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ANALYSIS OF PATIENT REGISTRATION SATISFACTION USING SELF-REGISTRATION MACHINE WITH END USER COMPUTING SATISFACTION (EUCS) METHOD

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ABSTRACT

Health Service Facilities are places to organize health service efforts, both promotive, preventive, curative and rehabilitative. Health services that are the first service in the health level of a region are Hospitals. One of the technologies that is currently developing is the Self-Registration Queue Machine (APM). This innovation project report aims to identify the level of satisfaction with the use of the Self-Registration Queue Machine for patients or the Community at Anna Medika Hospital Madura. This innovation project report was conducted on patients/families who use APM machines at Anna Medika Hospital, Madura. The sampling technique in this study used the Incidental Sampling Technique so that the respondents in this study were 18 respondents. The type of research used in this study is descriptive quantitative with a cross-sectional approach. The questionnaire research instrument was declared valid and reliable. The data analysis used was descriptive and univariate analysis. The results of the study showed the percentage of group calculations from the Format dimension 0.566 (56.6%) and Ease of Use 0.544 (59.5%) included in the moderate category, the Content dimension 0.722 (72.2%), Accurancy 0.811 (81.1%) and Timelines 0.656 (65.6%) were in the good category. This indicates that the satisfaction of APM machine users is running well and needs to be maintained, so there needs to be socialization for officers who are less supportive. The purpose of using APM machines is to reduce registration time at the counter for health services provided to improve services for outpatient needs.

Keywords: EUCS; satisfaction; self registration platform machine

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INTRODUCTION

Health service facilities are tools and/or places used to organize health service efforts, both promotive, preventive, curative and rehabilitative carried out by the government, local government, and/or community (P. R. Indonesia, 2016). One type of health service facility is a hospital. A hospital is a health service institution that organizes comprehensive individual health services that provide inpatient, outpatient and emergency services (R. Indonesia, 2009). Hospitals involve various service functions, education and training as well as research and development of health science and technology that cover various levels and types of disciplines, so that hospitals are able to carry out professional functions both in the fields of medical technology and health administration.

The very rapid development of technology today can be utilized and applied in all fields, including being applied in the health sector, one of which is in hospitals. The development of technology accompanied by the increasing need of the community for rapid health services requires hospitals to continue to improve the quality of their services in meeting these demands. Hospitals can utilize advances in IT to help carry out all tasks related to information

processing and management (Kristanto, 2020); (Haryanto, 2015). The use of technology in information systems can improve the quality and quantity of information produced so that information systems cannot be separated from the use of information technology, especially computers. Information is a resource that plays a very important role in human life and livelihood. This rapid increase in technology means that data management activities that were previously carried out manually are gradually being abandoned. Data management activities currently used are related to the development of modern information technology using electronic media in the form of computers, machines, and so on (Inayatullah, 2021); (Ikawati et al., 2024).

The Health Information System (HIS) is a subsystem of the National Health System (SKN) that is able to provide information support for the decision-making process at every level of health administration, both at the health effort implementation unit level, at the district/city level, at the provincial level, and at the central level (Putri & Akbar, 2019). HIS not only plays a role in ensuring data on health cases that will be reported, but also has the potential to help the efficiency and transparency of the work process. The general purpose of developing a health information system is to reduce data redundancy or duplication, maintain data integrity, protect data security, provide quality data and facilitate data access (Windarti & Nadya, 2023); (Azizah & Susanti, 2024). Hospitals as health service providers also utilize the development of technology and information systems as a tool to help the managerial process accurately and quickly which can be used as a decision-making tool. Anna Medika Madura General Hospital is a hospital that is often visited by the local Bangkalan community, especially the southern part of Bangkalan Regency (Bangkalan District, Socah District, Kamal District) because access to the place is easy to find and reach, so it is not surprising that the hospital is always busy with visits from patients, both old and new patients. Thus, the patient registration process becomes very full and crowded, making the patient registration officers on duty have a very large workload. On the other hand, patients also experience a fairly long queuing process due to the large number of outpatients who come and the lack of registration officers on duty. This incident continues every day until 2023 with data on Outpatient Visits in 2023 in January as many as 3728, February as many as 3416, March as many as 3174, April as many as 2223, May as many as 3633, June as many as 2983, July as many as 3411, August as many as 3361, September as many as 3130, October as many as 3532, November as many as 3658 and December as many as 3319.

Based on the table, it can be concluded that the number of patients per month always reaches more than 2000 visits with a total of 39,568 outpatient visits per year. The large number of visits makes the registration officer's job very busy, and is made worse by inadequate waiting room facilities. Therefore, Anna Medika Madura Hospital is one of the health service facilities that utilizes the use of technology and information systems in its daily work by using the APM (Independent Registration Machine) machine starting in June 2023. The APM machine is a tool for carrying out the outpatient registration process independently without having to queue at the registration counter. Indirectly, the APM machine can cut the long queue process at the registration counter. With this machine, patients can carry out the registration process in a short time and patients are also given facilities to be able to determine or choose a doctor according to their wishes. Not only that, the APM machine can also be used as a booking process for examinations for the next few days. If the patient has filled in their personal data and the intended examination polyclinic, the machine will provide output in the form of a queue number. The APM machine can only be used by outpatients with long visits (Ila Nur Afifah, 2023).

An easy-to-use system will affect the increase in user intention to use the system as a benefit of an easy-to-use system (Supriyanti & Cholil, 2017). In using an information system, most users will see its ease and usefulness. If the user feels that the system is easy to use and brings many benefits, then a person's intention to use the system will also be higher (Bimaniar et al., 2018). The use of APM machines provides many benefits for patients or users of the machine itself. In addition to the fast queue number processing time, patients also do not need to wait and queue for a long time. It is not surprising that patients feel satisfied and the queue at the registration counter gradually begins to decrease after the procurement of the APM machine (Inayatullah, 2021).

However, behind the many benefits provided by the APM machine, there is also a problem, namely the machine error due to running out of ink and print paper when used by the patient so that the machine cannot be used temporarily which makes patients have to wait for an indefinite time. The limited number of APM machines also triggers queues in the use of APM machines and the absence of features or notes on the doctor's holiday schedule. The APM machine that has been running for approximately 6 months has also never been evaluated based on user satisfaction. In this study, the researcher chose to use the EUCS (End User Computing Satisfaction) method as the evaluation process for the use of the APM machine. EUCS is a method for measuring the level of satisfaction of users of an application system by comparing the expectations and reality of an information system or the overall evaluation process of users of the information system based on user experience in using the system. This EUCS evaluation model was developed by Doll & Torkzadeh. Evaluation using this model emphasizes end-user satisfaction with the technological aspect, by assessing the content, accuracy, format, ease of use and time of the system (El Kariema et al., 2021) (Siregar, 2021). Thus, the researcher wants to know the effectiveness of the implementation of patient registration on the success rate of using the APM machine at RSU Anna Medika Madura using the EUCS method. The purpose of this study is to identify the level of user satisfaction in using APM machines based on aspects of content, accuracy, form, ease of use and time.

METHOD

The type of quantitative descriptive research with a cross-sectional approach. This research was conducted at Anna Medika General Hospital, Madura, located at Jl. RE Martadinata number 10 Mlajah, Bangkalan Regency. The independent variables studied were End User Computing Satisfaction (EUCS) and Content consisting of Content, Accuracy, Format, Ease of Use, Timeliness. The dependent variable in this study was Patient Satisfaction in using the APM machine. The population in this study was based on the number of patient visits since the APM machine was first used. Based on interview data with admissions officers, the APM machine has been running since June 2023. Researchers conducted observations for approximately 1 month in the APM machine section, patient data using the APM machine were 30 patients. The sampling technique used in this study was the Incidental Sampling Technique by distributing questionnaires to APM machine users at Anna Medika Hospital, Madura. The research instrument used the EUCS Doll and Torkzadeh questionnaire. Questionnaire Sheet Effectiveness of Implementation of Patient Registration Using Self-Registration Machine (APM) With End User Computing Satisfaction (Eucs) Method at Anna Medika Madura Hospital with 5-point Likert scale method. The five points of Likert scale used with the description of the first point means strongly disagree and the fifth point strongly agree. The results of the validity test of the content variable that each item 1 to item 5 is valid, the accuracy variable that each item 1 to item 2 is valid, the format variable that each item 1 to item 2 is valid, the ease of use variable each item 1 to item 2 is valid and the timeliness variable that each item 1 to 2 is valid. The results of the reliability test of the content variable with a value of 0.801 so it is reliable, the accuracy

variable with a value of 0.784 so it is reliable, the format variable with a value of 0.743 so it is reliable, the ease of use variable with a value of 0.797 so it is reliable and the timeliness variable with a value of 0.794 so it is reliable. Data were analyzed using descriptive statistics and inferential statistics. In the analysis of frequency distribution data with the frequency distribution of general data based on gender, age, last education and specific data based on APM information. After the frequency distribution is complete, it is then recapitulated. Calculating the score by converting the total score of the statement with the statement value that has been determined based on a Likert scale with the description of the numbers 0% - 20% = very bad; numbers 21% - 40% = bad; numbers 41% - 60% = moderate; numbers 61% - 80% = good and numbers 81% - 100% = very good. Univariate analysis in this study uses the EUCS (End User Computing Satisfaction) method, as well as the characteristics of the respondents.

RESULTS

Table 1.
Frequency distribution based on gender of respondents

	f	%
Male	7	38,9
Female	11	61,1
Total	18	100

Based on the table above, it shows that the majority of respondents were female, amounting to 11 patients with a percentage of 61.1%.

Table 2.
Frequency distribution based on respondent age

	f	%
<30 th	6	33,3
30-39 th	8	44,4
>40 th	4	22,2
Total	18	100

Based on the table above, it shows that the majority of respondents were aged 30-39 years, amounting to 8 patients with a percentage of 44.4%.

Table 3.
Frequency distribution based on respondents' last education

	f	%
No School	1	5,5
Primary School	3	16,7
Junior Hight School	2	11,1
High School	8	44,4
DIPLOMA/S1/S2	4	22,2
Total	18	100

Based on the table above, it shows that the majority of respondents based on their last education were high school graduates, namely 8 patients with a percentage of 44.4%.

Table 4.
Frequency distribution based on APM information of respondents

Ever	18	100
Never	0	0
Total	18	100

Based on the table above, it shows that all types of patients have used the APM machine (old patients), namely 18 patients with a percentage of 100%.

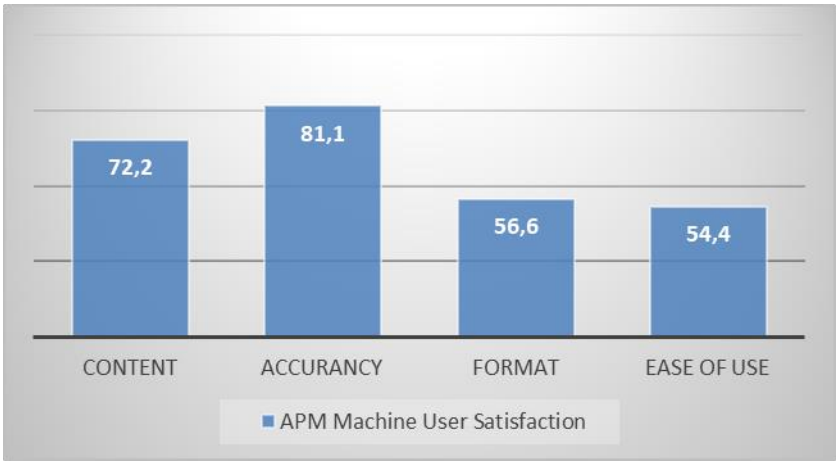

Figure 1. APM Machine User Satisfaction

Based on the calculation results, the content dimension assessment states that 72.2% have good value criteria, the accuracy dimension states that 81.1% have very good value criteria, the format dimension states that 56.6% have moderate value criteria, the ease of use dimension states that 54.4% have moderate value criteria, the timelines dimension states that 65.6% have good value criteria.

DISCUSSION

Based on the results of the study, it can be concluded that the implementation of the APM (Self-Registration Kiosk) machine at RSU Anna Medika Madura in terms of Content, Accuracy, Format (Appearance/Form), Ease of Use, Timelines provides good satisfaction with the use of the technology system. In terms of Content, the APM machine has provided satisfaction with the information produced by the complete system according to user needs without any problems that interfere with work. The content that can be accessed by the APM machine by the patient is that the patient only enters the NIK number/BPJS number/RM number, the patient's data will automatically appear. In terms of Accurancy, the APM machine is very accurate. The APM machine has bridged with the BPJS system (vclaim and Fingerprint detector) so that the data is integrated and there will be no errors in input or output data. In addition, Timelines are classified as good criteria where the satisfaction of APM machine users assesses the timeliness of providing data and information. This is because the APM machine has directly presented data accurately. However, there are still dimensions that are still considered moderate, namely in terms of Format and Ease of use, where these two dimensions have not provided satisfaction with the appearance and convenience of the APM machine. From the results of interviews and observations, APM machine users feel that the display is still confusing when it appears in the fingerprint section, on the display the user must re-enter the identity number (NIK/BPJS Card Number) where the patient must type the identity number on the APM machine keyboard (Lestari & Setyadi, 2024); (Fitriani et al., 2020). With the difficulties in this section, the user's perception of ease feels sufficient when operating the APM machine so that users prefer to re-queue at the registration counter when they have experienced the above difficulties (Solihah & Budi, 2018); (Nurkhalisa & Andi Rosdianti Razak, 2021); (Winda S, 2021).

Because measuring the satisfaction of using APM machines from accuracy, the accuracy aspect is very important. APM systems and machines that provide accurate information, have an impact on the level of efficiency of users of the APM system or machine (Hertiwi, 2020); (Sevtiyani & Fatikasari, 2020). The more accurate the system, the higher the satisfaction of the written system. APM machines and the timeliness aspect present or provide data on time

because the timeliness element evaluates customer satisfaction by looking at the timeliness of the data system when distributing and displaying data on the needs of system users (P.A. Agustin & I.K.D Nuryana, 2022). The speed of the system in supplying the expansion of user needs is a factor that has an impact on customer satisfaction because the speed of the system provides user needs, then user productivity will be more productive (Danis Elsandra, 2020); (Shiila Nika Adiffa & Masturoh, 2022); (Sabrina et al., 2021).

From the results of the description above, it is very unfortunate because the existence of this APM machine is to reduce registration time at the counter. The purpose of using this super practical APM machine is to provide health services to improve services for outpatient needs. Its use is still uneven. However, if you look at the purpose, it should have been used by all. 1) Cutting queues at the registration counter. Useful for yourself, also useful for other people who queue at the counter so that it doesn't take too long. 2) Makes it easier for people to find out the doctor's practice schedule down to the hour. So that you are better prepared to come on the right day. 3) Arrangement of treatment times so that sick people do not have to queue too long to enter the doctor's room to be examined. 4) Another purpose of the APM machine is to cut the administrative process that is usually done through the counter. 5) Realizing the implementation of modern bureaucratic services that make the quality and credibility of health services better and more advanced. 6) Indirectly, people who seek treatment and their families are guaranteed a parking space because everyone comes according to the hours stated on the SEP. 7) Time efficiency, both for those seeking treatment and companions as well as for the health workers on duty. 8) Educating sick people and companions regarding the use of technology in health services. The eight goals above are what ultimately underlie the existence of APM machines in various health facilities. Even though its use is not yet evenly distributed, hopefully over time it can be spread immediately throughout Indonesia for better health services.

CONCLUSION

The contents of the APM machine at RSU Anna Medika Madura are good, the appearance of the contents of an APM machine. The accuracy of the APM machine at RSU Anna Medika Madura is very accurate from the accuracy of the system in processing input and producing information. That the appearance of the APM machine at RSU Anna Medika Madura is sufficient to display an aesthetic display of the system interface. The ease of the APM machine at RSU Anna Medika Madura is sufficient to make it easy and useful to produce information for users. That the speed and renewability of information from the APM machine at RSU Anna Medika Madura has provided a response time for information that is always updated.

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