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Evaluation Of The Use Of The Integrated Referral System (SISRUTE) In Health Facilities In North Bengkulu Regency In 2023

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ABSTRACT
SISRUTE, an application that connects patient data between health facilities, is faced with obstacles such as data incompatibility and dependence on internet stability. Even though it started in 2020 in North Bengkulu, only 22.7% of health facilities have adopted it, especially community health centers. Implementation obstacles include staff, IT infrastructure, commitment of referring hospitals, patient conditions, and slow response.Usability testingneeded to improve health referral services. The aim of this research is to analyze the evaluation of the use of the Integrated Referral System (SISRUTE) inmedical facilityNorth Bengkulu Regency in 2023. This research is a mix methods research. The research instrument was a questionnaire which was analyzed using univariate analysis, bivariate analysis and multivariate analysis as well as observation and in-depth interviews with informants. Research analysis shows that perceived usefulness, ease of use, and intensity of use have a significant effect on attitudes and use of SISRUTE in hospitals. Attitude towards use is proven to mediate the relationship between perceived usefulness, ease of use, and intensity of use with SISRUTE use. Perception of usefulness has the greatest influence on the use of SISRUTE. Factors such as management support in the form of monitoring and evaluation of use, staff training, health infrastructure, government support, and financial issues influence the acceptance and use of SISRUTE in North Bengkulu Regency. Evaluation of the use of SISRUTE that needs to be carried out is increasing the efficiency of patient referrals, user satisfaction, and identifying areas of improvement such as monitoring and evaluating use.

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INTRODUCTION

Health development is a joint effort by the Indonesian people to increase awareness, motivation and ability so that everyone can achieve optimal health.(1)Hospitals and community health centers must provide comprehensive health services, record and report their activities. Information and communication technology is used to improve access and quality of health services,(2) including improving service quality and optimizing the referral system.(3)

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The Indonesian government, through the Ministry of Health, is implementing an application-based Integrated Referral System (SISRUTE).(4)(7)This is a communication and information tool that connects patient data between different health services with the aim of increasing the efficiency and speed of the referral process according to medical needs and the competence of health facilities using internet technology.(8)(9) SISRUTE prevents backlog of patients at high referral levels with an application-based system.(10)It has been implemented since 2016 in 11,393 health facilities in Indonesia. Even though there are 14.5% active users, SISRUTE's response time in 2020 is still often more than 6 hours (26%).(11) Health facilities in North Bengkulu are important places and services for public health care. According to BPS, there are 4 hospitals, 8 primary clinics and 22 health centers.(12)The implementation of SISRUTE in the North Bengkulu area has started on May 1 2019, involving around 22.7% of the total health facilities in the area. Among these facilities, community health centers have the largest role in using this platform.(13)However, even though they have adopted the SISRUTE application, health facilities in North Bengkulu Regency still face several obstacles in implementing it.

Based on the results of SISRUTE monitoring carried out by the North Bengkulu District Health Service, several obstacles were found, including: Hospital Information System (SISRUTE) staff working collaboratively (doctors and nurses work together), adequate Information Technology (IT) facilities and infrastructure , so the time required for IT facility budget allocation becomes significant. Hospital evaluations are still referred due to limited system data and required patient condition information along with requests that cannot be fulfilled due to unstable patient conditions, limited equipment, bed availability, or human resources.
(13)and slow response or response from the Referral Hospital.(14).

Research by Rahmadani et al. found a positive relationship between perceived ease and interest in using SISRUTE. However, there was no relationship between supportive circumstances or perceived benefits and SISRUTE use. Respondents who often use SISRUTE stated that this application is easy to use, but some rarely use it because the Puskesmas lacks serious patients or critical problems, delays in response from hospitals, invalid bed availability information, and internet connection problems.(15)Meanwhile, research by Susanto et al. assessing the usability of SISRUTE in the DIY Hospital ER, providing a score indicating marginal acceptability and recommendations for updating the application to make it easier and faster to use Top of Form.(4)

Based on the phenomena and gaps in the results of previous studies, this research will examine "Evaluation of the Use of the Integrated Referral System (SISRUTE) in Health Facilities in North Bengkulu Regency in 2023." So that the problem does not spread too far, this research limits the problem to evaluating the use of the Integrated Referral System (SISRUTE) in Health Facilities in North Bengkulu Regency in 2023. The research focuses on the influence of perceived benefits, perceived convenience, attitudes and intensity of user behavior on usage. SISRUTE, with the aim of understanding the factors influencing the acceptance and use of this system and evaluating its use in healthcare settings in the region.

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This research has significant benefits for society and patients, and provides valuable input for management, the Health Service, health centers and hospitals. With this research, it is hoped that SISRUTE can simplify and speed up the referral process, preventing patients from delays in getting the right health services. The benefit for community health centers and hospitals is that they can prepare themselves better before making referrals by using the information available through SISRUTE, so that communication between health facilities becomes more effective. This benefit is also useful for the Health Service, where the adoption of SISRUTE can help in handling emergency incidents by providing faster and more timely referrals. Therefore, it is hoped that this research can increase the efficiency and effectiveness of the health referral system as a whole, as well as improve the health services received by the community.

METHOD

This research is mixed methods research, which integrates two research approaches: qualitative and quantitative. Mixed methods is a research approach that produces a more comprehensive, in-depth and reliable understanding by combining the two approaches in one research framework. Thus, this research makes it possible to gain broader and deeper insight into the phenomenon under study. (17).

In a qualitative approach, participants are referred to as informants.Informants are identified as sources of information who have a deep understanding of ongoing research. The selected informants are those who are directly involved in the research topic or who are considered to have relevant expertise or experienceand understand the problems related to evaluating the use of an integrated referral system in management at Health Facilities in North Bengkulu Regency in 2023. Data collection from informants was obtained by conducting direct interviews with 5 predetermined informants, including namely 2 Heads of Community Health Centers, 2 Main Directors of Hospitals, 1 Head of Clinic.

In this study, the population consisted of all health workers registered with SISRUTE in health facilities in North Bengkulu, with a total of 78 employees(17). Because the population only consists of 78 employees, the sampling method used was the total sample. Total sampling is a sampling method where the entire population is sampled(17).

The samples in this research areoperating health personnelSISRUTE is a hospital and community health center health facility with inclusion criteria, namely all health workers who are related to the referral and have worked in hospital and community health center health facilities who have been involved in the referral process and have used the SISRUTE application for at least 1 (one) month and are willing to become research respondents . The exclusion criteria set arehealth workers who are on study permits, have further study assignments at college or are pregnant or notwilling to be a research respondent.

There are two data sources used in this research. First, primary data sources were obtained directly from research participants through questionnaires. This research uses a field research method (survey) where data collection is carried out by distributing questionnaires containing questions and statements to research subjectsoroperating health personnelSISRUTE health facilities in North Bengkulu Regencywith the aim of obtaining

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various kinds of valid and relevant information related to the research problem; Second, SourceSecondary data in this research is supporting data obtained from various sources such as reports, guidelines, research journals, regulations and other official sources.

This study adopted a closed questionnaire, where the available answers were determined by the researcher. This approach aims to ensure that the responses from respondents are in accordance with the needs and objectives of the research. The Likert scale was chosen as a measurement tool. This scale is used to evaluate the attitudes, opinions and perceptions of individuals or groups towards certain social problem phenomena. In the context of this research, the social problem phenomena determined by the researcher are referred to as research variables. The Likert scale allows measuring these variables by identifying variable indicators which are described in the form of questions or statements in the research instrument.

Research sitesis atin all health facilities in North Bengkulu Regency. Data collection for this research was carried out in January-March 2024. In this research, data was collected through two techniques. The first technique is to distribute questionnaires via electronic media using Google Forms to collect quantitative data. The second technique is to conduct interviews to collect qualitative data.

This research uses a questionnaire with answers determined by the researcher to ensure suitability for research needs. The Likert scale is used in this research to measure attitudes, opinions and perceptions of individuals or groups towards a social phenomenon. The social phenomena that are the focus of research are specifically referred to as research variables. On a Likert scale, responses to each item are rated based on the degree of agreement or disagreement. Questions prepared by researchers have positive or negative dimensions. Responses to each item were measured from strongly agree to strongly disagree using a Likert scale. At the same time, scores are given for quantitative analysis. Scores are given based on the respondent's level of agreement with the statement submitted. A score of 4 is given for a response of strongly agree, a score of 3 for agree, a score of 2 for disagree, and a score of 1 for strongly disagree.

Data processing is simply defined as the process of interpreting field data based on objectives, design, research characteristics and decision-making needs. According to the quantitative approach, the different processes in the data processing stage are: editing, coding, data entry, and tabulation. Univariate analysis is used to provide a description or interpretation of the characteristics of each research variable. The results of the analysis will be presented in the form of tables, diagrams, graphs and frequency distributions, which make it possible to observe the proportions of each variable studied. Variables analyzed in this stage include gender, age, highest education, income, and survey results.

Bivariate analysis was carried out to explore the relationship between the independent variables and the dependent variable. In this research, the bivariate test uses the Structural Equation Modeling (SEM) method using SmartPLS. The results of this test are included in the bivariate analysis and are an external model test.

Multivariate analysis is used to examine the relationship between various independent variables and dependent variables. In this research, multivariate analysis was carried out

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using path analysis with Structural Equation Modeling (SEM-PLS) using SmartPLS. the results included in the multivariate analysis are internal model tests. Testing of the structural model (internal model) is carried out by looking at the R-squared value (R^2), which is an indicator of the goodness of fit of the model. When testing a structural model, the significance of the predictive model can be assessed based on the t-statistic value between the independent variable and the dependent variable. A t-statistic value that is greater than the t-table and significant (t-table significance at 5% = 1.96) indicates that there is a significant influence. This research was carried out after obtaining permission and approval from the ethics commission of the North Bengkulu District Health Service and the respondents had obtained permission by signing the Informed Consent.

RESULTS

The results of this research are divided into two approaches, namely quantitative and qualitative approaches, becauseThis research is in the form of mixed methods. A quantitative approach to answer the analysis of the influence of perceived usefulness, perceived convenience, attitudes and intensity of user behavior on the use of SISRUTE. Meanwhile, the qualitative approach is to answer the factors that influence the acceptance and use of the SISRUTE system and evaluate its use in health facilities in North Bengkulu Regency.

Quantitative Research Results

The results of research using a quantitative approach present the results of univariate analysis, bivariate analysis and multivariate analysis of research. Univariate analysis in this study was carried out to describe the characteristics of respondents and research variables. So, based on the results of the analysis, it can be seen that the number of respondents sampled in this study was 78 employees/staff involved in SISRUTE in North Bengkulu health facilities.

Most of the respondents were 46 women (59.0%) and the remaining 32 were men (41.0%). Most of the employees aged 18 - 30 years amounted to 38 people (48.7%) and the remainder aged 31 - 40 years amounted to 31 people (39.7%) and > 41 years amounted to 9 people (11.5%). Most employees have a Bachelor's degree with 55 people (70.5%) and the remaining 8 people have a Diploma (10.3%) and 15 Masters/Doctoral degrees (19.2%). Employees have a maximum value of Rp. 2,500,000 – Rp. 3,500,000 totaling 40 people (51.3%) and the remaining Rp. 1,500,000 – Rp. 2,500,000 amounted to 7 people (9.0%) and > 3,500,000 amounted to 31 people (39.7%).

Whereasdescription of variables in the quantitative approach used in this research found that all variables showed the same min, max and median values with values 2, 4 and 3 respectively.There are mean values and standard deviations which indicate a lower standard deviation than the average value. This indicates that the respondents' answers to all research variables were evenly distributed.

The perceived usefulness variable (X1) has an average (mean) value for all items of 3.18, where this value indicates that the perceived usefulness variable (X1) is in the fairly good/medium criteria. The perceived ease of use variable (X2) has an average (mean) value for all items of 3.35, where this value indicates that the perceived ease of use variable (X2) is

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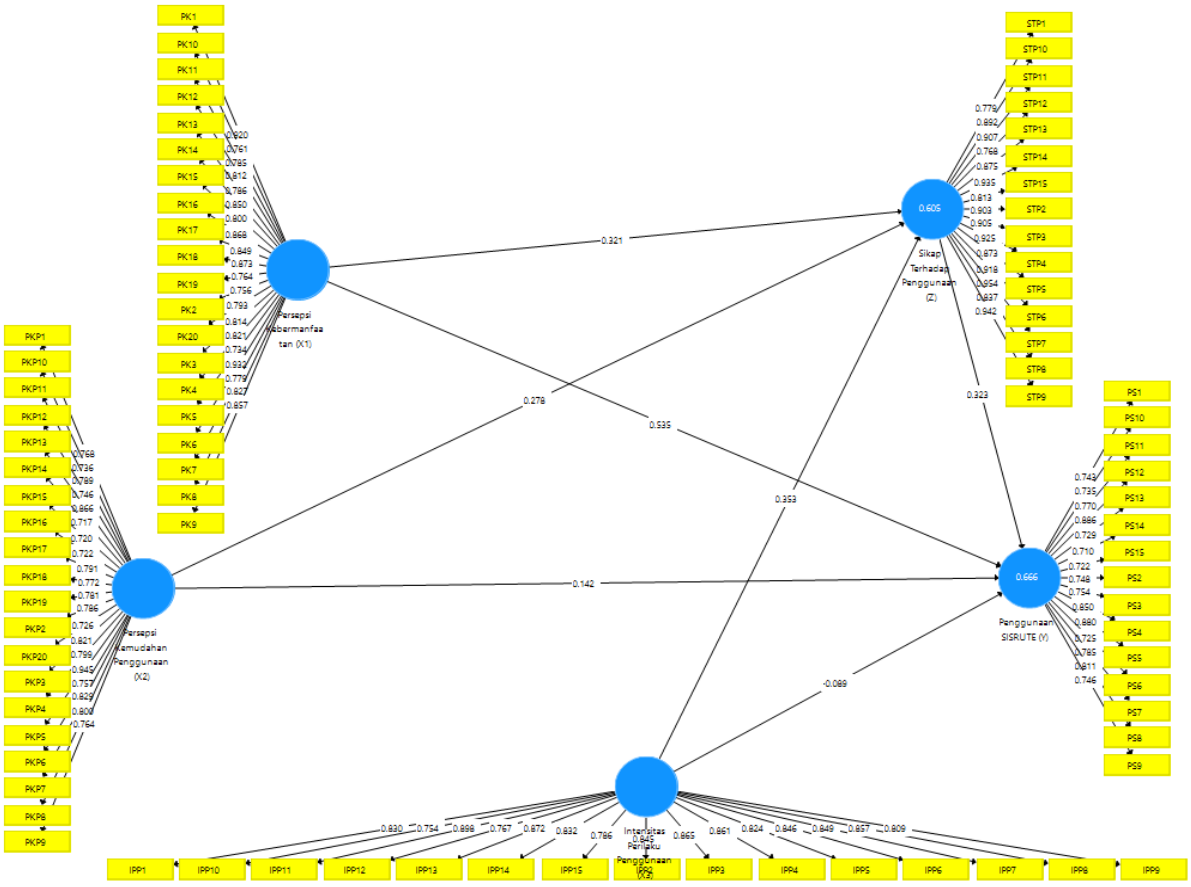
in the fairly good/medium criteria. The intensity of use behavior variable (X3) has an average (mean) value for all items of 3.31, where this value indicates that the use behavior intensity variable (X3) is in the fairly good/medium criteria. The attitude variable towards use (Z) has an average (mean) value for all items of 3.33, where this value indicates that the attitude variable towards use (Z) is in the fairly good/medium criteria. The SISRUTE (Y) usage variable has an average (mean) value for all items of 3.22, where this value indicates that the SISRUTE (Y) usage variable is in the fairly good/medium criteria.

After carrying out the univariate analysis, bivariate analysis and multivariate analysis were then used to see the relationship between the independent variable and the dependent variable in this research through Structural Equation Modeling (SEM) analysis with the SmartPLS software program which includes outer model and inner model testing, with results research as follows:



Picture1. Outer Model

Based on the results of measuring convergent validity with external loading values and discriminant validity with cross-validation values of reflective indicators, most of the research indicators meet the criteria for use as variable measurement indicators. The external loading values of all indicators show that they are valid for subsequent research analysis, because the values exceed 0.7 and the cross-loading values for the variables are the largest relative to other variables.

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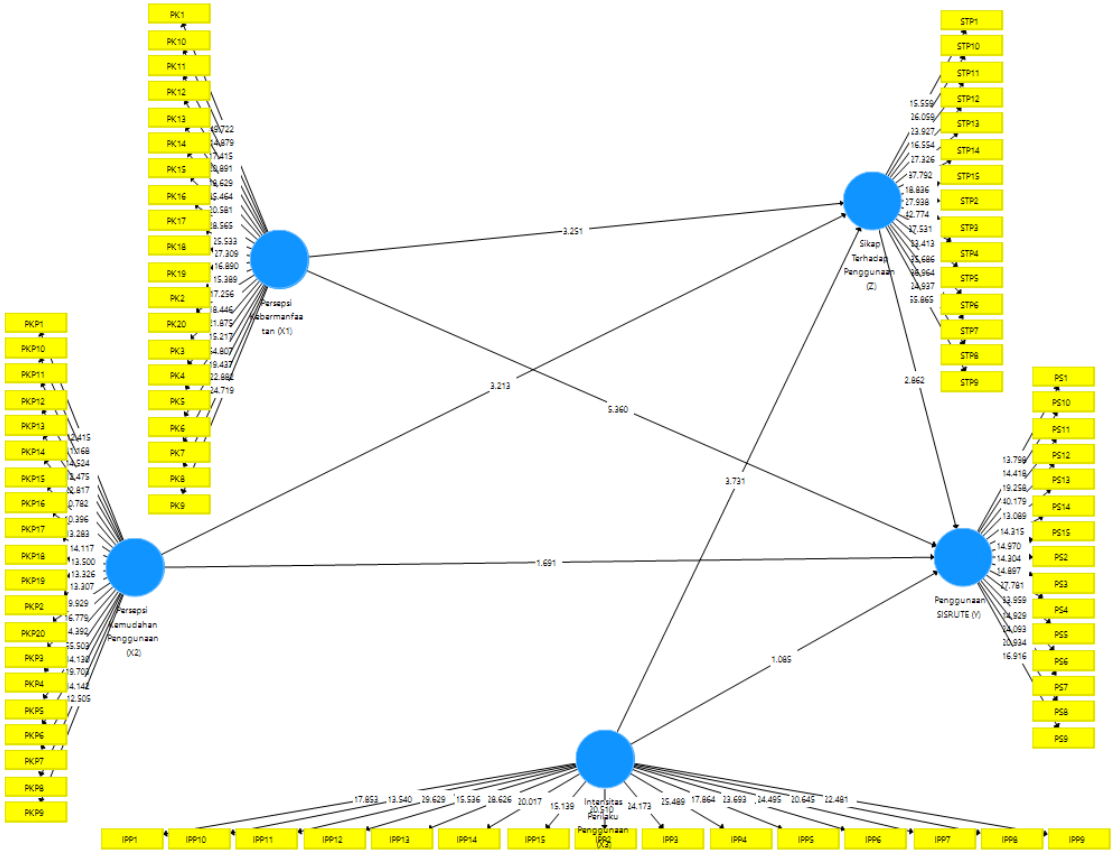
Judging from the Average Variance Extracted (AVE) value, all research variables meet the standard with a value above 0.5 (AVE > 0.5). The usability variable (X1) has an AVE value of 0.674, then the ease of use variable (X2) has an AVE value of 0.614, the intensity of use variable (X3) has an AVE value of 0.695, attitude towards use (Z variable) has an AVE value of 0.781, and variable SISRUTE Use (Y) with an AVE value of 0.601. With AVE values that meet the standards, each variable can be concluded to have good discriminant validity. The results of composite reliability and Cronbach's alpha calculations show that each research variable meets the Cronbach's alpha value requirements, indicating that all variables have a high level of reliability. Thus, the entire research instrument can be considered reliable for use in further analysis.



Picture2. Inner Model

Based on the internal model diagram in the figure, it can be seen that the largest path coefficient value is 0.535, which indicates a strong relationship between SISRUTE use (Y) and perception of use (X1) for intensity of use. All variables in this model have positive path coefficients, which shows that the greater the path coefficient value of the independent variable on the dependent variable, the stronger the influence of the independent variable on the dependent variable. However, it should be noted that the influence of usage intensity (X3) on SISRUTE usage (Y) has a negative path coefficient, which indicates the existence of the opposite influence. This indicates that the usage intensity variable can have a negative impact on SISRUTE usage.

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The R Square value for the Attitude towards Use (Z) variable is 0.605. Obtaining this value explains that the amount of Perceived Usefulness (X1), Perceived Ease of Use (X2) and Intensity of Use Behavior (X3) in influencing or explaining Attitudes towards Use is 60.5%. Then for the R Square value obtained by the SISRUTE Usage (Y) variable of 0.666, this value explains that SISRUTE Usage (Y) can be influenced and explained by Perceived Usefulness (X1), Perceived Ease of Use (X2), Intensity of Usage Behavior (X3) and Attitude Towards Use (Z) was 66.6%.

After meeting the R Square value, Q Square Predictive Relevance calculations can be carried out to determine the prediction accuracy of how good the observation values produced by the model and research parameters are, as follows:

$$
\begin{aligned}
Q2 &= 1 - (1 - R_{12})\,(1 - R22) \\
&= 1 - (1 - 0.6052)\,(1 - 0.6662) \\
&= 1 - (1 - 0.336)\,(1 - 0.444) \\
&= 1 - (0.664)(0.556) \\
&= 1 - 0.369 \\
&= 0.631\ (63.1\%)
\end{aligned}
$$

From the results of the Q Square Predictive Relevance calculation, it can be seen that the predicted value of the model observations and research parameters is 0.631 or 63.1%.

Based on the results of the significance of the research model, it can be concluded that:

1. The attitude of perceived benefits has a significant positive effect on consumption attitudes, with the t-statistic value (3.251) being greater than the t-table (1.96) and p < 0.05 (0.001).
2. The concept of ease of use has a significant positive effect on attitudes towards use, with a t-statistic value (3.213) greater than the t-table (1.96) and a p-value <0.05 (0.001).
3. Usage intensity behavior has a significant positive effect on usage attitudes, with a t-statistic value (3.731) greater than the t-table (1.96) and a p-value <0.05 (0.000).
4. The use of SISRUTE has a significant positive effect on attitudes towards use, with a t-statistic value (5.360) greater than the t-table (1.96) and a p-value <0.05 (0.000).
5. Perceived ease of use does not influence the use of SISRUTE, because the t-statistic value (1.691) is less than the t-table (1.96) and the p-value is > 0.05 (0.092).
6. The intensity of usage behavior has no effect on SISRUTE usage, because the t-statistic value (1.085) is less than the t-table (1.96) and the p-value is > 0.05 (0.278).

In addition, the semantic results show the mediation results of usage attitudes, including:

1. Attitude towards use positively mediates the perceived usefulness of using SISRUTE, with the t-statistic value (2.420) greater than the t-table (1.96) and p-value <0.05 (0.016).
2. Attitude towards use positively mediates the perception of ease of use of SISRUTE, with the t-statistic value (1.979) greater than the t-table (1.96) and p-value <0.05 (0.048).
3. Attitudes to use positively mediate the intensity of SISRUTE use behavior, with the t-statistic value (2.001) being greater than the t-table (1.96) and p-value <0.05 (0.046).

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Based on the results of calculating the magnitude of the influence on the research variables, it can be seen that the magnitude of the influence of Perceived Usefulness on Attitudes towards Use directly is 0.310 with a percentage of 21.30%, the magnitude of the influence of Perceived Ease of Use on Attitudes towards Use directly is 0.278 with a percentage of 16, 24%, the magnitude of the influence of Intensity of Usage Behavior on Attitudes towards Use is directly 0.353 with a percentage of 23.30%, the magnitude of the influence of Perceived Usefulness on Use of SISRUTE directly and indirectly is 0.639 with a percentage of 45.50%, the magnitude of the influence of Perception Ease of Use on SISRUTE Use directly and indirectly is 0.232 with a percentage of 11.37%, the large influence of Intensity of Use Behavior on SISRUTE Use directly and indirectly is 0.055 with a percentage of 0.85%, and the large influence of Attitudes towards Use on Direct use of SISRUTE was 0.323 with a percentage of 22.51%.

Qualitative Research Results

Based on the results of interviews, it was found that the SISRUTE system has become an integral part of several health facilities in the North Bengkulu Regency area. Starting from the Arga Makmur Community Health Center which accepted and implemented this system when it was first introduced, to the Air Lais Community Health Center which adopted SISRUTE about two years ago after receiving intensive training from the local Health Service team. Lagita Regional Hospital, as part of the modernization initiative, has also made SISRUTE an integral part since 2018, with initial training from the system development team followed by periodic internal training. Even the Main Director of the hospital has been using SISRUTE since 2020 after training from the local Health Service. Not only that, Clinical Leaders in the region have also adopted this system two years ago after receiving direct training from the SISRUTE implementation team.

Factors influencing the acceptance and use of SISRUTE in health facilities in the region vary but have several similarities. At the Arga Makmur Community Health Center, government support in the form of regulations, funding and training is key to encouraging adoption of this system, although there are still obstacles such as limited funds and technical problems that need to be overcome. At the Air Lais Health Center, the availability of adequate health infrastructure also supports the use of SISRUTE, although there are still challenges such as unstable internet connections. Lagita Regional Hospital found awareness of the benefits of the system, adequate training, and strong technical and management support as important factors in the acceptance and use of SISRUTE, although it still faced resistance to change from some staff and technical obstacles. In other settings, including facilities led by Chief Directors and Clinical Leadership, factors such as management support, staff training, and understanding the benefits of the technology have been key in facilitating the use of SISRUTE, while resistance to change and technical barriers remain challenges that need to be overcome. Suggestions for increasing acceptance and use of SISRUTE include increased training, improvements to the technology infrastructure, a more targeted approach to overcoming change resistance, and ongoing updates to the system's features and functionality.

Evaluation of the use of SISRUTE shows that this system has brought significant benefits in increasing the efficiency of the patient referral process in various health facilities.

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At the Arga Makmur Community Health Center, SISRUTE allows users to make more precise and informed referral decisions with fast and comprehensive access to patient data. However, there are still several aspects that need to be improved, such as internet connection stability and sometimes slow response times, as well as the need for more sophisticated data analysis features and better integration with other systems. At the Air Lais Health Center, SISRUTE also helps improve the efficiency of the referral process by providing fast and detailed access to information on health facilities around them. While generally satisfied with the system's performance, there are several areas that need improvement, such as increasing access speed and creating a more intuitive user interface. At Lagita Regional Hospital, SISRUTE succeeded in reducing waiting times, improving coordination between primary and specialist health services, and improving the patient experience. However, there is still a need to improve system access and response speed, integration with other systems, and refinement of the user interface. The President Director and Clinical Leaders also acknowledged the great benefits of adopting SISRUTE in increasing the efficiency of the patient referral process at their health facilities. While they are satisfied with the overall performance, they remain open to future improvements and enhancements, including system stability and better integration with other systems. This shows awareness of the importance of continuously improving and enhancing systems to ensure maximum contribution to healthcare operations.

So, it can be concluded thatfactors influencing the acceptance and use of the SISRUTE system inmedical facility in North Bengkulu Regency include:

1. Management Support: Monitoring and evaluation of use, regular training, and an active communication approach about the benefits of the system help the effective use of SISRUTE.
2. Training and Infrastructure Improvements: Increasing staff training, improving information technology infrastructure, and conducting ongoing outreach can increase acceptance and use of SISRUTE.
3. Availability of Health Infrastructure: Adequate infrastructure, including a stable internet network and quality hardware, facilitates the use of SISRUTE.
4. Government Support: Government regulations, funding, and training help drive adoption of these systems.
5. Limited Funds and Technical Disturbances: Barriers such as limited funds, lack of motivation, technical glitches, and resistance to change need to be overcome.

Discussion

Based on research analysis, it shows that the direct influence in this study shows overall significant results on each of the variables of perceived usefulness, perceived ease of use and intensity of usage behavior on attitudes towards usage, perceived usefulness and attitudes towards usage on SISRUTE usage. However, the perceived ease of use and intensity of usage behavior showed no influence on the use of SISRUTE. Then on the mediating role of attitude towards use, it shows that attitude towards use significantly mediates the influence of perceived usefulness, perceived ease of use and intensity of usage behavior on SISRUTE use.

The results of this research are supported by previous research, namely Fazriansyah et al., Sulfina et al., Setiyani et al. and Irawan & Hadi who showed that perceived ease and

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usefulness had a positive influence on attitudes toward using digital applications, and that perceived ease also influenced perceptions of usefulness and intensity of application use.(19)(20)(21)(22)

This research reveals significant findings in the context of technology acceptance, especially related to the SISRUTE application. It was found that perceived usefulness, perceived ease of use, intensity of usage behavior, and attitudes towards usage directly and indirectly influenced SISRUTE usage. However, comparison with previous research highlights differences in the influence of perceived ease of use on actual use, indicating the importance of considering these factors holistically in designing effective technology acceptance strategies.

From the results of calculating the magnitude of the influence on the research variables, it can be seen that the magnitude of the influence of Perceived Usefulness on Attitudes towards Use directly is 0.310 with a percentage of 21.30%, the magnitude of the influence of Perceived Ease of Use on Attitudes towards Use directly is 0.278 with a percentage of 16.24 %, the magnitude of the influence of Intensity of Usage Behavior on Attitudes towards Usage directly is 0.353 with a percentage of 23.30%, the magnitude of the influence of Perceived Usefulness on Use of SISRUTE directly and indirectly is 0.639 with a percentage of 45.50%, the magnitude of the influence of Perceived Ease of Use Usage on the use of SISRUTE directly and indirectly is 0.232 with a percentage of 11.37%, the big influence of the Intensity of Usage Behavior on the Usage of SISRUTE directly and indirectly is 0.055 with a percentage of 0.85%, and the big influence of Attitudes towards Usage on Usage SISRUTE directly is 0.323 with a percentage of 22.51%, so it can be concluded that the highest influence from this research is the Perceived Usefulness of Using SISRUTE directly and indirectly at 0.639 with a percentage of 45.50%.

The reason for the similarities in findings between this study and previous research can be caused by several factors. First, similar research methodologies may be used in measuring the same variables, so the results are likely to be similar. Additionally, consistency in the theories used can also be a cause, as different studies can be based on the same theories, leading to similarities in findings. Another factor that may play a role is similar sample characteristics; if studies use similar samples or have similar characteristics, the results may tend to be similar due to uniform responses from respondents. Finally, the influence of similar contexts may also be a factor, where research conducted in similar contexts, such as within the same organization or in a similar industry, may result in similar findings due to similar environmental factors. Meanwhile, the largest percentage was obtained by research by Sulfina et al. namely 86.9%.(20).

The results of this research provide a deeper understanding of the dynamics of the factors that influence SISRUTE application usage behavior. While the findings are in line with some previous research, there are important differences that highlight the complexity of technology acceptance in specific contexts. The implications emphasize the need for a more holistic and contextual approach in designing technology acceptance strategies to ensure successful use of applications in diverse environments.

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Perceived usefulness and perceived ease of use have a significant role in the use of information technology systems. Based on the Technology Acceptance Model (TAM), perceived usefulness and perceived ease of use influence usage intentions, which in turn influence actual usage behavior.(24)(25)In the context of using SISRUTE in hospitals, perceived usefulness and ease of use will influence user attitudes towards the system and intensity of use.(25)(26)(27)(28)Therefore, it is important to pay attention to how perceived usefulness and ease of use may influence the acceptance and use of integrated referral systems in the hospital environment. In the context of information system use, TAM also emphasizes that perceptions of usefulness and ease of use can influence actual usage behavior.(25)(29)Thus, a good understanding of how perceived usefulness and ease of use influences SISRUTE usage behavior in hospitals can help in designing effective strategies to increase adoption and use of this system.

The acceptance and use of SISRUTE in health facilities in North Bengkulu Regency is influenced by several interrelated factors. First, government support in the form of regulations, funding and training is the main driver for the adoption of this system. Second, the availability of adequate health infrastructure, including a stable internet network and quality hardware, is essential to facilitate smooth use of SISRUTE. However, challenges such as limited funding, lack of motivation, technical glitches, and resistance to change also need to be overcome. Intensive training of staff and improvements to information technology infrastructure can overcome these barriers, while maintaining ongoing outreach about the benefits of the system. Finally, strong management support, regular training, and an active communication approach about the benefits of SISRUTE are also needed to increase the effectiveness of its use. By considering all these factors holistically, acceptance and use of SISRUTE can be significantly increased in North Bengkulu Regency.

The research results above are in accordance with previous research findings that government support in the form of regulations, funding and training is very important to encourage the implementation of SISRUTE.(30)In addition, the availability of adequate healthcare infrastructure, including a stable internet network and quality hardware, is very important to facilitate the smooth use of SISRUTE.(31)However, challenges such as limited funding, lack of motivation, technical glitches, and resistance to change need to be overcome. Intensive training for staff and improvements to information technology infrastructure can help overcome these barriers, while maintaining ongoing outreach about the benefits of the system.(32)In addition, strong management support, regular training, and active communication about the benefits of SISRUTE are also needed to increase its effectiveness.(33)Technology adoption in developing countries, as seen in the case of Industry 4.0 technologies, is strongly influenced by competitive pressures and government support, which in turn drives top management support and contributes to technology adoption.(34)

Evaluation of the use of SISRUTE in health facilities in North Bengkulu Regency shows a significant increase in the efficiency of the patient referral process. Key findings include increased efficiency in referring patients quickly and accurately through comprehensive access to patient data and health facility information. Users also expressed their satisfaction

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with SISRUTE's performance, recognizing its benefits in making more precise and informed referral decisions. However, the evaluation also identified several areas of improvement, such as monitoring and evaluating the use of SISTUTE, system stability regarding internet connections, access speed, system response, integration with other systems to increase ease of use. Awareness of the need for continuous improvement became clear to all parties involved to ensure maximum contribution of SISRUTE in their healthcare operations.

An assessment of SISRUTE utilization in health facilities in North Bengkulu Regency shows a significant increase in patient referral efficiency.(35)This increase is due to comprehensive access to patient data and health facility information, so that patient referrals become faster and more accurate. Users have expressed satisfaction with SISRUTE's performance, and recognized its benefits in making more informed and informed referral decisions.(35)Additionally, analysis of SISRUTE usage in primary health centers revealed the influence of perceived ease of use and user interest on utilization of the integrated referral system, emphasizing the importance of user experience and interest in driving system adoption.(15)Additionally, an evaluation of the usability of an integrated referral system in a regional hospital highlights the importance of system usability in ensuring its effective implementation and use.(4)

These findings indicate that although SISRUTE has the potential to improve efficiency in referral systems, there are still several challenges that need to be overcome to maximize its benefits and increase user acceptance and satisfaction.(36)In research in Makassar Province conducted by Rahmadani and colleagues, respondents who frequently used SISRUTE reported that the system was easy to use and could be accessed easily anytime and anywhere. However, several reasons why respondents rarely use SISRUTE were also revealed. First, Community Health Centers rarely transport critical and urgent patients to hospital. Second, the slow response from hospitals is one of the inhibiting factors. Third, sometimes data regarding the availability of treatment rooms is invalid, affecting system use. Lastly, an unstable internet connection is also a problem when using SISRUTE. These findings indicate that although SISRUTE has ease of use and accessibility, these challenges need to be overcome so that the system can make a more effective and efficient contribution in supporting the referral system and health facility management.(15)The advantage of this research is that it uses a mix method research method which combines two approaches at once, quantitative and qualitative approaches. In addition, the findings of this study have significant practical implications, especially in the context of developing technology acceptance strategies in the hospital environment. This allows policy makers to take concrete steps to increase adoption and use of the SISRUTE application. This research also presents a holistic analysis of the factors that influence the acceptance and use of the SISRUTE application, including aspects such as perceived usefulness, perceived ease of use, intensity of use behavior, and attitudes towards use. This provides a comprehensive understanding of the dynamics of technology acceptance in the healthcare environment.

Meanwhile, the limitations of this research include limited generalization aspects because it focuses only on evaluating the acceptance and use of SISRUTE in North Bengkulu Regency health facilities. In addition, qualitative data collection is limited to interview methods,

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ignoring the possibility of more in-depth research through other techniques such as observation. Researchers experienced obstacles that required creative solutions, such as requiring a long time because it was mixed method research and also due to the large area of the research. Meeting with respondents was difficult due to access or the long distance between health centers, which took 2 to 3 hours to travel. The researcher chose to visit the community health center which was the object of the research directly to minimize the risk of respondents not understanding the contents of the questionnaire, even though it had used a digital format via Google Forms. In addition, some community health centers do not even use SISRUTE at all, so researchers have to adjust the sample to make it representative.

CONCLUSION

This research shows that perceptions of usefulness, ease and intensity of use have a significant effect on attitudes and use of SISRUTE. Attitude towards use is able to mediate the influence of perceived usefulness, ease and intensity of use with the use of SISRUTE. Perception of usefulness has the greatest influence on the use of SISRUTE. Factors such as management support in the form of monitoring and evaluation of use, staff training, health infrastructure, government support, and financial issues influence the acceptance and use of SISRUTE. Evaluation of the use of SISRUTE that needs to be carried out is increasing the efficiency of patient referrals, user satisfaction, and identifying areas of improvement such as monitoring and evaluating use. So it can be concluded that the acceptance and use of SISRUTE is as expected but still requires retraining and monitoring and evaluation. The research implications show the importance of increasing the perception of usefulness, ease and intensity of using SISRUTE in hospitals. Government support, health infrastructure, staff training, and effective management are also needed to increase SISRUTE adoption. Evaluations show improvements in patient referral efficiency, but system stability and integration need to be continuously improved. Based on research findings regarding the acceptance and use of SISRUTE in North Bengkulu Regency, several suggestions can be considered to increase the adoption and effectiveness of using this system. The Health Service and all health facilities in North Bengkulu Regency can carry out training and monitoring again regarding the use of SISRUTE. For the puskesmas, cadres can be carried out for each officer to anticipate changes in officers in other areas, so that employees who are still resident are ready to change their duties in operating SISRUTE. Collaboration with the health service sector to overcome network disruptions that often hamper SISRUTE's effectiveness. One of the steps proposed based on the results of the biggest impact test is to organize intensive training for operators using SISRUTE in health facilities, so that there are no more operators who do not understand the SISRUTE work process which can cause patients to be neglected. It is hoped that this training can improve operators' understanding and skills in using the system quickly and effectively, so that the referral process can run smoothly and patients immediately receive the treatment they need. In addition, evaluation is needed to improve communication problems by providing clear contact numbers to each operator at hospitals and health centers, so that they can communicate directly by telephone to facilitate the referral process and use of SISRUTE.

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