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Antecedents and consequences of health performance based on patient intimacy

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Abstract

This study aims to determine the antecedents and consequences in order to improve the performance of health services based on the patient intimacy perspective on the ISO-certified community health centers via qualitative exploratory methodology and quantitative methodology explanation. The results of this study indicate that antecedents and consequences improve the performance of health services based on patient intimacy perspective at community health centers. In conclusion, strategic imperative can significantly affect the company's bottom line and the company's success.

Keyword: Antecedents, Consequences, Health, Patient, Intimacy.

Antecedentes y consecuencias del desempeño en salud basado en la intimidad del paciente

Resumen

El objetivo de este estudio es determinar los antecedentes y las consecuencias para mejorar el rendimiento de los servicios de salud basados en la perspectiva de la intimidad del paciente en los centros de salud comunitarios certificados por ISO a través de una metodología exploratoria cualitativa y una explicación cuantitativa de la metodología. Los resultados de este estudio indican que los antecedentes y las consecuencias mejoran el rendimiento de los servicios de salud basados en la perspectiva de la intimidad del paciente en los centros de salud comunitarios. En conclusión, el

imperativo estratégico puede afectar significativamente el balance final de la compañía y el éxito de la compañía.

Palabra clave: Antecedentes, Consecuencias, Salud, Paciente, Intimidad.

1. INTRODUCTION

This research is very important because the Health Department of Surabaya City stated that the health center in Surabaya, Indonesia has a success rate in achieving ISO 9001: 2008 certification which is quite proud. Community health centers in Surabaya area is the best of other public health centers in Indonesia that have received ISO certification. Thus it is necessary to research what factors are capable of improving the performance of health services at community health centers so that the community is willing to go to the community health centers (EBADI & DAMIRCHI, 2018: MARTINS, SAMPAIO, CORDEIRO & VIANA, 2018).

However, based on the results of monitoring in the field, in addition to the advantages of Community health centers in Surabaya, the performance of the community health centers as a whole is still not seen pride, ie there is still a good communication miss between employers and employees, as well as employees with patients. Miss is mostly derived from the service that is still not maximized and still, there is a stingy smile to the patient (REZAEI & NEMATI, 2017).

Other empirical research results, conducted by LEE, TANG, YIP & SHARMA (2017) have obtained six factors that can improve

the performance of health services at community health centers so that the surrounding community is willing to go to an ISO-certified health center in Surabaya. The six factors are medical service, non-medical service, medical equipment technology, medical team communication, management system, and physical environment. However, of those six factors, Medical Team Communication by the medical team (Doctor and Nurse) has the lowest score of six factors that formed determination of health service performance at ISO Certified Community health centers in Surabaya. Empathy (one of the dimensions of patient intimacy), which is part of the medical team's communication felt by the patient is still lacking (YORGANCI, 2018)

According to LEE ET AL. (2017), health care providers need to strive to develop a quality of service that is in line with patient expectations so that patients are satisfied with the services provided. Because even if the healthcare provider has provided the best medical service if the patient disagrees or agrees with it, it is said if the health institution has provided good quality health care services. Thus, this research becomes very important, which aims to determine the antecedents and consequences in order to improve the performance of health services based on patient intimacy.

2. LITERATURE THEORY

2.1. Customer intimacy

Many companies are beginning to change the way they connect with their customers, especially with customers that match the targeted segment and benefit the company. This has happened since the publication of The Disciple of Market Leader 15 years ago. Service companies that initially use mass marketing as a marketing strategy began to replace it with an intimate relationship strategy. Through this strategy, the company will deliver value to its customers and they will carefully calculate how much value the company will get from the customer.

This strategy is the development of relationship marketing strategy that has been done before because the intimate relationship is a form of transformation of the relevant marketing strategy for the company, for now, that is the paradigm of economic and exchange theory to psychology/ social psychology and intimacy theory. In the concept of an intimate relationship, there are five attributes that make up it (WARING, TILMAN, FRELICK, RUSSEL & WEISZ (1980), called the 5 C's, which consists of communication, caring and giving, commitment, comfort, and conflict resolution and trust.

TREACY & WIERSMA (1993) argue that in recent years' customer intimacy has become an important factor in customer-organization relationships. Customer intimacy is the ability to share and offer something that suits the needs of consumers. It is a strategic imperative that can significantly affect the company's bottom line and the company's success. Several previous studies have found that preferential treatment that occurs during customer-employee

interaction in a given service will encourage customer firm's intimacy and will impact consumer loyalty, and ultimately also affect the company's profitability (YIM, TSE & CHAN, 2008).

2.2. Health service performance

Performance is a measurement indicator used in the health industry to assess the certainty of the structure, process, and outcome of the services provided (WAMBURA, 2016). The results can be based on a comparison or a tentative meaning, an increase in quantitative measurement for the development of company quality, or supervise and check the size of health services that trigger further examination. Performance can assess the size of structure, procedure or outcome of health services. Furthermore, the measure may be a significant general indicator for assessing most of the illness suffered by the patient appropriately or indicating the quality of care and attention given to patients through appropriate diagnosis.

For the development of health services, a performance appraisal is a key tool for improving medical services and assisting service providers to meet their operational development, and helping to run their operational systems to conform to the overall design of established performance. The development of health service performance outcomes needs to be assessed, as each region needs to find the best way to deliver its services effectively and efficiently to serve the public interest through an assessment of the objectives and

standards of public policy and provide rules to assist government policy.

Managers play an important role in policymaking that can affect the effectiveness and operational efficiency and development of sustainable performance to determine the company's success (WAMBURA, 2016). To develop operational performance, the health industry needs operational managers who understand which components of quality are more significant to consumers and how the influence of service performance is perceived by consumers. Managers can develop company performance if they can realize what consumers expect (technical quality) and how they expect to receive (functional quality) services offered by the company.

Described in the following features, such as knowledge and expertise, employee technical skills, technical solutions of products offered, and company reputation and credibility in which these components can improve the performance of the company. Managers must create a corporate valuation system that ultimately can make the company's culture, policy, and structure more targeted to fit the company's vision to meet the needs of employees and consumers.

2.3. Antecedent of Health Services Performance Based on Patient Intimacy

Intimacy is related to the discussion of love and caring in nursing. DOWLING (2006) states that there needs to be a sense of mutual care between patients and health staff, both of which must be mutually open and communicate with mutual trust and respect for each other. LEE ET AL. (2017) stated that patients who invest their time in developing intimate relationships by the business are psychologically more confident with the service provider. In carrying out health care activities, LEE ET AL. (2017) recommend that doctors and patients constantly improve the quality of communication, the quality of social interaction and the quality of compromise so that patients will more easily make decisions in using services provided by the health care provider concerned.

2.4. Consequences of Health Services Performance Based Patient Intimacy

ARYANA, NENGAH, MADE & KERTI (2017) stated that service companies are advised to improve the quality of service to suit consumer expectations. This is manifested through the relationship of intimacy with the customer (customer intimacy) which is shown by the existence of positive behavior of employees of the company consistently in serving consumers, which will ultimately increase consumer confidence in the products/services offered. Conclusion of the above research is supported by ZAREI, TSE & CHAN (2015) who stated that high-quality services significantly improve patient confidence, which impacts patient satisfaction and loyalty effectively. Research conducted by FORERO & GOMEZ (2017) also states that service performance becomes a better predictor to determine the level of service satisfaction. This study explains

that using the performance model will make the company easier to implement and make general conclusions to determine what attributes that can make consumers feel satisfied.

ZAREI ET AL. (2015) conducted research on private hospitals in Tehran and found that the quality of health services would have a positive impact on the patient's confidence in using company services. There are 2 keys that determine the patient's confidence in the company that is process quality and interaction quality. Increased quality required to improve patient confidence should focus on managerial aspects of service delivery, such as planning, timeliness, and prudence in service delivery, and strengthening interpersonal relationships and communication skills of doctors, nurses and other employees to strengthen patient intimacy.

Because the success of the health sector is ensured by the increased benefits offered and not only satisfactory but also can be enjoyed and impress the patients where the services provided are able to exceed their expectations (WAMBURA, 2016). In addition, by maintaining a high level of customer intimacy the company hopes that the small mistakes made can be understood by consumers. However, if companies often ask for tolerance it will cause things that are not desirable. Intimacy is like a double-edged sword. Consumers can understand the existence of a small error or service failure or otherwise can be very disappointed in the event if they intimate with a health care provider. Therefore, the company should always be careful in maintaining relationships with patients and pay attention to customer's intimacy to have a positive impact on the company.

Service facilities oriented to innovative world-class companies in the health field can be achieved if the services provided are of high quality, it is important to ensure patient satisfaction and loyalty. With the intimacy of customer intimacy as the company's effort to encourage its employees to always show positive behavior to consumers consistently, it will make consumers give a positive response to the company as a high-performance organization and will be interested in establishing a long-term relationship with the company. Given the positive behaviors shown will make patients feel satisfied and affect the end-of-life patient's intention to re-use the hospital services, and most likely to recommend it to friends, neighbors, and family.

3. CONCEPTUAL FRAMEWORK

Here is an analysis model in this study:
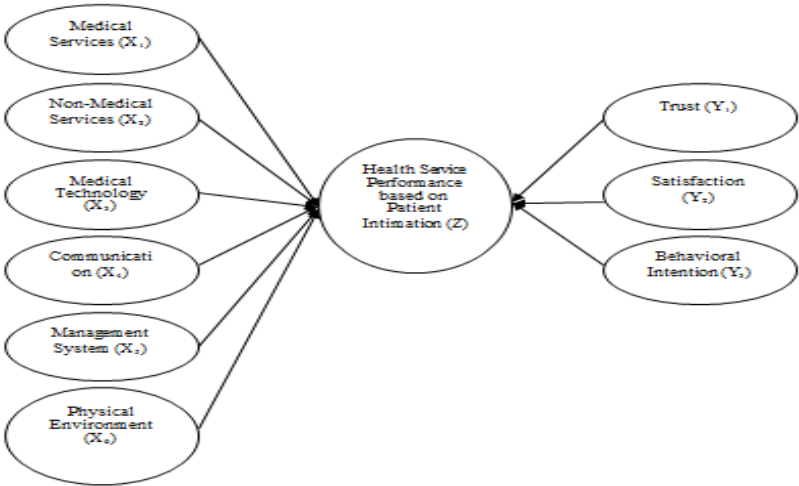
The analysis model in this study indicates that the antecedents or causes of the emergence of patient intimacy can be detailed into several exogenous variables (X1 through Xn). Similarly, endogenous variables (Y1 to Yn) as a consequence variable or impact of intimacy are perceived by patient intimacy patients who are explored using factor analysis techniques. Next, the model will be tested in the form of antecedent influence and consequence of patient intimacy variable through Partial Least Square (PLS) analysis technique.

3. RESEARCH METHODS

This study uses a research methodology approach with quantitative exploratory and quantitative explanation objectives (causality test). This is in accordance with the formulation of the main problems in this study, namely to examine the effect of antecedents and the consequences of patient intimacy at the ISO-certified Community health centers in Surabaya, Indonesia.

The samples used are patients who have checked their health at ISO-certified clinics at least the last three months. Sampling technique in this research is purposive sampling. The data in this study will be collected by cross-sectional or one-shot approach, ie data is collected only once. This study used field surveys, spreading 2 stages, with 40 samples used in the pre-investigation stage and 400 patients in Surabaya at the main research stage.

This research will be conducted through several stages. antecedents or causes of the emergence of patient intimacy can be detailed into some exogenous variables (X1 to Xn) that can be obtained from the first stage of the exploratory quantitative research approach with analyzed through factor analysis techniques. Similarly, in the second stage, we will explore the endogenous variables (Y1 to Yn) as a consequence variable or the impact of intimacy (interaction relationship) perceived by the patient intimacy through exploratory quantitative research with the factor analysis technique. The third stage, as the last stage of this series of studies, tested the model of antecedent's influence and the consequences of patient intimacy variable through the technique of Partial Least Square (PLS) analysis. Thus, the analysis technique used is the factor analysis and Partial Least Square.
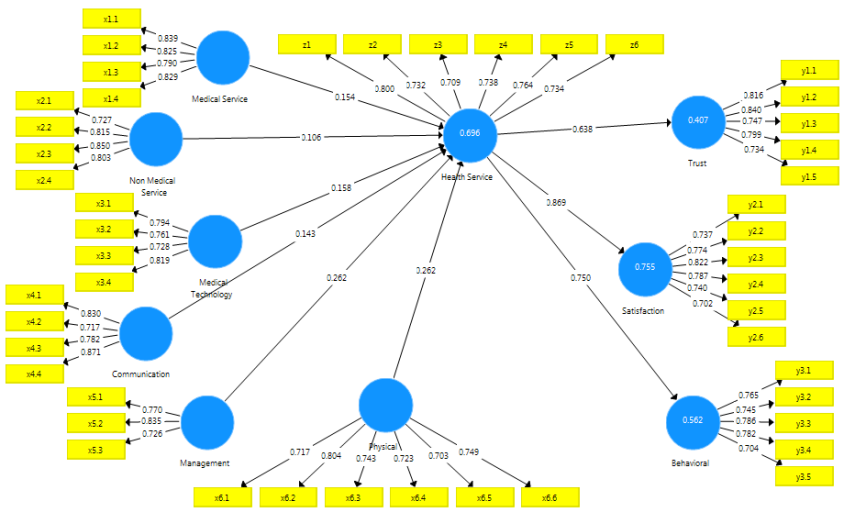
4. RESULTS

The PLS test is an analytical method that is not based on many assumptions. Data should not be normally distributed, with nominal, ordinal, or interval-to-ratio scales. PLS can be used to confirm the theory and explain the presence or absence of relationships among latent variables. In Partial Least Square (PLS) processing using smartPLS, 3 is done in two stages.

1. The first stage is to test the outer model.

2. The second stage is to test the inner model. In this stage aims to determine whether there is influence between variables. Testing is done by using the t-test.

4.1. Outer Model Testing Stage

Here is a picture of PLS testing results on the outer model stage of the variable. Testing is done on all of each variable. The indicator criteria of the variable are said to be valid and reliable in a constraint if it has a loading factor greater than or equal to 0.5 and its test value> 1.96. Here is an outer test model on each - each research variable:

Picture 1: Outer result model with outer loading value

4.2. Reliabilities

The reliability of the constructs measured by the value of composite reliability, constructive construct if the value of composite reliability above 0.70 then the indicator is called consistent in measuring the latent variable. Here are the results:

Table 1: Reliability Test Result of Constraint

	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
Behavioral	0.814	0.818	0.870	0.573
Communication	0.814	0.824	0.878	0.643
Health Service	0.841	0.843	0.883	0.558
Management	0.673	0.669	0.821	0.606
Medical Service	0.839	0.842	0.892	0.674
Medical Technology	0.780	0.781	0.858	0.603
Non-Medical Service	0.814	0.837	0.876	0.640
Physical	0.835	0.841	0.879	0.548
Satisfaction	0.855	0.863	0.892	0.580
Trust	0.847	0.853	0.891	0.622

The test results show that the constructs (variables) of all variables have a composite reliability value greater than 0.7. So it is reliable.

4.3. Stage Structural Model

Stage structural model aims to determine whether there is influence between variables. Testing is done by using t test. The variable is said to have an effect when p value is less than 0.05. Similarly, if the relationship between the negative variables then the decision is if - t count is smaller than - t table. The calculation results can be seen in the following figure:
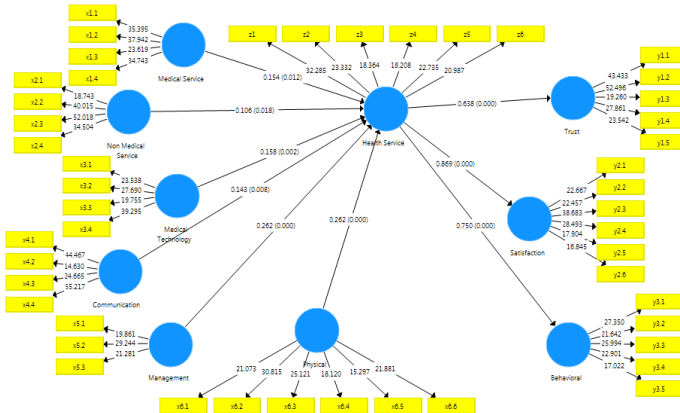
Picture 2: Structural Test Model

4.4. Hypothesis testing

Here is the estimate value of each - each relationship between research variables:

Table 2: Estimate Variable Coefficient Value

	Original Sample (O)	T Statistics (|O/STDEV|)	P Values	Penerimaan Hipotesis
Communication -> Health Service	0.143	2.683	0.008	Ho ditolak
Health Service -> Behavioral	0.750	16.422	0.000	Ho ditolak
Health Service -> Satisfaction	0.869	39.138	0.000	Ho ditolak
Health Service -> Trust	0.638	11.491	0.000	Ho ditolak
Management -> Health Service	0.262	5.362	0.000	Ho ditolak
Medical Service -> Health Service	0.154	2.530	0.012	Ho ditolak
Medical Technology -> Health Service	0.158	3.123	0.002	Ho ditolak
Non-Medical Service -> Health Service	0.106	2.365	0.018	Ho ditolak
Physical -> Health Service	0.262	3.707	0.000	Ho ditolak

Based on the above table it can be interpreted as follows:

a. The magnitude of the coefficient of estimate communication to health service is 0.143. The coefficient is marked positive that if the communication increased the higher the health service. And conversely the lower the communication the lower the performance of health services. Based on the value of t arithmetic significance value 0.008 ($p < 0.05$) so that there is a significant influence communication to health service.

b. The magnitude of the coefficient of estimate health service to the behavioral is 0.750. The coefficient is marked positive that if the enhanced health service, the higher the behavioral. And the lower the health service, the lower the behavioral. Based on the value of t arithmetic values obtained 0.000 (p <0.05) so there is a significant effect of health service on behavioral.

c. The coefficient of estimate health service to satisfaction is 0.869. The coefficient is marked positive that if the increased health service then the higher the satisfaction. And the lower the health service, the lower the satisfaction.

d. Based on the value of arithmetic values obtained 0.000 (p <0.05) so the value of estimate health service coefficient to trust is 0.638. The coefficient is marked positive that if the improved health service, the higher the trust. And the lower the health service the lower the trust. Based on the value of t arithmetic values obtained 0.000 (p <0.05) so there is a significant influence on health service to trust.

e. The amount of estimate management coefficient on health service is 0.262. The coefficient is marked positive that if the increased management then the higher the health service. And the lower the management the lower the health service. Based on the value of t arithmetic values obtained 0.000 (p <0.05) so that there is a significant influence on health service management.

f. The amount of coefficient of estimate medical service to health service is 0.154. The coefficient is marked positive that if the improved medical service, the higher the health service. And the lower the medical service the lower the health service. Based on the value of t arithmetic significance value of 0.012 (p <0.05) so that there is a significant effect of medical service on health service.

g. The magnitude of the coefficient of estimate medical technology to health service is 0.158. The coefficient is marked positive that if the enhanced medical technology, the higher the health service. And the lower the medical technology the lower the health service. Based on the value of t arithmetic significance value of 0.002 (p <0.05) so that there is a significant influence on medical health technology health service.

h. The magnitude of the coefficient of estimate non-medical service to health service is 0.106. The coefficient is marked positive that if the increased non-medical service then the higher the health service. And the lower the non-medical service, the lower the health service. Based on the value of t arithmetic obtained a significance value of 0.018 (p <0.05) so that there is a significant effect of non-medical service on health service.

i. The amount of estimate physical coefficient to health service is 0.106. The coefficient is marked positive that if the increased

physical then the higher the health service. And the lower the physical lower the health service. Based on the value of t arithmetic obtained value of significance 0.018 (p <0.05) so that there is a significant physical effect on health service.

4.5. Testing the Goodness of Fit

While the inner model analysis / structural analysis model is done to ensure that the structural model built robust and accurate. Inner model evaluation can be seen from several indicators that include:

1. Coefficient of determination (R2)

Tests on the structural model are done by looking at the value of R-Square which is a goodness-fit test model. The inner model test can be seen from the value of R-square on the equation between latent variables. The value of R2 explains how much exogenous (independent/independent) variable in the model is able to explain the endogenous variable (dependent/bound).

Table 3: R square value

	R Square	R Square Adjusted
Behavioral	0.562	0.561
Health Service	0.696	0.691
Satisfaction	0.755	0.754
Trust	0.407	0.405

The value of R square shows the influence of Behavioral, Communication, Management, Medical Service, Medical Technology, Non-Medical Service, Physical to Health Service variables, is 0.696 or 69.6%. Then the influence of the Health Service variable to behavioral is 0.562 or 56.2%. Then the influence of Health Service variables to satisfaction is 0.755 or 75.5%. Then the influence of the Health Service variable to trust is 0.407 or 40,7%.

1. Predictive Relevance (Q2)

In addition, the R-square model is also evaluated by looking at the Q-square value. The value of Q-square can be calculated as follows: Q2 = 1 - (1 - 0.696) (1 - 0.562) (1 - 0.755) (1 - 0.407) = 0.9807 Based on the result of Q-square calculation can be seen that the value of Q -square of 0.9807. because the value of Q2> 0, it can be concluded that the health service model and its effect on behavior, satisfaction, trust is relevant.

2. Goodness of Fit Index (GoF)

The last one is to find the value of Goodness of Fit (GoF). In contrast to CBSEM, for GoF values in PLS-SEM must be searched manually. The formula is:

$$GoF = \sqrt{AVE \times R^2} \quad \text{........Tenenhaus (2004)}$$

The calculation of AVE average value is 0.591, while the average R2 is 0.605, so the value of GOF is 0.5979 According to LEE ET AL. (2017), GoF value is small = 0.1, GoF medium = 0.25 and big GoF = 0.38.

5. DISCUSSION

5.1. Antecedents of Health Performance Based on Patient Intimacy

The results of this study indicate that antecedents consisting of medical services, non-medical services, medical equipment technology, medical team communication, management system, and physical environment have been shown to improve the performance of health services based on patient intimacy perspective at community health centers. This result is supported by empirical research results conducted by LEE ET AL. (2017), they obtained six factors that can improve the performance of health services based on patient intimacy orientation. The six factors are medical service, non-medical service, medical equipment technology, medical team communication, management system, and physical environment. LEE ET AL. (2017) also stated that patients who invest their time in developing intimate relationships by the business are psychologically more confident with the service provider.

6. CONCLUSION

Based on this study indicate that antecedents consisting of medical services, non-medical services, medical equipment technology, medical team communication, management system, and physical environment, and consequences consisting of trust, satisfaction and behavioral intention have been shown to improve the performance of health services based on patient intimacy perspective at community health centers.

It is a strategic imperative that can significantly affect the company's bottom line and the company's success. Several previous studies have also found that preferential treatment occurring during customer-employee interactions in the services provided will encourage customer firm's intimacy and will impact consumer loyalty, and ultimately also impact on corporate profitability (YIM ET AL, 2008).

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