



## The Relationship of Management Elements to The Waiting Time in Outpatient Registration of Soegiri Lamongan Hospital

Kafidhotin Azizah, Rafida Alifiyah Yusro, Tjatur Ermintajani Judi, Amirul Amalia, Muh. Ganda Saputra, Nihayatul Munaa, Lilis Maghfuroh

Master of Health Administration Study Program, Faculty of Health Sciences, University of Muhammadiyah Lamongan, Lamongan, Indonesia

### ARTICLE INFORMATION

#### Article process

Submission: July 25, 2024  
Revision : December 17, 2024  
Accepted : December 30, 2024

#### Co-Author

Lilis Magrfuroh  
[lilisahza99@gmail.com](mailto:lilisahza99@gmail.com)  
Master of Health Administration Study Program, Faculty of Health Sciences, University of Muhammadiyah Lamongan, Lamongan, Indonesia

#### Cite this as:

Azizah, K., Yusro, R. A., Judi, T. E., Amalia, A., Saputra, M. G., Munaa, N., Maghfuroh, L. (2024). The Relationship of Management Elements to The Waiting Time in Outpatient Registration of Soegiri Lamongan Hospital. *SURYA: J. Media Komunikasi Ilmu Kesehatan*, 16 (3). 126-138. Doi: <https://doi.org/10.38040/js.v16i3.957>

### ABSTRACT

**Introduction:** Time Wait Registration Treat Roads at the hospital Soegiri Lamongan known from 30 they respond The observed, show that 19 they respond or 63,3% tidak sesuai dengan standar ( $\leq 60$  menit).

**Objective:** This study aims to determine the relationship between management elements (Man, Method, Information and Time) and waiting time in outpatient registration of Soegiri Lamongan Hospital.

**Methods:** This study used a cross sectional method, with an observational analytical design using an accidental sampling technique obtained from 100 respondents. The independent variable is the management element (Man, Method, Information and Time), and the dependent variable is the waiting time for outpatient registration. The instrument used management elements (Man, Method, Information and Time) using a closed questionnaire, waiting time using an open questionnaire.

**Results:** The research found that the management elements of Man were 51% competent, Method 77% registered via Offline, Information 59% informative, Time 58% fast, and more than some patients stated that the waiting time was not suitable as many as 77 respondents (77%). This study uses the SPSS 25 For Windows program using the Chi Square test with a value of  $\alpha=0.05$  obtained a value of Man  $p = 0.000$ , Method  $p = 0.001$ , Information  $p = 0.000$ , Time  $p = 0.006$  meaning that there is a relationship between management elements (Man, Method, Information and Time) to the waiting time in the outpatient registration of Soegiri Lamongan Hospital.

**Conclusion:** It is hoped that the outpatient unit will further increase the speed of waiting time in outpatient registration

through improving the competence of registration officers by taking courses, participating in various trainings, and taking competency certification tests.

**Keywords:** Health worker, Knowledge, Occupational Health and Safety (K3)

## INTRODUCTION

According to the Law of the Republic of Indonesia Number 44 of 2009, a hospital is a health service institution that provides individual health services in a complete manner that provides inpatient, outpatient, and emergency services. Registration service is a type of *front office* service that is the spearhead because it is the first service and directly interacts with patients, so that it can give patients an impression on the quality of service in general (Diana, et al., 2014). Therefore, the services in the registration provided must be of quality and in accordance with existing service standards to create patient satisfaction, especially in terms of waiting time.

Outpatient waiting time is the time used by patients to get health services from the place of registration to entering the doctor's examination room (Laelihyah & Subekti, 2017). The outpatient waiting time in Indonesia is set by the Ministry of Health (Kemenkes) through minimum service standards. The minimum waiting time for outpatient services based on the Ministry of Health Number 129/Menkes/SK/II/2008 is  $\leq 60$  minutes (Ministry of Health, 2008). If the outpatient waiting time does not meet the minimum service standard, which is  $\leq 60$  minutes, there will be long queues or patient accumulation. If the registration waiting time is too long, it will affect the length of the patient's overall treatment time, which will ultimately affect patient satisfaction

Soegiri Lamongan Hospital is a hospital for general patients and BPJS as well as a referral hospital for the people of Lamongan. Therefore, many patients come to the hospital, causing a long queue, especially in front of the registration counter. Although Soegiri Hospital also provides registration service facilities for outpatients through online services, it still feels difficult for some patients so that patients are still willing to queue directly at the registration counter. This results in congested services and long queues so that the waiting time for registration services becomes long, especially in outpatient registration services.

The researcher obtained outpatient waiting time data by conducting a preliminary survey with a total of 30 respondents in the achievement of outpatient waiting time in accordance with the minimum service standard determined in the form of a unit of time, namely  $\leq 60$  minutes amounting to 11 respondents or 36.7% and those who were not in accordance with the minimum service standard, which amounted to 19 respondents or 63.3%. It can be concluded that of the 30 respondents whose waiting time was in accordance with the standard, 36.7% were in accordance with the standard, while the minimum service standard was 80%.

For this reason, hospitals must strive to build a better service system, because the quality of service provided will affect

patient satisfaction and affect the image of the hospital itself. There are often waiting or queuing activities at the hospital, especially in the registration counter service area during peak hours, and this must be carefully examined and taken seriously because the registration counter service is one of the first services provided. Interacting directly with patients, this will give an impression to patients about the quality of service received and if the quality of service is low, it will affect patient satisfaction (Septiani et al., 2017).

The element of management is the action to make a group of people able to achieve their goals or according to the target. The center of management is man, because man makes goals and he is the one who carries out the process of activities to achieve the goals he has made. *Methods* are needed in every management activity, namely in planning activities. Every goal that you want to achieve from a business or business requires a certain period of time so that everything can run according to the rules. *Information* is needed so that the results of something can be more perfect.

Based on the description above, the researcher is interested in conducting research on the waiting time for outpatient registration at Soegiri Lamongan Hospital and relate it to the management element entitled *The Relationship of Management Elements (Man, Method, Information and Time)* to *Waiting Time in Outpatient Registration at Soegiri Lamongan Hospital*.

## METHOD

This research is a quantitative research with an analytical observational research design. The research method used is a survey method with *a cross sectional study* approach.

Population, according to Sugiyono (2013), is a generalized area consisting of objects or subjects that have certain qualities and characteristics that are determined by the researcher to be studied and then drawn conclusions. In this study, the population is all patients in the outpatient registration of Soegiri Lamongan Hospital, which is based on the number of patient visits in December 2022, which is 12,706 visitors (Source: processed data <https://satudata.lamongankab.go.id>).

Sampling in this study used *accidental sampling techniques*. The statistical test used in this study is the *chi-square test* which is used to determine the correlation or relationship between two variables.

## RESULTS

### Overview of Research Locations

Dr. Soegiri Hospital was established on August 20, 1986 which is located on Jalan Kusuma Bangsa No. 17 Lamongan. Dr. Soegiri Hospital was accredited "PLENARY" On December 6, 2022 LARS DHP, Dr. Soegiri is a hospital owned by the government of Lamongan Regency. Dr. Soegiri Hospital has the task of carrying out health efforts effectively and successfully by prioritizing healing efforts, recovery that is carried out in harmony, integrated with improvement and prevention efforts, and carrying out referral efforts, in accordance with applicable laws and regulations.

The services at Soegiri Lamongan Hospital are medical services, medical and non-medical support services, nursing care services, referral services, education and training implementation, research and development implementation, and administrative and financial implementation.

Outpatient services at Soegiri Lamongan Hospital are pediatrics, surgery, obstetrics and gynecology, internal medicine, teeth and oral, neurology, ENT, eyes, lungs, kidney and blood vessels, skin and genitals, medical rehabilitation, neurosurgery, psychiatry, urology, *orthopedic*, VCT poly, executive poly, beauty poly, vascular surgery poly.

The flagship innovations of Soegiri Lamongan Hospital are the Self-Registration Platform (APM), PACS (*Picture Archiving and Communication System*), Soegiri Mobile (online registration application), Latar Omah (delivery service to the home).

Table 1 Characteristics of Respondents

Respondent Characteristics	Frequency	(%)
<b>Gender</b>		
Male	28	28
Women	72	72
<b>Total</b>	<b>100</b>	<b>100</b>
<b>Age</b>		
18-25	20	20
26-35	23	23
36-45	21	21
46-55	36	36
<b>Total</b>	<b>100</b>	<b>100</b>
<b>Education Level</b>		
SD	23	23
SMP	21	21
SMA	38	38
S1	17	17
S2	1	1
<b>Total</b>	<b>100</b>	<b>100</b>

The respondents of Soegiri Lamongan Hospital patients were mostly female (72%) and a small number of men (28%). Almost

half of the respondents were in the 46–55 age range (36%), while a small percentage were 26–35 years old (23%), 36–45 years old (21%), and 18–25 years old (20%). The education level of the respondents was dominated by high school graduates (38%), while a small percentage of the respondents were educated in elementary school (23%), junior high school (21%), s1 (17%), and s2 (1%).

Table 2 Validity Test Results

Security	r count	R table	Ket
<b>Man (X1)</b>			
P1	0,707	0,165	Valid
P2	0,746	0,165	Valid
P3	0,779	0,165	Valid
P4	0,804	0,165	Valid
P5	0,818	0,165	Valid
P6	0,694	0,165	Valid
<b>Information (X2)</b>			
P7	0,803	0,165	Valid
P8	0,814	0,165	Valid
P9	0,804	0,165	Valid
P10	0,659	0,165	Valid
P11	0,748	0,165	Valid
<b>Time (X3)</b>			
P12	0,730	0,165	Valid
P13	0,732	0,165	Valid
P14	0,780	0,165	Valid
P15	0,751	0,165	Valid
P16	0,715	0,165	Valid
P17	0,802	0,165	Valid
P18	0,679	0,165	Valid

The validity test is used to measure the validity or validity of a questionnaire. A questionnaire is said to be valid if the questions on the questionnaire are able to reveal something that the questionnaire will measure. So validity wants to measure

whether the questions in the questionnaire that we have made can really measure what we want to measure (Ghozali, 2016). The validity test used is *Pearson* Correlations. The significance of the Pearson Correlation used in this study was 0.05. If the significance value is less than 0.05, then the question item is valid and if the significance value is greater than 0.05, then the question item is invalid (Ghozali, 2016).

The results of the validity test showed that the correlation between the Man variable (X1) and the total score had a correlation value above the table r of 0.165 so that all Man questionnaire items were declared valid. Similarly, the Information variable (X2) shows a correlation value above the table r of 0.165, so that all information questionnaire items are valid. The same is also shown by the variable Time (X3), where the correlation value is above the table r 0.165, so that all Time questionnaire items are declared valid.

Table 3 Reliability Test

	Alpha	R table	Ket
<i>Man</i>	0,851	0,165	Reliabel
<i>Information</i>	0,823	0,165	Reliabel
<i>Time</i>	0,861	0,165	Reliabel

Based on table 3 above, all variables have Alpha values > r table, so it can be concluded that all variables in this study are declared Reliable. The table r-value for N = 100 is  $df = N-2$  ( $100-2$ ) = 98 with a 10% bidirectional test significance distribution of 0.165 (Junaidi, 2010).

Table 4 Frequency Distribution

	f	%
<b>Man</b>		
Competent	51	51

Incompetent	49	49
Total	100	100
<b>Method</b>		
Online	23	23
Offline	77	77
Total	100	100
<b>Information</b>		
Informative	59	59
Not Informative	49	49
Total	100	100
<b>Time</b>		
Fast	58	58
Slow	42	43
Total	100	100
<b>Waiting Time</b>		
Compliant with standards	23	23
Not up to standard	77	77
Total	100	100

Respondents to patients of Soegiri Lamongan Hospital stated that more than half of the registration officers were competent (51%) and almost half were incompetent (49%). Patients who registered mostly opted offline (77%), while only a small percentage used online registration (23%). In terms of information, most respondents rated the service informative (59%), while almost half rated it as uninformative (41%).

In terms of service speed, more than half of respondents stated fast time (58%) and almost half others stated slow (42%). Meanwhile, in the aspect of standard conformity, most patients rated the service as not up to standard (77%) and only a small percentage rated it as compliant (23%).

Based on table 5, it was found that only a small percentage of respondents stated that the waiting time was not in accordance with standards (30%) and in accordance

with standards (21%), while incompetent men almost half of respondents stated that they were not in accordance with standards (47%) and only a small percentage were in accordance with standards (2%). The Chi Square test showed a p value of  $0.000 < 0.05$  with an OR of 16,450, meaning that an officer who is communicative, meticulous, responsive, and responsible has a 16,450 times greater chance of creating a waiting time according to the standard.

In the registration method, online patients showed that the waiting time was not in accordance with the standard (12%) and according to the standard (11%), while offline patients were mostly not in accordance with the standard (65%) and only a small part were in accordance with the standard (12%), with a p value of 0.001 and an OR of 4.965, so that online patients

had a 4.965 times greater chance of getting a waiting time according to the standard.

The informative information element showed that the waiting time was not in accordance with the standard (38%) and according to the standard (21%), while the non-informative did not meet the standard (39%) and according to the standard (2%), with a p value of 0.000 and an OR of 10.776, which means that informative services increased the chances of waiting time according to the standard by 10.776 times. Meanwhile, fast time service resulted in non-standard (39%) and standard (19%) waiting times, while slow service not compliant (38%) and standard (4%), with a p value of 0.006 and an OR of 4.628, indicating that fast service increased the chance of waiting time according to standard 4.628 times.

Table 5 Chi Square Test Relationship With Lead Time

	Waiting Time				Total	P Value	OR
	Compliant with Standards		Not Up to Standard				
<b>Man</b>	<b>f</b>	<b>%</b>	<b>f</b>	<b>%</b>	<b>f</b>	<b>%</b>	
Competent	21	21	30	30	51	51	0,000 16,450
Incompetent	2	2	47	47	49	49	
Total	23	23	77	77	100	100	
<b>Method</b>	<b>f</b>	<b>%</b>	<b>f</b>	<b>%</b>	<b>f</b>	<b>%</b>	
Online	11	11	12	12	23	23	0,001 4,965
Offline	12	12	65	65	77	77	
Total	23	23	77	77	100	100	
<b>Information</b>	<b>f</b>	<b>%</b>	<b>f</b>	<b>%</b>	<b>f</b>	<b>%</b>	
Informative	21	21	38	38	59	59	0,000 10,776
Not Informative	2	2	39	39	41	41	
Total	23	23	77	77	100	100	
<b>Time</b>	<b>f</b>	<b>%</b>	<b>f</b>	<b>%</b>	<b>f</b>	<b>%</b>	
Fast	19	19	39	39	58	58	0,006 4,628
Slow	4	4	38	38	42	42	
Total	23	23	77	77	100	100	

## DISCUSSION

### Management Elements (*Man, Method, Information and Time*)

#### 1. Man

It is known that the respondents of patients at Soegiri Lamongan Hospital stated *that the man* or registration officer was more than partially competent (51%), and almost half were incompetent (49%).

#### 2. Method

It is known that the respondents of Soegiri Lamongan Hospital patients who registered were mostly *offline* (77%), and a small percentage *online* (23%).

*Method* is a way to carry out work in achieving a predetermined goal that greatly determines the work results of a person. Facilities are a factor that can affect patient satisfaction in the offline registration service system, because with adequate facilities, patients will feel comfortable so that they do not pay attention to the length of the registration waiting time. Meanwhile, the factors that influence the online registration base that does not experience problems will increase patient satisfaction, but on the other hand, when online registration services experience problems with patient satisfaction, it decreases. Patients feel more satisfied with *online* registration than *offline* because patients can access online registration services before coming to the hospital, so that they can minimize the time when registering (Ganda, et al., 2020).

From these results, it can be concluded that many patients register offline, although Soegiri Hospital also provides registration service facilities for outpatients through *online services*, but it still feels difficult for some patients so that patients are still

From these results, it can be concluded that *Man* or registration officers are competent with a percentage of 51%. In this *element of management, Man* has criteria that measure the competence of registration officers through good communication, being careful in every act of registration, accuracy and precision, responsibility to be responsive and ready to serve, and providing clear certainty. willing to queue directly at the registration counter.

#### 3. Information

It is known that the respondents of patients at Soegiri Lamongan Hospital stated that most of them were informative (59%), and almost some were not informative (41%).

Of the 100 respondents, 59% stated that the criteria already existed, but there were still 41% of respondents who stated that the criteria did not exist and made respondents not understand the flow of registration services and also what requirements must be brought when registering at the outpatient services of Soegiri Lamongan Hospital, especially new patients who register offline or come directly to the hospital, it greatly affects the course of the registration process, if the patient or visitor does not know and does not bring the completeness of the documents that must be brought to register the registration process will be longer.

#### 4. Time

It is known that the respondents of Soegiri Lamongan Hospital patients stated that more than part of the time was fast (58%), and almost partly slow (42%).

Time management is the planning and control of time for certain activities. In health services, waiting is inevitable

because hospitals cannot always immediately meet the needs of patients. However, waiting time is still considered a failure of the service system because it causes inconvenience, even though waiting for a doctor is common (Ige Dhamanti in Haya, 2020).

The average score in the respondents' answers was the lowest on the criteria for the administrative registration process carried out by the registration officer was still not fast, and the opening hours of doctors' services were not opened on time. If the registration process is long and the opening hours of doctor's services are not on time, it will result in patients taking a long time to get services.

### **Outpatient Enrollment Waiting Time**

According to the Minister of Health of the Republic of Indonesia Number: 129/Menkes/SK/II/2008 regarding the minimum service standards of hospitals, it is stated that the standard waiting time for outpatient services is  $\leq 60$  minutes. The category of distance between waiting time and time to be examined that is estimated to be satisfactory or unsatisfactory to the patient includes when the patient arrives starting from registering at the counter, queuing and waiting for a call to the polyclinic to be examined by a doctor, nurse or midwife  $> 60$  minutes is categorized as long or not in accordance with standards (Minister of Health of the Republic of Indonesia, 2008).

Service waiting time is the waiting time for patient services at the patient reception place until the patient is called to be examined at the intended polyclinic. Waiting is unacceptable for everyone in health services. This is well realized by service providers, including hospitals, so

they always try to regulate in such a way that hospital service users are not in the queue, by adjusting the service capacity they have. Therefore, managing the balance between service capacity and the estimated number of patient queues while waiting for the presence of doctors. Determining how long a patient has to wait is very important and is the main concern of a hospital that wants to increase the level of customer satisfaction and optimal service capacity (Setyo B, 2017)

Waiting time in an agency, especially health services, is one of the important things to pay attention to by health workers. Likewise, at Soegiri Lamongan Hospital, the waiting time for patients who receive treatment in outpatient facilities has not met standards with the results obtained by still 23% of respondents who stated that it was in accordance with the minimum service standards in hospitals and 77% of respondents stated that it was still not in accordance with the minimum service standards of hospitals.

One of the factors that affects the slow waiting time for outpatient registration services, which is allegedly caused by the speed of performance of registration officers and medical personnel who are not in accordance with their competencies and the number of patients who still register offline, resulting in crowded services and long queues. If the patient's waiting time is long, it can affect the level of patient satisfaction with the service. Patients will consider health services bad if their illness does not heal, long queues, and health workers are not friendly even though they are professional.

### **The Relationship of Man Management Elements to Waiting Time in Outpatient Registration**

It is known that *the Chi Square* analysis shows that the results of the statistical test obtained a p value of  $0.000 < 0.05$ , so it can be concluded that there is a significant relationship between the elements of Man management and the waiting time in outpatient registration. The results of the calculation obtained an OR (Odds Ratio) value of 16,450 which means that competent officers are officers who communicate with good words, are careful, precise and thorough, responsible, responsive and ready, and provide clear certainty that there is a risk of waiting time that meets the standard of 16,450 times.

The results of this study are in line with the theory (Lia, 2018) that employee competence is an important factor and affects the implementation and completion of work in an organization. Employee competence is defined as the correct way or procedure of work carried out by employees. For this reason, in realizing a waiting time that is in accordance with the hospital's minimum service standard, which is  $<60$  minutes, each officer in it is required to have the necessary competency standards.

### **The Relationship of Management Method Elements to Waiting Time in Outpatient Registration**

It is known that *the Chi Square analysis* shows that the results of the statistical test obtained a p value of  $0.001 < 0.05$ , so it can be concluded that there is a significant relationship between the elements of *Method management* and the waiting time in outpatient registration. The results of the calculation obtained an OR

(*Odds Ratio*) value of 4.965 which means that patients who register *online* have a risk of waiting time that meets the standard of 4.965 times.

The results of this study are in line with the theory (Irwan, et al., 2021) that registration carried out online can make patients get a queue number directly, providing a queue number in *online* registration is very useful to minimize waiting time for the patient and the health service itself. Not only that, according to researchers, the availability of online registration applications can also facilitate communication between patients and registration officers in determining the time of patient visits, so that it can reduce waiting times.

### **The Relationship of Information Management Elements to Waiting Time in Outpatient Registration**

It is known that *the Chi Square* analysis shows that the results of the statistical test obtained a p value of  $0.000 < 0.05$ , so it can be concluded that there is a significant relationship between *the element of information* management and the waiting time in outpatient registration. The results of the calculation obtained an OR (*Odds Ratio*) value of 10,776 which means that informative information with service instructions, registration processes and procedures, instructions for the completeness of documents, and the existence of a doctor's schedule has a risk of waiting time that meets the standard of 10,776 times.

The results of this study are in line with the theory (Ulfa & Azlina, 2016) that information can provide input and knowledge related to what is needed by patients, especially in the process of patient

registration at the hospital registration counter. For this reason, it is necessary to have informative information for each patient to make it easier for patients during the registration process, if the service becomes easy, it will affect the speed of the registration waiting time so that it can be in accordance with the minimum service standards.

### **The Relationship of Time Management Elements to Waiting Time in Outpatient Registration**

It is known that *the Chi Square analysis* shows that the results of the statistical test obtained a p value of  $0.006 < 0.05$ , so it can be concluded that there is a significant relationship between the element of *time management* and the waiting time in outpatient registration. The results of the calculation obtained an OR (*Odds Ratio*) value of 4.628 which means that *the time* that the registration service process from the patient to the registration counter to be handled by the doctor is carried out quickly, the opening hours of the registration counter and the doctor's service is opened on time has a risk of waiting time that meets the standard of 4.628 times.

Time or period according to the Great Dictionary of the Indonesian Language is the entire series of times when a process, deed, or situation is or takes place. In this case, the time scale is the interval between two events, or it can be the length of time an event lasts. According to the researcher, time (*Time*) when related to the waiting time in outpatient registration is very influential because they both have a meaning of the length of an activity has taken place. For this reason, if *the time* is fast, the waiting time in registration will

also be fast or in accordance with the standard, and vice versa if *the time* is slow, it will make the waiting time slow or not in accordance with the standard.

### **CONCLUSION**

Based on the research that has been conducted on 100 respondents of Soegiri Lamongan Hospital, conclusions can be drawn from this thesis are:

1. The results of the management element are 51% competent, Method 77% register through *Offline*, Information 59% informative, and Time 58% fast.
2. The waiting time at Soegiri Lamongan Hospital was obtained as a result of 77% not meeting the standards.
3. There is a relationship between Man management elements and the waiting time at the outpatient registration of Soegiri Lamongan Hospital.
4. There is a relationship between the *management element of Method* and the waiting time in the outpatient registration of Soegiri Lamongan Hospital.
5. There is a relationship between information management elements and waiting time at outpatient registration of Soegiri Lamongan Hospital.
6. There is a relationship between Time management elements and the waiting time in the outpatient registration of Soegiri Lamongan Hospital.

### **REFERENCES**

Ministry of Health of the Republic of Indonesia. *Law of the Republic of Indonesia Number 36 of 2009 concerning Health*. Jakarta: Ministry

- of Health of the Republic of Indonesia: 2009. downloaded on <https://rskgm.ui.ac.id/wp-content/uploads/2021/03/07.-Nomor-36-Tahun-2009-Tentang-Kesehatan.pdf> on February 14, 2023.
- Diana Fuanasari, A., Suparwati, A. and Asmita Wigati, P. (2014). *Analysis of service flow and queues at the outpatient registration counter*. Journal of Public Health (Undip), 2(1), pp. 15–21. Available at: <https://doi.org/10.14710/jkm.v2i1.6369>.
- Ganda, M, et al. 2020. *The Relationship of Online and Offline Enrollment with Patient Satisfaction*. Lamongan.
- Ghozali. (2016). *Application of Multivariate Analysis with IBM SPSS Program*. Semarang: Publishing Agency of Diponegoro University.
- Haya, M. 2020. *The relationship between waiting time and the implementation of 5S of nurses and patient satisfaction at the Dadi Regional Special Hospital Polyclinic, South Sulawesi Province*. Thesis. STIKES Panakkukang Makassar. Junaidi. (2010). Table t for d.f = 1-200. Available in: <http://eprints.umpo.ac.id/3197/10/table-r.pdf>.
- Ministry of Health, RI. *Regulation of the Minister of Health of the Republic of Indonesia Number 129/Menkes/SK/II/2008*. downloaded on <https://www.regulasip.id/book/9233/> read on February 14, 2023.
- Laeliyah, N. and Subekti, H. (2017). *Waiting Time for Outpatient Services with Patient Satisfaction with Outpatient Services at Indramayu Regency Hospital*. Journal of Vocational Health, 1(2), p. 102. Available at: <https://doi.org/10.22146/jkesvo.27576>
- Septiani, ade selvia, Wigati, daughter of Asmita and Fatmasari, eka yunila. (2017). *Overview of the Patient Queue System in Service Optimization at the Outpatient Installation Registration Counter of Fatmawati Central General Hospital*. Journal of Public Health (e-Journal), 5(4), pp. 1–14.
- Setyo, B. 2017. *The Effect of Waiting Time on Patient Satisfaction in the Outpatient Unit of Santa Clara Madiun Hospital in 2017*. Thesis. STIKES Bhakti Husada Mulia Madiun.
- Sugiyono. (2018). *Quantitative Research Methods*. Publisher Alfabeta: Bandung.
- Ulfa, H.M. and Azlina. (2016). *Factors Related to Outpatient Registration Officer Services to Excellent Service at Petala Bumi Regional General Hospital, Riau Province in 2016*. Journal of Indonesian Health Information Management, 4(1), pp. 81–90. Available at: <https://doi.org/10.33560/v4i2.140> .
- Law of the Republic of Indonesia Number 44 of 2009. Jakarta. downloaded on [http://dkk.balikhpapan.go.id/assets/files/1.UU44-09-RS\\_.pdf](http://dkk.balikhpapan.go.id/assets/files/1.UU44-09-RS_.pdf) on February 14, 2023.
- Yeni, U.T. *Journal of the Relationship between Outpatient Waiting Time and Patient Satisfaction Level at Assalam Gemolong Hospital*. Apikes Citra Medika. Surakarta.

Yusup, F. (2018). *Test of Validity and Reliability of Quantitative Research Instruments*. *Tarbiyah Journal: Scientific Journal of Education*, 7(1), pp. 17–23. Available at: <https://doi.org/10.18592/tarbiyah.v7i1.2100>.