



Waiting Time of Patients in Outpatient Hospital Before and After Pandemic Covid 19: A Literature Review

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Kata Kunci

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Abstrak

Waktu tunggu pasien merupakan faktor penting yang berpengaruh pada kualitas layanan rumah sakit. Waktu tunggu akan mempengaruhi faktor kepuasan layanan dan kunjungan ulang pada rumah sakit terutama pasien pada rawat jalan. Penelitian ini bertujuan untuk mengetahui kajian literature waktu tunggu pasien rawat jalan di rumah sakit. Sintesis data menggunakan metode PICO. Sumber artikel yang digunakan melalui google scholar, Pubmed NCBI dan DOAJ. Kriteria inklusi yang ditetapkan adalah artikel dengan kata kunci "faktor, waktu tunggu, pasien rawat jalan, rumah sakit", artikel berbahasa Indonesia atau inggris, terbit 2012-2022, dan dapat diakses full teks. Ditemukan 10 artikel yang cocok dengan kriteria inklusi dan eksklusi. Sebanyak 4 artikel diperoleh setelah pandemi Covid 19 dan 6 artikel sebelum pandemi covid 19. Sebelum pandemi covid 19, rata-rata waktu tunggu 6 artikel adalah 83,62 menit dengan waktu tercepat 65 menit dan waktu terlama 149 menit. Setelah pandemi COVID-19, rata-rata waktu tunggu untuk 4 artikel adalah 42,6 menit dengan waktu tunggu tercepat 19,2 menit dan waktu tunggu terlama 93 menit. Pada masa pandemi, waktu tunggu lebih cepat dibandingkan sebelum pandemic, faktor yang mempengaruhi waktu tunggu sebelum pandemi adalah sumber daya manusia, rekam medis, jenis rumah sakit dan jenis kelamin. Setelah pandemi ditemukan faktor-faktor yang mempengaruhi yaitu waktu kedatangan, jumlah pasien, waktu pendaftaran, rekam medis dan rekam medis. System rekam medic menggunakan elektronik based dapat menjadi upaya yang dapat dilakukan untuk memperpendek waktu tunggu.

Keywords

COVID-19
Hospital;
Outpatient;
Waiting time

Abstract

Patient waiting times is an important factor that affecting hospital services quality. Waiting time will affect service satisfaction and repeat visits at the hospital, especially for outpatients. This study aims to determine the literature review of the patient waiting time at the hospital. Synthesis of data used the PICO method. The articles source was through Google Scholar, Pubmed NCBI and DOAJ. The inclusion criteria set were articles with the keywords "factor, waiting time, outpatients, hospitals", articles in Indonesian or English, published in 2012-2022, and accessible in full text. In this literature, 10 articles were found that matched the inclusion and exclusion criteria. A total of 4 articles were obtained after the Covid 19 pandemic and 6 articles before the covid 19 pandemic. Before the covid 19 pandemic, the average waiting time for 6 articles was 83.62 minutes with the fastest time of 65 minutes and the longest time of 149 minutes. After the COVID 19 pandemic, the average waiting time for 4 articles was 42.6 minutes with the fastest waiting time of 19.2 minutes and the longest waiting time of 93 minutes. This shows that the waiting time is faster during the pandemic than before the pandemic, the factors that influence the waiting time before the pandemic are human resources, medical records, type of hospital and gender. After the pandemic, the influencing factors were found: arrival time, number of patients, registration time, medical records and medical records. An electronic-based medical record system can be an effort that can be made to shorten waiting times.

Introduction

Waiting time is the duration of time used by patients from registration to getting treatment from a doctor to get health services both at the clinic and at the hospital (1). Waiting time is an indicator of service quality from six quality dimensions, including the effectiveness and efficiency of outpatient services. Waiting time plays an important role in whether or not the patient is satisfied with the hospital's services especially for outpatients. This of course applies to hospital services around the world (2).

The Outpatient Registration Center (TORC) is a part of the health service that handles the admission of patients, both those who will seek outpatient treatment and those who will be hospitalized. Outpatient service is the first service as a hospital gate, and has a very important role in giving the patient the first impression as consumers (3). Waiting time has always been a problem for outpatient clinics because patients have to spend a lot of time waiting for services to be provided by doctors and other related healthcare professionals. (4). The waiting time for the outpatient clinic is the main focus of this study and is considered a center for the provision of outpatient services. Waiting time for outpatients in hospitals is formed because a patient seeking health services spends time in the hospital, rather than resting when sick and for caregivers to lose time working to earn money (5).

According to research, patients should receive medical check-up services a maximum of 30 minutes after they arrive at the hospital or clinic (6). Patient waiting time in hospitals in different countries will be different. In developing countries, which even have an average duration of 2-4 hours to get examination services from a doctor. 4-6 Developed countries have fewer patient waiting times but it is still a problem such as the time span in the United States which has a waiting time of around 60-188 minutes (7). In Indonesia, patient waiting time follows the hospital's Minimum Service standard based on the Ministry of Health No. 129/Menkes/SK/II/2008 which states that patient waiting time must be less than 60 minutes. (8).

Waiting times that are too long can cause obstacles in accessing health services in hospitals. Research shows that patients who wait in the hospital for a long time will cause unpleasant feelings, torment, frustration and there is an increase in costs incurred. Therefore, waiting time is one of the main indicators of patient satisfaction (9). Previous studies have shown that less waiting time has a higher patient satisfaction score and higher repeat visits than long waiting times (10).

The problem of patient waiting time is a major issue that affects patient satisfaction. This requires a thorough understanding of how the factors that affect patient waiting time (11). At the end of 2019, the pandemic virus that occurred throughout the world, the government issued a new protocol that the public must comply with with the aim of limiting the spread of the virus, not connecting services in hospitals, because hospitals are the most risky place to submit requests for adjustments in carrying out their functions. Health includes road space, so the Covid 19 pandemic must be included in the calculation of this study. This study examines issues related to time in hospital. outpatients before and after the COVID 19 pandemic. This study aims to determine the literature review of the factors that affect the waiting time of outpatients at the hospital.

Methods

This study used the form of a literature review which was carried out by analyzing several previous studies and evaluating them (12). The selection of this literature review aims to determine the waiting time factor for outpatients at the hospital. This research was conducted through Google scholar, PubMed/Medline, DOAJ (Directory of open access journals) to make it easier for researchers to get references that match what they want. Researchers can search journals with the keywords "factor", "waiting time", "outpatient", "hospital". Determination of the journal whether or not it can be used is explained into the inclusion and exclusion criteria. These inclusion criteria are published in the 2012-2022 range, the literature discusses the scope of the waiting time factor for outpatients in hospitals, the research location is not limited, Indonesian and English articles and free full text. Inclusion criteria are articles that use systematic review research methods.

Data collection strategies can be in the form of a keyword search method used to search for articles to be studied. The keyword search method that can be used as a reference to obtain relevant literature can use "PICO" (Population in Question, Intervention of Interest, Comparator and Outcome). The determination to use the PICO adjusts the reference source that we will use (13). If the source is an international library reference (Google Scholar, Pubmed and DOAJ (Directory of open access journals)) then the keyword must use English in the search. The more keywords that are embedded in the search, the more specific the search will be.

Data collection includes inclusion and exclusion criteria, selection of articles and assessment of the quality of articles relevant to the topic of thesis writing. The inclusion criteria are an explanation of the factors the author chose to include articles for review. Exclusion criteria are an explain of the author's

factors to decide that the article in the search is not included in the article to be reviewed. It is also worth mentioning the number of studies that were used and which were not used in writing this review.

The selection of journals or literature to be analyzed must be carried out comprehensively and sequentially. Screening is filtering or selecting data (research articles) which aims to select research problems according to the topic or title, abstract and keywords studied. Quality or feasibility assessment is based on data (research articles) with full text by meeting the specified criteria (inclusion and exclusion criteria) Comprehensive screening process using the PRISMA (Preferred Reporting Items For Systematic Reviews and Meta Analyses) method (13).

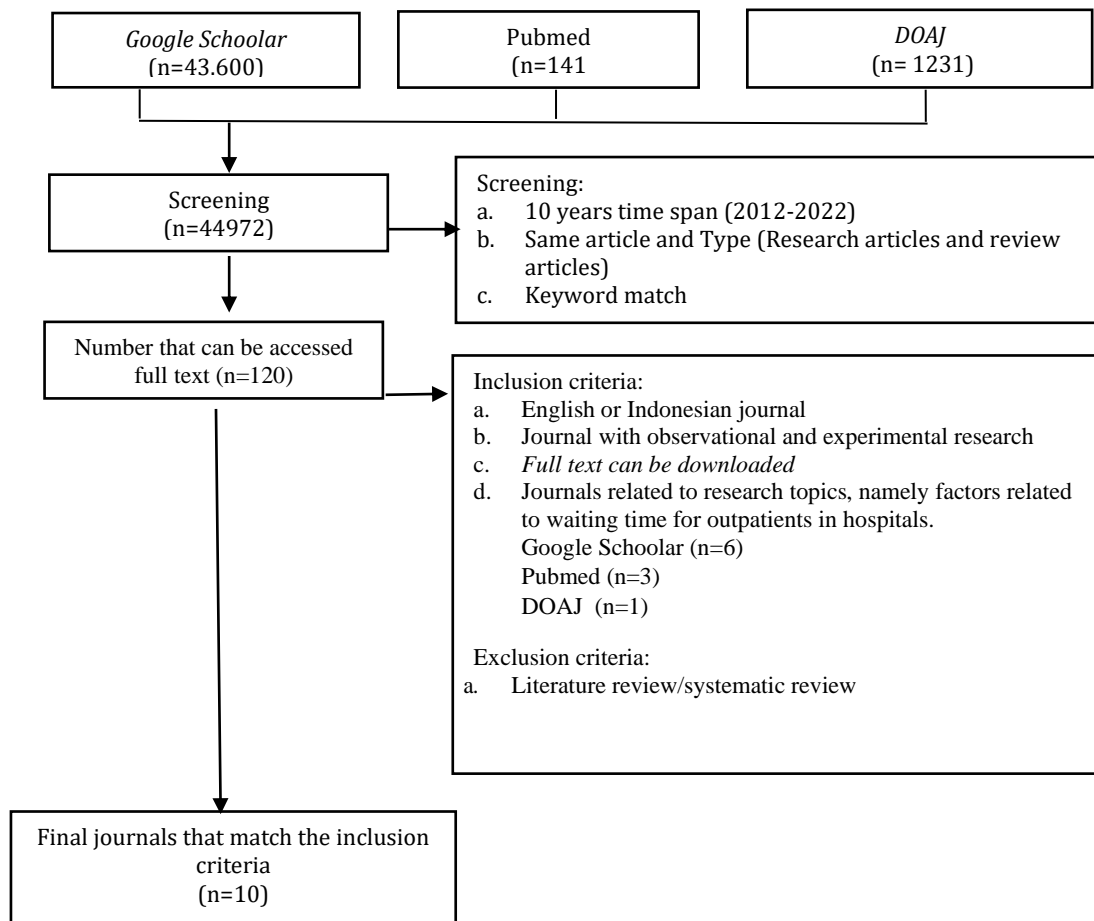


Figure 1. Literatur Review Prisma

Based on the data used to browse journal articles according to the title of outpatient waiting time at the hospital. There are six sources from google scientist, 3 articles from pubmed and 1 article from DOAJ which are used to conduct a literature review. This article was then assessed using the Joanna Briggs Institute (JBI) critical Appraisal Checklist for Analytical Cross Sectional Studies to assess the quality of the article (14,15).

Results

In this literature, 10 articles were found that matched the inclusion and exclusion criteria. A total of 4 articles were obtained after the COVID-19 pandemic and 6 articles before the COVID-19 pandemic. Before the COVID-19 pandemic, the average waiting time for 6 articles was 83.62 minutes with the fastest time of 65 minutes and the longest time of 149 minutes. After the COVID-19 pandemic, the average waiting time for 4 articles was 42.6 minutes with the fastest waiting time of 19.2 minutes and the longest waiting time of 93 minutes. This shows that during the pandemic, the waiting time is faster than before the pandemic. In the results, the factors that influence the waiting time before the pandemic are human resources and medical records. There is one article which states that the waiting time factor is the type of hospital and gender. After the pandemic, the influencing factors were found, namely arrival time, number of patients, registration time, medical records and medical records.

Table 1. Result of Journals Synthesis

Researcher (year)	Findings	Methods and Sample	Reference
Before pandemic			
Shahzadi& Annayat (2017)	This study found the average waiting time was 65 minutes. Factors related to waiting time are health personnel resources and medical record practice in hospitals	This study used a survey design with a cross sectional approach which was carried out on 356 patients in Faisalabad	(16)
Sriram, et al (2018)	This study found the average waiting time was 33.37±52.20 minutes. There are four factors that are significant to the waiting time at the hospital type of private or public hospital and gender.	This study used a survey design with a cross sectional approach which was carried out on 830 patients in India	(7)
Belayneh, et al (2017)	This study found the average waiting time was 149±72.1 minutes. The influencing factors are the lack of health workers, the length of time to search for patient cards and the length of time for hospital registration.	This study used a survey design with a cross sectional approach which was carried out on 464 patients in Ethiopia	(4)
Mo et al (2013)	This study found the duration of the waiting time was 83.7 ± 38.5 minutes. The three most common factors causing the long waiting times observed in this study were high patient load with few doctors, and medical record clerks.	This study used a survey design with a cross sectional approach which was carried out on 100 patients in Nigeria	(17)
Silitonga (2016)	This study found the average waiting time was 66.58 minutes. Factors that affect waiting time are doctor's services, medical record units and hours of service.	This study used a qualitative design in Indonesia	(18)
Nguyen et al (2018)	This study found that the average waiting time to see a doctor was 104.1 minutes. Influential factors are registration time and doctor's schedule	This study used a cross-sectional design with a total sample of 12,299 people in Vietnam	(19)
After Pandemic			
Fahrurazy, et al (2022)	This study found the average waiting time was 23.0 ±11 minutes. There are four factors that are significant for waiting time in hospitals, namely the number of hospital staff, actions that require intervention and the process of filling out medical records. While the factors of type of disease, number of patient and arrival time with outpatient waiting time.	This study used a corsssectional design with a sample of 248 people in Malaysia	(20)
Saragih (2020)	This study found the average waiting time was 19.2 minutes. Factors that affect waiting time are due to HR factors, incomplete registration files, very far file storage space.	This study used a qualitative approach in as many as 12 informants in Indonesia	(1)
Biya et al (2022)	This study found the median waiting time was 93 ± 33.4 minutes. Factors that affect patient waiting time include patient education, arrival time and hospital administration	This study used a survey design with a cross sectional approach which was carried out on 422 patients in Ethiopia	(21)
Walakandou et al (2021)	In this study the average waiting time was 35 minutes. The most influential factors according to the number of patient, medical records, and medical personnel.	This study used a qualitative approach with the snowball method in as many as 7 informants in Indonesia	(22)

Discussed

Average patient waiting time

In this literature review, the average waiting time of patients before the COVID-19 pandemic (83.62 minutes) was longer than after the COVID-19 pandemic (42.6 minutes). The data shows that the average waiting time is still in a wide time range. These results show that the research locations are in developing countries such as Indonesia, Malaysia, Ethiopia, Nigeria, India and Vietnam which generally have suboptimal health systems. Patient waiting time is patient's time in the waiting room to access health

services. Patient waiting time is one of the indicators of whether hospital management is good or not. The waiting time to get a patient satisfaction range is less than 30 minutes(2). In Indonesia, the waiting time policy should not be more than 60 minutes. These results indicate that the waiting time is still a problem for outpatient services in hospitals.

The long waiting procesed to got service in outpatients starts from the patient registering until the patient is called/entered the polyclinic room, which in the end indirectly have an impact on patient satisfaction with the services provided in outpatient services (starting from registering to being called/into the polyclinic). Not a few are still found complaints / complaints from some patients because of the problem of waiting time at the destination polyclinic in order to get medical services as soon as possible, so that the patient's condition still looks so crowded and the patient looks bored and restless because of the limited time during outpatient services, so it is still found some patients who asked back to the registration officer and polyclinic officers related to outpatient services (9). Waiting times that are too long could cause patients to be dissatisfied and patients will choose another hospital to look for better services (23). Patients who wait long would have a negative impact on patients' perceptions of hospital comfort and accessibility. Patients who experience longer waits seem to feel less ignored by doctors. In addition, patients who received an explanation of the waiting time were more satisfied. However, patients who wait more but feel satisfied, maybe because they get maximum care from health workers (11). Several ways to improve the service system in waiting times involve realigning human resources in hospitals, improving efficient operational systems and using information technology in hospital administration. The existence of this evidence-based strategy can be a favorable consideration for patient waiting times (24).

Researcher opinion, during the COVID-19pandemic the waiting time is faster because this can be caused by human resources, source factors, registration process factors related to medical records and other factors.

Human resources

There were eight from ten articles that support that human resources are a factor in the length of patient waiting time. The problem of a busy doctor's schedule, an inadequate ratio of staff and patients make the waiting time longer (4,16–19,21,25). Human resource problems occurred both before the COVID-19pandemic and after the COVID-19 pandemic.

The biggest causes of long waiting times in Ethiopian hospitals are the inadequate number of doctors and staff, long search for medical record data and long registration times. This is of course due to limited resources. The impact of long waiting time causes patient satisfaction to decrease because patients are bored and bored (4). Supported by research in Nigeria, respondents stated that too many patients with too few doctors were the reason for their long stay in the clinic. This is not surprising because the population has increased severalfold in Nigeria over the years, without a commensurate increase in the number of healthcare providers. Most of the respondents stated that too many patients with too few doctors were the reason for their long stay at the clinic. This is not surprising because the population has increased severalfold in Nigeria over the years, without a commensurate increase in the number of healthcare providers. (17) .

Human resources are an important part the management must be considered in its management as one of the improvement efforts to reduce the waiting time of patients in the outpatient unit so that it can provide satisfaction to customers which is one indicator of quality, availability of adequate health workers and professional attitude from health workers is one of the factors that causes the service time to be shorter. If you examine the respondent's answers, there are several parts that should be considered and efforts to improve the human resources section, including: officers who look less tidy, officers who provide explanations that are not thorough, complete and clear, officers who are not friendly, doctors who come to check are not on time, the number of officers (registration, nurses and doctors) that is not balanced with the number of patients served (26).

There are several ways to divert boredom while waiting for a service call. The majority of respondents in this study preferred to listen to health talks or watch television while waiting. Listening to counseling from health workers who provide health education in the form of health talks can be a useful way to take advantage of long waiting times in outpatient clinics (17). Likewise in previous studies, overcoming boredom waiting for the service turn is to watch television. However, the lack of waiting rooms causes patients to wait in the hospital halls and canteens (4).

Hospital management is needed to report areas of delay in the polyclinic that often occur. One of the efforts is to do patient numbering accompanied by the estimated time of service. It is necessary for doctors and nurses to be present on time so as to prevent delays due to HR problems. Hospital management is responsible for providing information to long-waiting patients and the provision of additional health workers and helping patients to reduce waiting time (16)

Medical Records Service

There were nine from ten articles that support that system administration starting from registration, time to search for medical records to services related to medical records is a factor in the length of waiting time. The manual service system using paper based, full storage space and remote medical record storage space can increase patient waiting time to get health services (4,16–21,25). Even before the pandemic and after the pandemic, the role of the medical record is very important depending on how the outpatient management system is in the hospital.

Medical record factor plays an important part in waiting time. Medical records in paper form indirectly cause an increase in patient waiting time, namely the increase in the time required for officers to search for files because the medical record storage area is already crowded. Medical records are still in the form of paper (paper based), so apart from taking up space for storage, they are also vulnerable to physical damage. Medical records that are still in the form of files also cause officers to search for the medical record directly and bring the medical record physically to the patient's examination site. Second, the medical record storage room at Bhayangkara Hospital is already overcrowded, some files have even been stored outside the storage room. Storage conditions that are full and very dense can make it difficult for officers to find patient medical records when needed, and risk of storage errors. Third, the medical record determines the queue order. The order in which patients are summoned at the polyclinic is determined by how quickly or slowly the patient's medical record arrives at the polyclinic nurse station. This order can be different from the order in which patients register at the initial registration administration section, especially if an error occurs such as the patient's file being scattered in the process of delivering files from the medical records to the polyclinic. The limitations of officers in delivering medical records to the outpatient unit so that if there is a delay, the patient must wait for the medical record to arrive before his name is called for examination. (22).

The length of waiting also depends on the time of registration with the patient. The most registration time is in the morning because the doctor's schedule is more in the morning than in the afternoon. This also affects the time of taking more patient medical record documents. Therefore the waiting time is longer in the morning than in the afternoon or evening (19). So the length of time a patient waits is one of the potential indicators that can cause patient dissatisfaction and also in this study it is stated that the faster the time for providing medical record documents, the more satisfied the patient is, or the slower the time for providing medical record documents, the more dissatisfied the patient will be. This is confirmed in journal theory (27).

In previous studies, according to the majority of respondents, waiting for medical record service officers were in the fast category as much as 85.7% and patient satisfaction according to the majority of respondents said 85.7% satisfied. So that there is an effect of waiting time for medical record officer services on patient satisfaction at outpatient registration. So that in practice the patient does not expect a waiting time to get his medical record document. (28). The effect of waiting time for medical record service officers on patient satisfaction at inpatient registration (29). Several ways that can be used to reduce waiting time in outpatients have been widely studied. The use of the model before admission to the hospital through internet applications, e-mail, the six sigma model, the FIFO model into a program in the intervention to reduce patient waiting time (5).

Number of patients

There are two studies which state that during the COVID-19 pandemic the factor that affects waiting time for outpatients is the number of patients. The number of patients during the COVID-19 pandemic decreased drastically compared to before the COVID-19 pandemic (20,22).

According to research in the United States, it was stated that during the COVID-19 pandemic, the number of outpatients in the United States experienced a drastic decline. This is because it shows that there is an increase in death cases due to Covid 19, so patients will choose to wait for the COVID-19 storm road treatment to subside unless it is an emergency (30). The same thing also happened in Europe and Asia, where the number of outpatients was less than before COVID-19(1,31). The number of patients experiencing this decline could result in shorter waiting times compared to patients before the COVID-19 pandemic (32). The decreasing number of patients does not mean that they do not get health services. Hospitals improve service facilities by using telemedicine. Outpatients still get health services through telemedicine (33),

Other Factor

Other factors found in this study were the type of action on the patient, arrival by ambulance, type of hospital and gender. Research in India shows patient waiting time has a very wide range. This depends on the arrival using an ambulance or not. Arrivals using ambulances will be handled faster than those without. Ownership of insurance is also a consideration in this study. Outpatients who cannot afford treatment at private hospitals are forced to seek treatment at public hospitals which have longer waiting

times. The government needs policy intervention to provide equal access to services in private and government-owned hospital facilities (7).

Besides that, another factor is gender. Gender was also found to be associated with length of waiting time, respondents who waited more than 3 hours were female, while only a small proportion of male respondents waited that long (20). In India, female gender has a longer waiting time than male. Therefore, gender equality is still an important policy so that women are given equal access to treatment by overcoming longer waiting times for women (7).

Conclusion

We conclude that the average waiting time in this review article is 67.19 minutes with the fastest waiting time of 19.2 minutes and the longest waiting time of 104.1 minutes. Factors that significantly affect waiting time are human resources and hospitals' medical record administration system. Other factors such as arrival by ambulance, type of hospital and gender. Efforts can be made to add health service staff and use an electronic-based medical record information system. However, while reducing waiting times may not always be possible (due to lack of resources or staff limitations), it is still possible to improve some aspects of patient-centred care services, which could reduce patient dissatisfaction with waiting periods and allow for a more positive perception of the services provided. they accept.

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