

The Effect Of Telemedicine And Brand Awareness On The Decision To Treatment And Its Impact On Return Visits Of Outpatient Hospital Patients X

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Keywords

Telemedicine, Brand Awareness, Treatment Decisions and Repeat Visits, Hospitals.

Abstract. The pandemic situation has not only caused changes in health management, but has also caused business competition in the pharmaceutical sector. The development of information technology is utilized in pharmaceutical services such as telemedicine. Hospital X is one of the hospitals that has implemented telemedicine services since 2020. The implementation of telemedicine services is one of the ways Hospital X has responded to the impact of the pandemic and developments in information technology. This service has been implemented since 2020 along with the pandemic which has changed the format of services in many health facilities, including hospitals. Technological developments also make hospital customers have high expectations for health services. Research Objectives: This study aims to determine the effect of telemedicine and Brand Awareness on treatment decisions and impact on patient repeat visits at X Hospital. Research Methodology: The authors used a cross-sectional study design with quantitative methods, measuring telemedicine service variables, brand awareness, treatment decisions, and patient repeat visits with a sample size of 150. Results: The telemedicine service variable has a mean value of 3.99. The brand awareness variable has a mean value of 4.09. medication decision variable has a mean value of 4.32. the patient return visit variable has a mean value of 4.11. Conclusion: There is an influence of telemedicine services on treatment decisions while there is no influence of telemedicine services and brand awareness on treatment decisions. Brand Awareness also influences Patient Return Visits. However, telemedicine has no effect on patient repeat visits. Treatment Decisions Affect the patient's repeat visit.

1. INTRODUCTION

The development of information technology is used by pharmaceutical business managers with various innovations such as telemedicine. The results of telemedicine services are recorded in a digital or manual record by the doctor as a medical record document and are the responsibility of the doctor. This medical record must be kept confidential, and used in accordance with statutory provisions. Based on Permenkes Number 20 of 2019 concerning the Implementation of Telemedicine Services Between Health Service Facilities, telemedicine is the provision of remote health services by health professionals using information and communication technology, including the exchange of information on diagnosis, treatment, disease and injury prevention, research and evaluation, and education. sustainable health care provider for the benefit of improving the health of individuals and communities, ¹. Telemedicine aims to organize primary and specialist healthcare care in the public health system, electronic communication in making referrals for specialized care, assisting in connecting patients and primary hospitals with treatment clinics in remote areas and can enhance collaboration between specialist doctors and referral nurses. Telemedicine services are carried out between doctors and patients, and/or doctors and other doctors. Doctors who provide telemedicine services to patients are responsible for the health services they provide, including guaranteeing the security of patient data accessing telemedicine services in accordance with applicable laws and regulations. The telemedicine services referred to consist of services: teleradiology, teleelectrocardiography, teleultrasonography, clinical teleconsultation 1.

Hospital X is one of the hospitals that has implemented telemedicine services since 2020. Based on Hospital X's policy, several provisions regulate the administration of telemedicine prescriptions, namely that doctors are responsible for the contents and effects arising from the drugs written in the prescription. In telemedicine services, doctors are not allowed to prescribe narcotics, psychotropic drugs, injections except insulin. Electronic prescriptions that are used only for one time

prescription service and cannot be repeated (iter), prescriptions and or copies of prescriptions cannot be given to patients electronically via e-mail or fax².

RS X's performance has experienced interesting dynamics, especially in the last 3 years. Hospital X's annual report data shows that in 2020 there has been a significant decrease in the number of visits from outpatients in each type of service. Decrease in the number of visits from 2019 to 2020 by 39%. Then in 2021, there will be an increase from 2020 of 21%, but still less than the number of visits in 2019. There are 25 types of services provided by X Hospital for outpatients, namely: pediatric, obstetrics & gynecology, internist, general practice, lactation clinic, dentist, ENT, cardiology, surgeon, dermatologist, neurologist, psychiatrist, urology, allergy, nutrition, acupuncture, anesthesia, tumbling, andrology and sexology, Aesthetic Breast Clinic, Jakarta Knee and Shoulder, J Klinik, Spine, Ophthalmologist, and IVF Clinic. During the 2019–2021 period, the number of outpatients at X Hospital experienced dynamics in terms of numbers, considering the Covid 19 pandemic with a very unexpected situation. The number of visits in the last 2 years from 25 types of outpatient services can be seen in the image below:

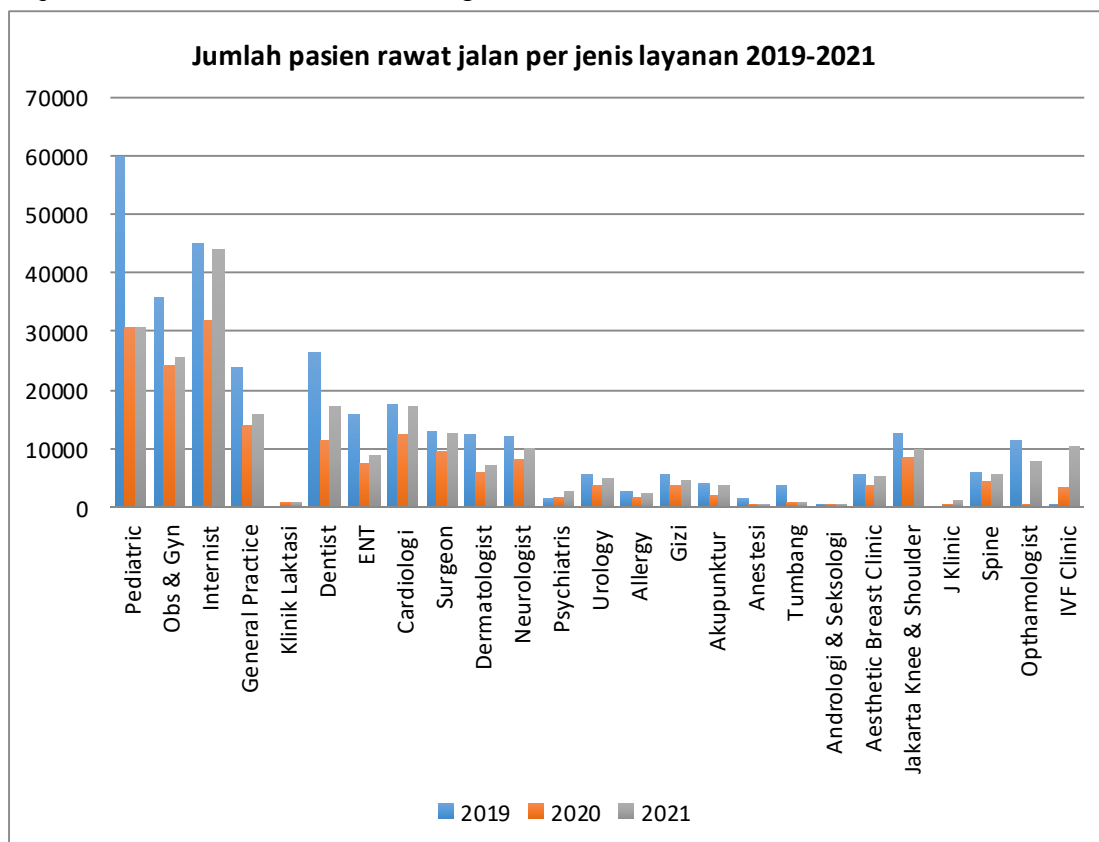


Figure 1. Number of Outpatient Visits in 2019, 2020 and 2021
Source: Annual Report of RS X 2019 - 2021

One of the factors that influence the sale of a product is consumer or customer trust. Trust is generally formed after going through a long-term relationship between the buyer and the service provider. Trust will be formed if consumers experience satisfaction while using the services or services of a company. Trust occurs when one party has confidence in the other party involved in the exchange and has reliability and integrity³. In the context of the decision to buy something, trust has a significant effect on consumer loyalty⁴. This means that the decline in sales turnover is also indirectly due to decreased consumer confidence. The trust factor from customers is very influential on the sustainability of a company. Without customer trust, it is impossible for a company to survive with good business processes and performance.

The implementation of telemedicine services is one way for Hospital X to respond to the impact of the pandemic and developments in information technology. This service has been implemented since 2020 along with the pandemic which has changed the format of services in many health facilities, including hospitals. Technological developments also make hospital customers have high expectations for health facilities. The emergence of various digital applications in the field of health services forces all health facilities to change rapidly to adapt to technological developments, if customers do not want to be abandoned. Based on the results of field observations, the achievement of telemedicine services at X Hospital can be described as follows:

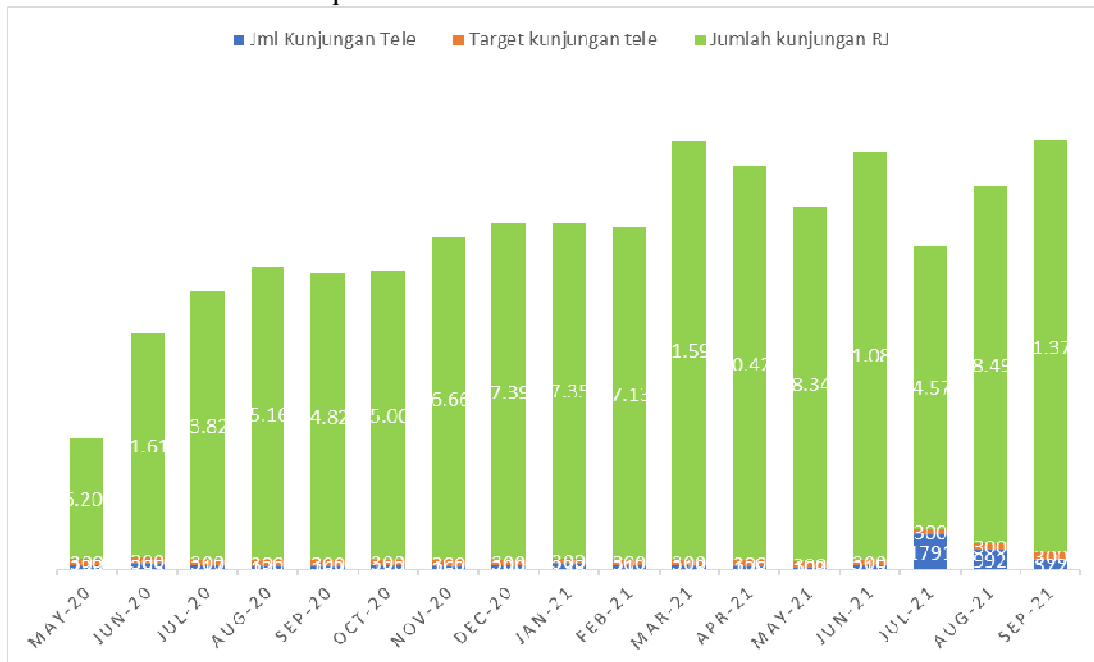


Figure 2. Number of Telemedicine Visits, Non-Telemedicine and Telemedicine Targets of Hospital X 2020 - 2021

Source: RS.X Annual Report 2019 - 2021

The graph above shows a very significant increase in the number of telemedicine visits to Hospital X, especially starting in July 2021, when it was precisely the peak of Covid-19 in Indonesia, especially Jakarta. There was an increase of 800% from June to July. This figure is considered unusual in the business world during normal times, but the impact of the pandemic has indeed brought many surprises. This means that during the Covid-19 pandemic, at the peak of public anxiety about health, the need for medicines was even higher and telemedicine was the choice to meet the need for medicines. This is understandable because health protocols during a pandemic do not allow customers to visit health care centers or pharmacies, so digital services are very relevant. The graph shows that telemedicine services still have not reached the target each month, so it still needs to be re-evaluated to improve this service.

The initial survey conducted in December 2021 showed that customers were satisfied with the telemedicine services implemented at Hospital X. There were 15 indicators surveyed and 39 respondents answered all questions with 'agree' and 'strongly agree'.

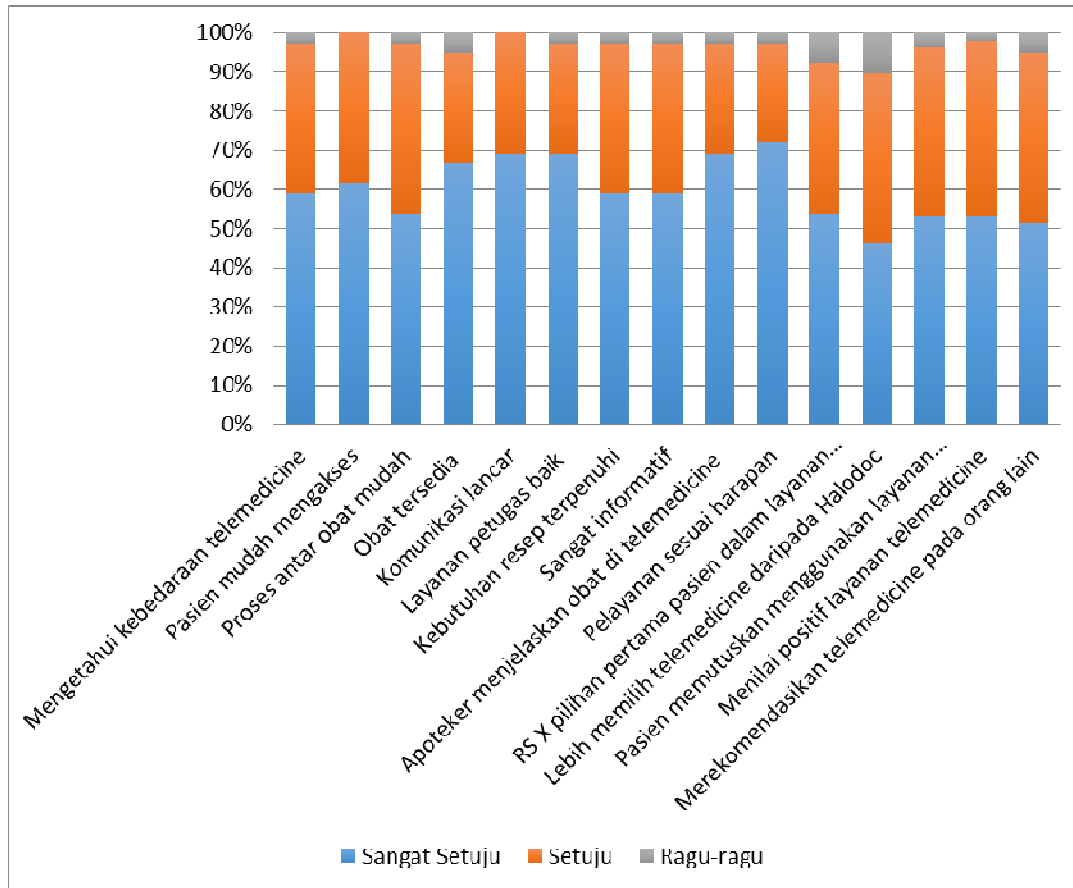


Figure 3. Customer Satisfaction Survey Data for Hospital X Telemedicine Services

Respondent satisfaction with telemedicine services at Hospital X needs to be maintained in order to increase patient loyalty. Loyalty to hospital services can be seen from the number of repeat visits. The more loyal a customer is to a service or product, the more frequently they will use the service or product. Loyalty can be formed if the customer gets optimal service, experiences satisfaction in the service, and has a good understanding of the brand or brand of the service provider. Several studies on brand awareness have an impact on patient loyalty showing mixed results.

Elements of brand awareness (brand awareness) has a strong influence in measuring brand equity to influence customer loyalty. Asriani, Usman and Majid's research (2019) 5, there is an influence of brand awareness on service utilization at RSIA Trifa Kota Parepare. Agree with this statement that brand awareness has a positive effect on the decision to purchase services at RSI Banjarmasin⁶. The same thing is found in research which states that there is a relationship between brand awareness and the decision to use a lactation clinic at RSML⁷. However, different results stated that the awareness of the respondents on the RSMS brand was not good enough⁸. Similar to other studies which state that brand awareness at Dungus Madiun Paru Hospital is in the low category. This is due to the respondents' ignorance that the Dungus Madiun Lung Hospital also serves general patients. The results of the study show that brand awareness has no effect on the intention to reuse the Ibnu Sina Makassar Hospital⁹.

Hospital X as one of the health service units that provides full services participates in realizing an optimal level of public health. To continue to increase the number of patient visits in the era of the Covid-19 pandemic, various methods are needed to remain the hospital of choice for patients for their treatment. The implementation of telemedicine services through online medical services can increase repeat visits and brand awareness. Although preliminary data shows an increase in the number of visits served, it is important to evaluate the implementation of telemedicine services at Hospital X to

get a more concrete picture for the implementation of a long-term strategy, both to improve service quality and improve hospital performance. X. This study aims to: 1) Determine the effect of telemedicine services on patients' decisions to seek treatment at X Hospital; 2) Knowing the effect of patient brand awareness on the decision to seek treatment at X Hospital; 3) Knowing the effect of telemedicine on patient repeat visits at Hospital X; 4) Knowing the effect of brand awareness on repeat visits of X Hospital patients; 5) Measuring the influence of telemedicine services and brand awareness on treatment decisions and impact on patient repeat visits at X Hospital.

2. METHOD

The research method uses quantitative methods and descriptive analysis using primary data. Data collection techniques using survey methods, observation and documentation studies. Questionnaires will be given to respondents, data based on the questionnaire will be tabulated and then instrument trials will be carried out. The next process will be carried out by making a correlation test, coefficient test (path test). Respondents in this study were customers of X Hospital who had used hospital services either directly or via telemedicine.

Hypothesis Testing with Structural Equation Modeling Partial Least Square

PLS testing uses the second order model. This second order model is implemented because the return visit variable has 4 dimensions, namely trust, promotional behavior, commitment and cooperation. Second order testing can only be done in the PLS SEM model. Tests were carried out on each variable, namely telemedicine service latent variables, brand awareness, treatment decisions and repeat visits. The indicator criteria for the variable are said to be valid and constructively reliable if they have a loading factor value greater than or equal to 0.5. The following is testing the outer model in this study:

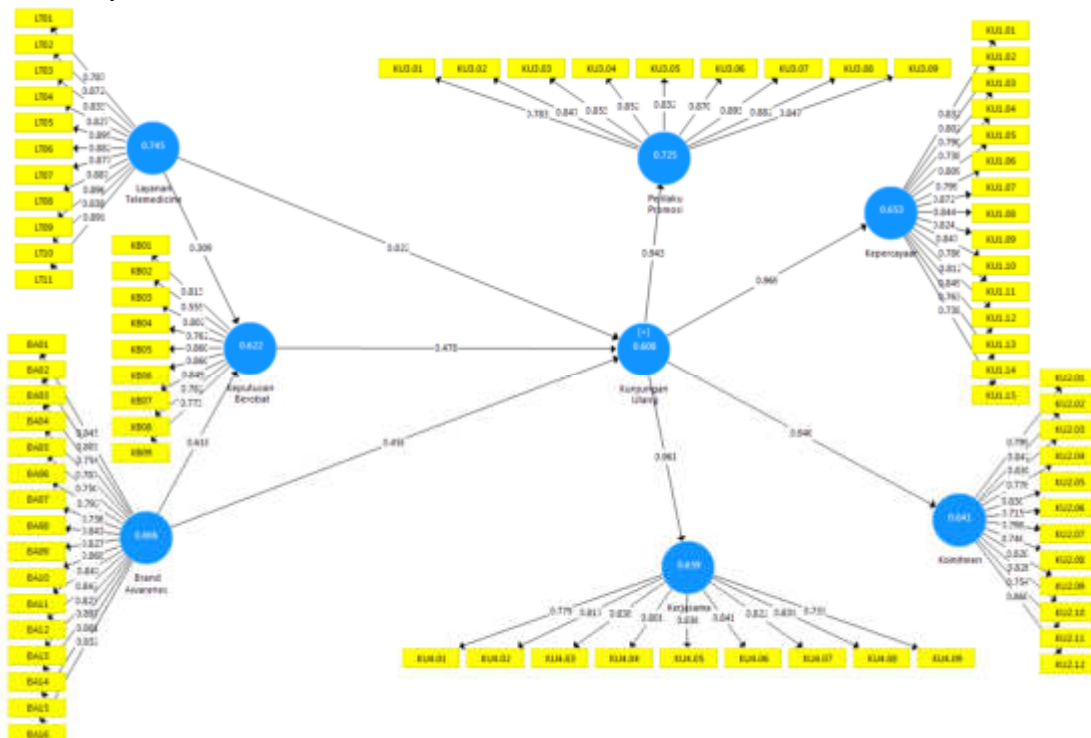


Figure 4. Outer PLS SEM Test Model Results

Convergent Validity Value, Contract, Discriminant, and Reliability

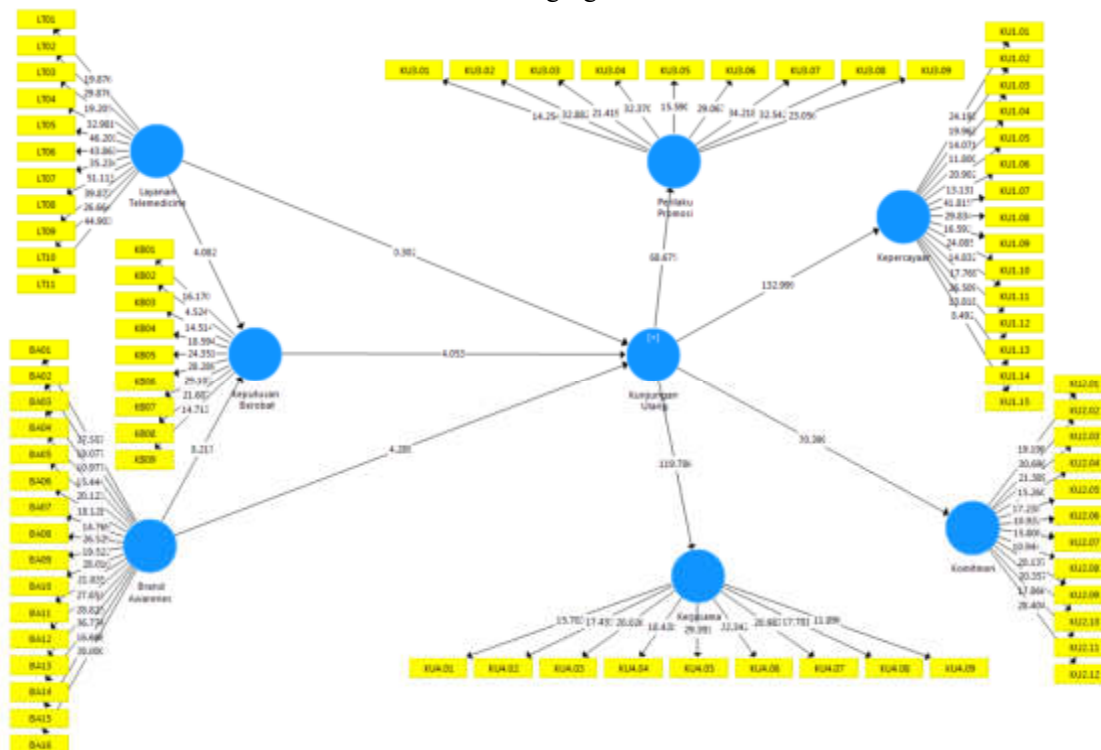
The results of testing the outer model in the first stage are convergent validity values. The results of convergent validity can be seen from the value of the loading factor and the calculated t

value. The loading factor value is said to be valid, it must be worth more than 0.5. The results of the calculations show that for variables that have a factor loading variable value for telemedicine services, brand awareness and treatment decisions have a factor loading value that is greater than 0.5. Then the return visit variable is assessed based on the forming dimensions, namely trust, cooperation, commitment and promotional behavior which also has a factor loading value that is greater than 0.5. With these results, all variables and variable dimensions have convergent validity that meets the standards. The next measurement model is the Average Variance Extracted (AVE) value, which is the value indicating the magnitude of the indicator variance contained by the latent variable. An AVE value greater than 0.5 also indicates good adequacy of validity for latent variables.

The calculation results show that the AVE value of the telemedicine service variable, brand awareness and treatment decisions has a factor loading value that is greater than 0.5. Then the return visit variable is assessed based on the forming dimension, namely trust, cooperation, commitment and promotional behavior which also has an AVE value greater than 0.5. With these results, all variables and variable dimensions have construct validity that meets the standards. Meanwhile, discriminant validity can be measured using the cross loading value. A high cross loading value of more than 0.5 on a variable or dimension compared to the dimension values of other variables means that the construct validity of the latent variables and dimensions is good. Meanwhile, the construct reliability is measured by the composite reliability value, the construct is reliable if the composite reliability value is above 0.70, the indicator is called consistent in measuring its latent variables. The test results show that the constructs (variables and dimensions) of all variables have a Cronbach alpha value and composite reliability and Cronbach alpha is greater than 0.7. So that all variables are declared reliable.

Inner Model or Structural Model Testing Phase

After testing the outer model, the next step is the inner model or structural stage. The structural stage of this model aims to determine whether there is influence between variables. Testing is done using the t test. The variable is said to have influence if the significance value of t is less than 0.05. The calculation results can be seen in the following figure:



3. RESULT AND DISCUSSION

The Effect of Telemedicine Services on Treatment Decisions

The following is the result of calculating the effect of Telemedicine Services on Treatment Decisions using the PLS SEM method:

Table 1. Calculation Results of the Effect of Telemedicine Services on Treatment Decisions

Relationship between variables	Original Sample	T Statistics	P Values
Telemedicine service -> Treatment Decision	0.309	4.082	0.000

The original value of telemedicine services on the decision to treat outpatients at Hospital X was 0.309. The path coefficient is positive. This positive value means that the higher the telemedicine service, the greater the decision to treat outpatients at Hospital X.

The results of the t test obtained a significance level of 0.000. The value is less than 0.05 so that the H1 hypothesis which states "there is an influence of telemedicine services on the decision to treat outpatients at Hospital X" is accepted as true.

The Effect of Brand Awareness on Treatment Decisions

The following is the result of calculating the effect of Brand Awareness on Treatment Decisions using the PLS SEM method:

Table 2. Results of Calculation of the Effect of Brand Awareness on Treatment Decisions

Relationship between variables	Original Sample	T Statistics	P Values
Brand Awareness -> Treatment Decision	0.618	8.217	0.000

The original value of Brand Awareness on the decision to seek treatment for outpatients at Hospital X was 0.309. The path coefficient is positive. This positive value means that the higher the Brand Awareness, the greater the decision to seek treatment for outpatients at Hospital X.

The results of the t test obtained a significance level of 0.000. The value is less than 0.05 so that the H2 hypothesis which states "There is an influence of Brand Awareness on the decision to treat outpatients at Hospital X" is accepted as true.

The Effect of Telemedicine Services on Return Visits

The following is the result of calculating the effect of Telemedicine Services on Repeat Visits using the PLS SEM method:

Table 3. Calculation Results of the Effect of Telemedicine on Repeat Visits

Relationship between variables	Original Sample	T Statistics	P Values
Telemedicine service -> Return Visit	0.022	0.302	0.763

The original value of telemedicine services for repeat visits of outpatients at Hospital X was 0.022. The path coefficient is positive. This positive value means that the higher the telemedicine service, the greater the return visits of outpatients.

The results of the t test obtained a significance level of 0.763. The value is greater than 0.05 so that the hypothesis H3 which states "there is a significant effect of telemedicine services on repeat visits of outpatients at Hospital X" is not accepted as true.

The Effect of Brand Awareness on Repeat Visits

The following is the result of calculating the effect of Brand Awareness on Repeat Visits using the PLS SEM method:

Table 4. Calculation Results of the Effect of Brand Awareness on Repeat Visits

Relationship between variables	Original Sample	T Statistics	P Values
Brand Awareness -> Repeat Visit	0.458	4.289	0.000

The original value of Brand Awareness for repeat visits of outpatients at Hospital X was 0.458. The path coefficient is positive. This positive value means that the higher the Brand Awareness, the greater the repeat visit of outpatients at Hospital X.

The results of the t test obtained a significance level of 0.000. The value is less than 0.05 so that the H4 hypothesis which states "There is an effect of Brand Awareness on the return visits of outpatients at Hospital X" is accepted as true.

The Effect of Treatment Decisions on Repeat Visits

The following is the result of calculating the effect of the decision to seek treatment on repeat visits using the PLS SEM method:

Table 5. Calculation Results of the Effect of Treatment Decisions on Repeat Visits

Relationship between variables	Original Sample	T Statistics	P Values
Treatment Decision -> Repeat Visit	0.478	4.053	0.000

The original value of the decision to seek treatment for repeat visits of outpatients at Hospital X was 0.478. The path coefficient is positive. This positive value means that the higher the decision to seek treatment, the greater the repeat visit of outpatients at Hospital X.

The results of the t test obtained a significance level of 0.000. The value is less than 0.05 so that the hypothesis H5 which states "there is an influence on the decision to seek treatment on the return visit of outpatients at Hospital X" is accepted as true.

1. The Effect of Telemedicine Services on Treatment Decisions for Outpatients at Hospital X

The results of the study stated "There is an Influence of Telemedicine Services on the Decision to Treat Outpatients at Hospital X". Telemedicine is useful for primary and special care settings in public health systems, electronic communication in making referrals for special care, assisting in connecting patients and primary hospitals with care clinics in remote areas and can improve collaboration between specialist doctors and referral nurses 10. Telemedicine services between doctors and patients and/or doctors and other doctors. Doctors who provide telemedicine services to patients are responsible for the health services they provide, including ensuring the security of patient data accessing telemedicine services in accordance with applicable laws and regulations 11. Telemedicine services produce digital or manual records that are documented by doctors as medical record documents and is his responsibility which must be kept confidential and used in accordance with the applicable laws and regulations.

2. The Effect of Brand Awareness on Outpatient Treatment Decisions at Hospital X

The results of the study stated "There is an Influence of Brand Awareness on the Decision to Treat Outpatients at Hospital X". Brand awareness is the ability of a potential buyer to recognize or recall a brand as part of a certain product category. People tend to like or buy familiar brands because they feel safe with something they know. Most of them assume that a brand that is already known has the possibility of being reliable, stability in business, and quality that can be accounted for. Brand awareness is one of the basic dimensions of brand equity which is often considered as one of the requirements of a consumer's purchasing decision, because it is an important factor in considering a brand, including in the context of a hospital. The more well-known the hospital is and enters the awareness of the patient, the brand is always prioritized in a series of considerations in purchasing decisions 12. The decision to use health services reflects a combination of normative and perceived

needs, because for consumption decisions in the health sector, consumers often depend on the information provided by the supplier plus his preferences.

3. The Effect of Telemedicine Services on Return Visits of Outpatients at Hospital X

The results of the study stated "There is no significant effect of telemedicine services on repeat visits of outpatients at Hospital X". Telemedicine has various aspects of application, namely in terms of providing health services to patients, the interests of education, research, administration and public health. Telemedicine exists as an innovation in health services. Telemedicine as part of telehealth is an important component of the future of health services. Telemedicine expands access to health services, both for patients in urban and rural areas. The clinical benefits of telemedicine are many, including remote monitoring, offering telehealth services to rural populations who do not normally receive adequate health care, providing remote expertise, cost savings, and educational purposes. However, with the many benefits that come with telemedicine, there are also many limitations. The most significant limitations are economic, regulatory, and technical. The results are not significant because if the hospital only relies on telemedicine services, it will not have an impact on repeat visits. Because in patients who are still technologically illiterate, this condition will be of little benefit. Meanwhile, for patients who are familiar with technology, there are barriers related to security and privacy when using this service. With this condition, patients do not always make repeat visits to outpatients at hospital X.

4. The Effect of Brand Awareness on Repeat Visits of Outpatients at Hospital X

The results of the study stated "There is an Influence of Brand Awareness on Repeat Visits of Outpatients at Hospital X". Brand awareness is in the range of someone's feelings that are uncertain about the introduction of a brand to the feeling that someone believes that the product brand is the only one in the product class concerned. Brands that are not known usually have little opportunity to attract potential customers. Brand awareness requires a continuum ranging from an uncertain feeling that a particular brand is known, to a belief that the product is the only one in the product class concerned. Brand awareness is related to the strong impression stored in memory which is reflected in the customer's ability to recall or recognize a brand again in different conditions 13. With the ability to remember a strong brand will make patients return to the hospital because it is in peak The patient's mind is X hospital outpatient.

5. The Influence of Treatment Decisions on Repeat Visits of Outpatients at Hospital X

The results of the study stated "There is an Influence of Treatment Decisions on Repeat Visits of Outpatients at Hospital X". The existence of this influence can be explained by thinking that the decision to use health services reflects a felt need, because for consumption decisions in the health sector, consumers often depend on the information provided by the hospital plus their preferences. After the patient decides to seek treatment, the patient will make a repeat visit. Respondent satisfaction with telemedicine services at Hospital X needs to be maintained in order to increase patient loyalty. Loyalty to hospital services can be seen from the number of repeat visits. The more loyal a customer is to a service or product, the more frequently they will use the service or product. Loyalty can be formed if the customer gets optimal service, experiences satisfaction in the service, and has a good understanding of the brand or brand of the service provider. The results of this study are also supported by descriptive calculations which show that patients have a good response on repeat visits as measured by four dimensions, namely trust, promotional behavior, cooperation and commitment. With the patient deciding to seek treatment, it will make the patient make a repeat visit based on trust, promotional behavior, cooperation and commitment from the hospital.

4. CONCLUSIONS

Data analysis concluded that telemedicine services had a significant effect on the decision to treat outpatients at Hospital X; brand awareness has a significant effect on the decision to treat outpatients at Hospital X; telemedicine services have no significant effect on repeat visits of outpatients at Hospital X; brand awareness has a significant effect on repeat visits of outpatients at

Hospital X; the decision to seek treatment for an outpatient visit to X Hospital. Thus the hypotheses H1, H2, H4, and H5 are proven correct, while H3 is rejected. It is recommended that Hospital X further improve the quality of telemedicine services, especially in the element of communication with customers so that a sense of attachment and ownership arises from the patient and in the end make regular repeat visits. X Hospital can also be a good telemedicine model so that hospitals can keep abreast of rapid changes that are based on technology and digitalization.

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