



## Correlation of Patient Characteristics and Patient Satisfaction with Patient Loyalty in Public Health Center

Nadia Rifqi Cahyani<sup>1</sup>; Tusy Novita Dwi Wardani<sup>2</sup>; Hanifiya Samha Wardhani<sup>3</sup>;  
Ratna Dwi Wulandari<sup>4\*</sup>)

<sup>1,2,4\*)</sup> Faculty of Public Health, Universitas Airlangga

<sup>3</sup> Faculty of Mathematics and Natural Sciences, Universitas Negeri Surabaya

### ARTICLE INFO

#### Article history:

Received 23 May 2021

Accepted 08 July 2021

Published 20 September 2021

#### Keyword:

Patient characteristic  
Patient satisfaction  
Patient loyalty

### ABSTRACT

In today's competitive world, success in healthcare depends on the patient. Characteristics, satisfaction and loyalty of patients are some of the important factors that are the key to success in health services. This study aims to determine the relationship between patient characteristics and patient satisfaction with patient loyalty. This research is an analytic survey research with a cross-sectional design. The research was conducted at Jatiwates Health Center Tembelang Jombang, East Java, Indonesia. The instrument used in this study is a questionnaire with a sampling technique carried out by random sampling in proportion. Data analysis was performed by statistical tests, namely chi-square test and regression test to see the effect of patient characteristics and patient loyalty. The results of this study found that there was a relationship between patient characteristics, namely education (p-value = 0.015) and occupation (p-value = 0.024) with patient loyalty. Meanwhile, patient satisfaction is not related to patient loyalty (p-value = 0.186). This shows that there is a significant relationship between patient characteristics and loyalty. Health centres need to know the characteristics and patients.

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#### Kata kunci:

Karakteristik pasien  
Kepuasan pasien  
Kesetiaan pasien

#### \*) corresponding author

Department of Health Policy and  
Administration, Faculty of Public Health,  
Universitas Airlangga, Surabaya 60155,  
Indonesia

Email: ratna-d-w@fkm.unair.ac.id

DOI: 10.30604/jika.v6i3.608

### ABSTRAK

Pada dunia yang kompetitif seperti saat ini, keberhasilan pada layanan kesehatan bergantung pada pasien. Karakteristik, kepuasan dan loyalitas pasien merupakan beberapa faktor penting yang menjadi kunci keberhasilan pada pelayanan kesehatan. Penelitian ini bertujuan untuk mengetahui hubungan karakteristik pasien dan kepuasan pasien dengan loyalitas pasien. Penelitian ini adalah penelitian survei analitik dengan desain cross sectional. Penelitian dilakukan di Puskesmas Jatiwates Tembelang Jombang, Jawa Timur, Indonesia. Instrumen yang digunakan pada penelitian ini yaitu kuisioner dengan teknik pengambilan sampel dilakukan dengan sampling acak secara proporsi. Analisis data dilakukan dengan uji statistik yaitu uji chi-square dan uji regresi untuk melihat pengaruh dari karakteristik pasien dan loyalitas pasien. Hasil dari penelitian ini yaitu didapatkan bahwa adanya hubungan antara karakteristik pasien yaitu pendidikan (p-value = 0,015) dan pekerjaan (p-value = 0,024) dengan loyalitas pasien. Sedangkan untuk kepuasan pasien tidak berhubungan dengan loyalitas pasien (p-value = 0,186). Hal ini menunjukkan bahwa adanya hubungan yang signifikan antara karakteristik pasien dengan loyalitas. Public Health Center perlu mengetahui karakteristik dan kepuasan pasien untuk memenuhi perspektif pasien dalam pemberian layanan yang nantinya akan berdampak pada loyalitas pasien.

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## INTRODUCTION

The health-care industry like many other industries has recognized the essence of and the need to have loyal patients, given that a focus on the quality of care and patients satisfaction alone may not be enough to achieve the objectives of health-care organizations in the current competitive environment (Kessler & Mylod, 2011). Service providers include customers in the product development process to build relationships. If a relationship impresses the customer, then the relationship is likely to be maintained in the long term (Astuti & Nagase, 2014). Patient characteristics are unique characteristics possessed by each patient that distinguish them from other patients consisting of gender, age, occupation, education, income and source of medical expenses. (Mosadeghrad, 2014). In addition, the characteristics of customers are also one of the important factors in shaping customer satisfaction and loyalty. One of the characteristics of an influential customer is the education or health literacy skills of the customer. Previous research stated that health literacy skills are understood as an important asset to maintain or improve one's health. From this perspective, low health literacy skills can, for example, be a barrier to access to health information and health care, drug use, and disease prevention. (Van Der Heide et al., 2013). Furthermore, the characteristics of the service provider and its organizational environment as well as the customer's wishes and how he communicates with others can affect the level of satisfaction (Mortazavi et al., 2009). Other studies also state that the characteristics of patients who have low education will cause people to be less able to deal with chronic diseases, have less knowledge about health and have difficulty understanding information on drug packages or formulas given to health services (Heijmans et al., 2015). People with low education show lower health literacy skills than people with higher education. This will affect customer loyalty in utilizing health services as well (Morrison et al., 2014).

Customer satisfaction represents the sole purpose of every organization, because it is the core of every mission statement, and the ultimate goal of every strategy in the organization. Customer satisfaction is defined as a feeling of pleasure or disappointment resulting from comparing the perceived performance (or outcome) of a product in relation to its expectations (Ahmed et al., 2017). The concept of satisfaction is not unique to healthcare. In fact, the study on satisfaction had been long established in the social sciences discipline. One of the earliest discussion on satisfaction of needs was put forward by American psychologist Abraham Maslow. In his classical paper described that human needs were arranged into a hierarchy of prepotency. He suggested that human needs emerged at the fundamental levels of physiological needs and safety needs; yet upon the satisfaction of these needs, love needs, esteem needs and the need for self-actualization would arise at higher levels (Ng & Luk, 2019).

Customer loyalty remains an important strategic objective for managers. In the substantial research devoted to establish how to improve customer loyalty, a variety of factors show up as possible drivers of loyalty, but customer satisfaction remains the predominant one (Schirmer et al., 2018). Consumer loyalty is a manifestation and continuation of consumer satisfaction in using health service facilities provided by the company, as well as to remain a customer of the company. Loyalty is evidence of consumers who are always customers who have the power and positive attitude towards the company (Ningrum et al., 2016). The formation

of loyalty will provide great benefits for the company. Loyalty will be the key to success, not only in the short term but sustainable competitive advantage (Hardjono & San, 2017).

Consumer assessment on the quality of health services is important as a reference in improving services so as to create a customer satisfaction and create a loyalty from consumers. Customer satisfaction is the main factor in forming customer loyalty. Satisfied customers will give the products offered and influence other customers to buy products and services from a company. To form customer satisfaction and loyalty in health services, one must know what factors can affect customers, one of which is by knowing the internal factors of the customer. Understanding these personal factors is important to improve the efficiency of the services provided. Personal factors such as age, gender, occupation, education, lifestyle and personality (Utami, 2018). Public Health Center was developed as the spearhead of health services in Indonesia and was built to provide basic, comprehensive, and integrated health services for all people living in their working areas (Christine et al., 2013). Patient loyalty at the Public Health Center is also an important indicator to assess the quality of patient care. Based on this background, this study aims to determine the relationship between patient characteristics and patient satisfaction with patient loyalty.

## METHOD

### Participant characteristics and research design

This type of research is an analytic survey research with a cross sectional design. The criteria for determining the sample in this study are patients who Jatiwates Health Center Tembelang Jombang, East Java, Indonesia, and are willing to be respondents.

### Sampling procedures

The research was conducted at Jatiwates Health Center Tembelang Jombang, East Java, Indonesia. The research population is patients who seek treatment at the Jombang Health Center, East Java, Indonesia. The sampling technique was carried out by random sampling in proportion. This study uses a questionnaire instrument. Previously, the researcher make introduce to the respondent and explained the purpose of the researcher in the activity. Furthermore, the respondent fills out the consent form to become a respondent first if he agrees with the intent of the researcher. After that, it was followed by filling out questionnaires by the respondents.

### Sample size, power, and precision

The sample in this study is part of the population from the research site which is used as a representative of the entire population to be studied, with a total sample obtained in this study of 138 patients seeking treatment at the Jatiwates Health Center Tembelang Jombang, East Java, Indonesia

### Measures and covariates

This study uses primary data in this study is data received from the results of questionnaires that have been

filled in by respondents who became the sample. Primary data is data obtained from the information of research respondents. Primary data collection is done by distributing questionnaires to patients who visit the puskesmas.

### Data analysis

Data analysis was carried out using statistical tests on each variable, namely patient characteristics, patient satisfaction and loyalty. Analysis of the relationship between patient characteristics and patient loyalty and the relationship between patient satisfaction and patient loyalty was carried out using statistical tests using the chi-square test and the effect of patient characteristics and patient loyalty using regression tests. Data presented in analysis of p-value, prevalence ratio (PR) and 95% confidence interval (CI).

## RESULT AND DISCUSSION

In this study, the results are shown in Table 1, namely the relationship between patient characteristics at the

Community Health Centers and patient loyalty. The characteristics of the patients obtained were gender, age, education and occupation. From these characteristics associated with patient loyalty. Patient loyalty is measured by the intensity of patient visits to the Community Health Centers. In the gender variable, the results showed that all male patients were loyal patients with a percentage of 100%, while 6 patients who were disloyal female patients with a percentage of 5.4%. Based on the age variable of patients aged 17-34 years as many as 70 people are loyal patients with a percentage of 97.2%. Meanwhile, the education variable of patients with high loyalty is junior high school education patients with a percentage of 96.4% and undergraduate education with a percentage of 100%. In the work variable, patients are also declared loyal with a percentage of 100%, namely students, private employees and traders. While the results of the analysis of the relationship between patient characteristics and patient loyalty, namely patient education and occupation, showed a significant relationship ( $p < 0.05$ ).

**Table 1.**  
**The relationship between patient characteristics at the Community Health Centers and patient loyalty**

Variable	Loyalty		Total	p-value
	Loyal n (%)	Disloyal n (%)		
Gender				
Male	27 (100,0%)	0 (0%)	27	0,061
Female	105 (94,6%)	6 (5,4%)	111	
Age:				
17-34	70 (97,2%)	2 (2,8%)	72	0,082
≥35	62 (93,3%)	4 (6,1%)	66	
Education:				
Elementary School	23 (95,8%)	1 (4,2%)	24	0,015
Junior High School	54 (96,4%)	2 (3,6%)	56	
Senior High School	46 (93,9%)	3 (6,1%)	49	
Bachelor's degree	9 (100,0%)	0 (0,0%)	9	
Job				
Student	3 (100,0%)	0 (0,0%)	3	0,024
Employee	24 (100,0%)	0 (0,0%)	24	
Labor	20 (95,2%)	1 (4,8%)	21	
Merchant	15 (100,0%)	0 (0,0%)	15	
Not work/Housewife	70 (93,3%)	5 (6,7%)	75	

Patient satisfaction is the main factor in shaping patient loyalty. Table 2 shows the relationship between patient

satisfaction and loyalty. Based on the results obtained, satisfaction is not related to patient loyalty ( $p$ -value = 0.186).

**Table 2.**  
**Relationship of Patient Satisfaction and Loyalty**

Variable	PR (95%CI)	p-value
Satisfaction Crosstab	4,200 (0,422-41,805)	0,186
	Loyalty	
Satisfaction	Loyal n (%)	Disloyal n (%)
Satisfied	126 (96,2%)	5 (3,8%)
Not Satisfied	6 (87,5%)	1 (14,3%)
Total	132	6

From the results of the analysis of the relationship between patient characteristics and patient loyalty which has a significant relationship, namely in education and work, a regression test was carried out to see the effect of these variables. The results of the analysis of the effect of patient characteristics (education and occupation) with patient loyalty are shown in Table 3. Table 3 shows that there is a

relationship between education and work with loyalty. It is shown that education has a value of  $t = 0.065$ , while the work variable has a value of  $t = 1.349$  and has a  $p$  value of  $< 0.0001$ .

Good service quality will certainly create user satisfaction with the service. Good service quality will ultimately provide several benefits, including the

establishment of a harmonious relationship between providers of goods and services and patients providing a good foundation for the creation of profitable customer loyalty for service providers (Juhana et al., 2015). Loyalty is a deeply held commitment to repurchase or repatronize a preferred product or service consistently in the future, thereby, leading to repeated purchases of the same brand or set of brands, despite situational influences and marketing efforts having the potential to cause behavioral switching (Moreira & Silva, 2015). Patient loyalty in health services such as at the Community Health Centers can be seen from the patient's characteristics. From the results of the study, it is known that patients with female gender have loyalty with a percentage of 94.6%. In patients with male

gender also obtained the results of a percentage of 100% having loyalty to the Community Health Centers. Previous research has stated that female consumers are more loyal than male consumers. This gender difference determines the individual in decision making. In addition, gender also determines the trust, commitment, communication, and conflict handling of consumers towards their loyalty to a service or product (Jacques & Osman, 2019). Other studies also state that a person's consumption and tastes are shaped by gender, where there are certain differences between men and women. Women have an important role as decision makers on the use of health services, not only for themselves but also for their families (Kotler & Keller, 2012).

**Table 3.**  
**Effect of Patient Characteristics Dimensions with Patient Loyalty**

Variabel	Loyalty				
	Unstandardized beta	Standard error	Standard beta	t stat	Hypothesis
Education	*0,001	0,021	0,006	0,065	0,948
Job	*0,018	0,013	0,115	1,349	0,180

\*p<0,001

In terms of age, patients aged 17-34 years were more loyal than patients aged 35 years. Consumers with a young age or age range of 21-40 years and consumers who are still in education or consumers with the last education below a bachelor's degree are more concerned with price than the quality of a product or service. Meanwhile, consumers aged over 40 years, namely those with an age range of 41-60 years or more, are more concerned with the quality of the services provided compared to the price (Klopotan et al., 2014). Another study states that the age groups that use health services the most are the elderly, children and women at parenting age. Meanwhile, based on educational characteristics, patients with higher education or undergraduate education have the highest percentage of loyalty (Ali et al., 2016). Based on previous research, it is stated that the loyalty parameters of consumers are the quality of the product and the quality of the services provided. A person's level of education affects a person's perspective in using health services (Batterham et al., 2016). In addition, the level of education is influential in responding to the information received and will think about the extent of the benefits that can be obtained from the information. A high level of education allows a person to process the information received into a certain attitude. Someone with low education will have a low attitude in maintaining their health (Satibi, 2015)

Customer loyalty, on the other hand, is defined as a deeply held commitment to consistently purchase or reuse a preferred product or service in the future (Picón et al., 2014). Another characteristic that affects patient loyalty is the patient's occupation. The results of the study stated that patients with student status and patients with employment status as private employees and traders had loyalty to the Community Health Centers. Previous research stated that there is a significant relationship between job satisfaction where respondents with lower-middle jobs tend to be satisfied with getting health care at health services such as Community Health Centers (Satibi, 2015). The patient's occupation is related to the income earned. The higher a person's income, the higher the obligation of health workers to provide good services (Sriatmi et al., 2014).

Patient care is an activity carried out to meet the needs, desires and expectations of patients. If the service received is in accordance with the patient's expectations, it means that

the service is satisfactory. To understand how to satisfy a patient is to identify the patient's needs and wants (Geurts et al., 2017). Service quality has a close relationship with patient satisfaction. Good service quality gives impetus to customers to forge strong bonds with the company (Juhana et al., 2015). Customer satisfaction is one of the goals of an organization. Customer satisfaction is defined as a feeling of pleasure or disappointment resulting from comparing the perceived performance (or outcome) of a product in relation to its expectations. Satisfaction with service quality depends on a large number of tangible and intangible attributes such as patient safety and comfort. Increased customer satisfaction can reduce complaints from customers and increase customer loyalty (Mortazavi et al., 2009). Customer loyalty and satisfaction have a relationship, although the relationship does not always go hand in hand. Satisfaction becomes an important step in the formation of loyalty but becomes less significant when loyalty begins to arise through other mechanisms. Other mechanisms can take the form of determination and social bonds (Fitri & Ainy, 2016).

Customer expectations also affect customer satisfaction. Expectation-confirmation theory is widely used in the marketing and information systems literature (Qazi et al., 2017). The underlying logic of the expectation-confirmation theory framework is described as follows: First, consumers form an expectation of a specific product or service prior to a transaction. Second, after a period of consumption, they form perceptions about its performance. Third, they assess its perceived performance against their original expectation and determine the extent to which their expectation is confirmed. Fourth, they develop a satisfaction level based on their confirmation level and the expectation on which that confirmation was based. Finally, they form a repurchase intention based on their level of satisfaction (Chiguvu & Guruwo, 2017). Other studies also state that customer loyalty is determined by the quality of service that forms patient satisfaction. In addition, customer loyalty is built with the efforts of marketing programs in an organization that can position the customer as the center of all activities carried out by an organization. Customer loyalty is also determined by customer characteristics (Bielen & Demoulin, 2007).

Quality is the overall characteristics and characteristics of a product or service that depend on its ability to satisfy the



needs expected by customers. Quality can be met when the company can provide products according to what customers expect and even exceed customer expectations (Kotler & Keller, 2012). In this study, it was found that there is a relationship between education and work with loyalty. Education has a significant relationship with the level of assessment of patient characteristics seen from patient satisfaction and loyalty. Patients with less education will be more satisfied than patients with higher education. Educated patients tend to have a good understanding of the disease and they expect better communication from the health care providers they receive (Marcus, 2014). Previous research has also stated that there is an effect of working with character assessments. Patients who work have more expectations, because they are more demanding of health workers to provide services that meet their expectations. Therefore, patients who work have higher expectations than patients who do not work (Najafi Kalyani et al., 2014).

#### LIMITATION OF THE STUDY

Even though some findings have been made in this research, there are still some limitations that need to be addressed. This research only sampled one healthcare institution in one Public Health Center in Jombang, East Java, Indonesia. Therefore, it may not be possible to generalize to other contexts. Therefore, follow-up research hopes to select several Public Health Center as monitoring points to carry out regular monitoring of customer characteristic, customer satisfaction and customer loyalty, thus reflecting the dynamic changing principle of correlation with customer loyalty.

#### CONCLUSION AND RECOMMENDATION

The results show that there is a relationship between patient quality and patient loyalty, namely the relationship between education and work and loyalty. Education has a significant relationship with the level of service quality assessment seen from patient satisfaction and loyalty. Meanwhile, patients who work have more expectations, because they require more health workers to provide services that meet their expectations. Customer loyalty and satisfaction have a relationship, although the relationship does not always go hand in hand. Satisfaction becomes an important step in the formation of loyalty but becomes less significant when loyalty begins to arise through other mechanisms

#### Ethical Statement

The research instrument used has complied with the rules of research ethics for human objects, according to standard research ethics protocols. Written consent was taken from each study participant. Study participants were informed about the aim, benefits, risk, and duration of the interview. Each questionnaire was number-coded without any personal identification to keep privacy and confidentiality throughout the study period. Only volunteer participants were interviewed.

#### Funding Statement

The authors did not receive support from any organization for the submitted work.

#### Conflicts of Interest Statement

The author declares no conflict of interest.

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