction of inpatients at Assalam Gemolong General Hospital, Sragen, (2) Responsiveness affects the satisfaction of inpatients at Assalam Gemolong General Hospital, Sragen, (3) Assurance affects the satisfaction of inpatients at Assalam Gemolong General Hospital. Sragen, (4) Tangibles affect the satisfaction of inpatients at Assalam Gemolong General Hospital, Sragen, (5) Empathy affects the satisfaction of inpatients at Assalam Gemolong Hospital, Sragen, (6) Reliability affects the loyalty of inpatients at Assalam Gemolong Hospital, Sragen, (7) Responsiveness affect the loyalty of inpatients at Assalam Gemolong Hospital Sragen, (8) Assurance affects the loyalty of inpatients at Assalam Gemolong Hospital, Sragen, (9) Tangibles affect the loyalty of inpatients at Assalam Gemolong Hospital, Sragen, (10) Empathy affects the loyalty of inpatients stay at Assalam Gemolong General Hospital, Sragen, (11) Satisfaction affects the loyalty of inpatients at RSU Assalam Gemolong Sragen	Cross sectional	100 respondents of inpatients at Assalam Gemolong General Hospital, Sragen	Positive and significant effect to patient loyalty: reliable, responsiveness, tangible, empathy, assurance, and patient satisfaction	Not reported

(Contd...)

Table 1: (Continued)

Authors, year	Study aim	Study design	Participant and sample size	Key findings	Limitations
Sektiyaningsih et al., 2019	To determine the effect of service quality on customer satisfaction, the effect of service quality on hospital image, the effect of service quality on patient loyalty, the effect of customer satisfaction on hospital image, the effect of customer satisfaction on patient loyalty and the influence of hospital image on patient loyalty in outpatient units. Mampang Prapatan Hospital	Cross sectional	323 respondents were patients in the outpatient unit of Mampang Prapatan Hospital	Service quality has an insignificant negative effect on patient loyalty, customer satisfaction has a positive and insignificant effect on hospital image, customer satisfaction has a negative and significant effect on patient loyalty, image has a positive and significant effect on patient loyalty	Not reported
Wulaisfan et al., 2019	To determine the effect of service quality on patient loyalty with patient satisfaction as a mediation of inpatients at Dewi Sartika Public Hospital Kendari	Cross sectional	83 respondents were inpatients at Dewi Sartika Public Hospital Kendari	Service quality has a significant effect on patient satisfaction, service quality has no significant effect on patient loyalty, patient satisfaction has a significant influence on patient loyalty, and service quality can have a significant effect on patient loyalty with patient satisfaction as an intervening variable	Not reported
Dewi, 2017	To determine and analyze the effect of (1) service quality on patient satisfaction, (2) service quality on patient loyalty, and (3) patient satisfaction on patient loyalty	Cross sectional	100 respondents of inpatients BPJS of RSU Slamet Riyadi	(1) Service quality variable has a positive and significant influence on patient satisfaction, (2) service quality variable has a positive and significant influence on patient loyalty, and (3) patient satisfaction variable has a positive and significant influence on patient loyalty	Not reported
Putra et al., 2013	To analyze the effect of service quality on perception and satisfaction in an effort to increase patient loyalty	Cross sectional	100 respondents from class 3 inpatient to VIP class at Cilegon Hospital	The satisfaction variable has the greatest influence on loyalty	Not reported
Bukhari et al., 2018	To analyze the effect of service quality, company image and satisfaction on the loyalty of inpatients at Mitra Keluarga Hospital Tegal.	Cross sectional	125 respondents of inpatients at Mitra Keluarga Hospital, Tegal	Variables of service quality, hospital image, and patient satisfaction have a significant positive effect on patient loyalty at Mitra Keluarga Hospital Tegal	Not reported
Arianto, 2017	To determine the effect of service quality, price and satisfaction on patient loyalty	Cross sectional	100 respondents Outpatient Premier Bintaro Hospital	Service quality has a positive and significant influence on patient loyalty, besides that price also affects the loyalty of patients seeking treatment at the hospital and patient satisfaction also has a positive influence on patient loyalty	Not reported
Bahari et al., 2018	To determine the effect of marketing mix strategy on patient loyalty. This research was conducted at Petrokimia Gresik Hospital	Cross sectional	120 respondents of outpatients at Petrokimia Gresik Hospital	There is a simultaneous effect of all 7P independent variables (product, price, place, promotion, people, physical evidence, and process) on the dependent variable (patient loyalty) at Petrokimia Gresik Hospital	Not reported
Hidayanti, 2016	To analyze the assessment of the service quality of doctors and nurses on the loyalty of general polyclinic patients at Aisyiyah Hospital Bojonegoro	Cross sectional	97 respondents Outpatient General Poly Hospital Aisyiyah Bojonegoro	The most effect factor on patient loyalty is the dimension of reliability	Not reported
Kurniasih et al., 2015	To analyze the role of satisfaction with the quality of pharmaceutical services in increasing the loyalty of outpatients at Al Islam and Santo Yusup Hospitals, Bandung City	Cross sectional	100 respondents InHealth Hospital Al Islam, 103 respondents InHealth Santo Yusup Hospital, 100 general respondents at Al Islam Hospital Bandung City as controls	In InHealth patients at Santo Yusuf and Al Islam Hospitals, as well as general patients at Al Islam Hospital, service satisfaction on direct evidence plays a role in increasing loyalty. In Al Islam Hospital InHealth patients, service satisfaction on empathy has a role in increasing loyalty In general patients of Al Islam Hospital, service satisfaction on empathy does not play a role in increasing loyalty In InHealth patients at Al Islam Hospital, Santo Yusuf Hospital, satisfaction with service responsiveness plays a role in loyalty, while in general patients at Al Islam Hospital service satisfaction on responsiveness does not play a role in increasing loyalty Service satisfaction on reliability does not play a role in increasing loyalty to InHealth patients at the Santo Yusuf and Al Islam Hospitals, while in general patients service satisfaction on reliability plays a role in increasing loyalty. In InHealth patients and general patients at Al Islam Hospital, service satisfaction with guarantees plays a role in increasing loyalty, in InHealth patients at Santo Yusuf Hospital, service satisfaction with guarantees does not play a role in increasing loyalty	The sample used is a quota sample, which is 100 respondents
Vigaretha et al., 2018	To determine the effect of service quality on patient loyalty, service quality and patient satisfaction, patient satisfaction on patient loyalty and to determine whether patient satisfaction can mediate the relationship between service quality and patient loyalty	Cross sectional	106 respondents were outpatients at RSUD dr. Sudirman Mangun Sumarso	There is an influence between service quality on loyalty (Significant = 0.020), service quality on satisfaction (Significant = 0.000), satisfaction with loyalty (Significant = 0.000) and satisfaction can mediate the relationship between service quality and loyalty (0.339 > 0.267)	Not reported

RSU: Rumah Sakit Umum, RSUD: RSUD Daerah, SEM: Structural equation modeling.

taking a long time. Low prices are also one of the satisfaction factors that support patient loyalty.

Factors that affect patient satisfaction will indirectly build the hospital image. If the hospital service provides good service and satisfying service, it will improve the hospital image. Hospital image is a parameter to measure the quality of hospital services. Therefore, hospital image is also related to patient satisfaction and loyalty indirectly.

However, there are several models found in the literature related to the relationship between service quality and loyalty. Service quality assesses the level of excellence, namely, the extent to which services have been provided in accordance with patient expectations. Service quality will affect the patient's expectations which will then correlate to a sense of satisfaction. Furthermore, this sense of satisfaction will lead to patient loyalty and empathy for hospital services.

Risk of bias assessment in included trials

The risk of bias of the included studies is summarized in Figure 1. The majority of the trials had unclear risk of bias for sequence generation and concealment of allocation. There was no loss to follow-up in any of the included in the studies. All trials were judged to have low risk of bias.

Discussion

The relationship between patient satisfaction and customer loyalty in the hospital

In developing the facilities and quality of hospital services, patient loyalty is the most important part of the whole process. Patient loyalty refers to the continuation of services used at the hospital. In addition, patient loyalty will also affect how much the patient recommends hospital services to others. Therefore, to increase patient loyalty, hospitals need to pay attention to several things related to satisfaction for hospital patients [23], [24], [25].

Inpatient and outpatient hospital patient satisfaction indexes are quite different. Inpatient or outpatient can be influenced by many things. Hospital facilities must be considered by inpatients [26], [27]. On the other hand, inpatients are not too concerned with complicated procedures because they feel more contact with nurses, so they understand how hard work health workers gave to patients. On the contrary, the lack of contact with nurses and also the complicated procedures caused outpatients to be dissatisfied with it. Waiting time for outpatients is also the most important factor in their satisfaction. Based on the exposure factors above, it can be concluded that

satisfaction between inpatient and outpatient patients is different.

In addition, giving accurate explanations about drugs and information as well as providing detailed and easy-to-understand information bring a positive relationship to patient satisfaction [28]. Communication training should be considered by hospitals to its staff to increase a sense of satisfaction regarding the complete information to patients [29], [30], [31]. Furthermore, the information provided by the doctors regarding the patient's condition also affects the level of patient satisfaction.

The quality of services provided by the hospital to patients also affects patient satisfaction [31], [32], [33], [34], [35], service quality includes the following: (a) The first is tangibles (physical evidence) which include physical facilities, equipment, employees, and communication facilities as well as operational vehicles. Thus, direct evidence or existence is one of the most concrete indicators. Its form is in the form of all facilities that can be seen; (b) second is responsiveness, namely, the responsiveness of employees in providing the services needed and can be completed quickly. The speed of service provided is the responsiveness of the officer in providing the required service. This responsive attitude is a result of reason and thought shown to customers; (c) third, reliability is the ability to provide the promised service immediately and satisfactorily. According to Lovelock, dependability is the capacity to consistently provide the requested service or to accomplish it correctly throughout time. That is, reliability is the company's ability to deliver the promised service accurately and consistently. Reliability can be interpreted as doing it right up to a certain time. Fulfillment of the promise of appropriate and satisfactory service includes timeliness and skills in responding to customer complaints and providing services fairly and accurately; (d) fourth is insurance which includes knowledge, ability, courtesy, and trustworthiness of employees, free from danger, risk, and doubt. Insurance is a protection effort that is presented to the community for its citizens against risks which if that risk occurs will cause disruption in the normal structure of life; and (e) fifth, empathy includes ease of making relationships, good communication, and understanding customer needs. Empathy is individualized attention to customers. Empathy is the attention that is carried out personally or individually to customers by placing themselves in the customer's situation.

The effect of satisfaction on hospital image

Based on the results, service quality and patient satisfaction will affect the image of the hospital. This satisfaction will shape the quality of service in the hospital and will then form an image or hospital

accreditation. The majority of satisfaction felt by patients is formed from a mix consisting of tangibles (real physical evidence), responsiveness (responsiveness), reliability (reliability), assurance (guarantee), and empathy (empathy). From this, the hospital can make the five mixes to increase patient satisfaction [32].

The negative results of the study found that service quality and patient satisfaction did not significantly affect patient loyalty. On the contrary, satisfaction and service quality influenced the hospital's image which, in turn, could influence patient loyalty later. This is supported by the study which obtained a survey of 323 outpatient unit patients at Mampang Prapatan Hospital [36]. However, the result of the study [37] found that the image of the hospital did not significantly enhance the level of patient loyalty.

The level of patient loyalty is determined by the type of patients: Outpatient or inpatient. Outpatients tend to look at the image of the hospital as a factor in patient loyalty, while inpatients are more likely to search for service quality so that patient satisfaction is more important. This is also supported by three other articles that state the hospital image (brand image) affects the level of patient loyalty [36], [38], [39]. Based on the articles obtained through analysis and reduction, the majority showed that service quality had an effect on patient loyalty based on the mediator of patient satisfaction [37], [40], [41], [42].

Conclusion

All factors directly impact patients' satisfaction but indirectly impact patient loyalty. The factors include hospital health workers' competency, tangible factors (facilities), communication, punctuality in work (responsiveness), patient waiting time (facility satisfaction and responsiveness), queuing system, drug availability (price factor, facility satisfaction), providing information to clients (trust and communication, guarantees), equal treatment for uninsured patients, and complaint system for clients (hospital image).

Authors' Contributions

CP carried out the review procedures under the direct supervision of NH and AD. CP took the lead in writing the manuscript. NH and AD were editors of the manuscript. All authors provided critical feedback and helped shape the review, discussion, and conclusion.

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