Comparative of Outpatient Queue Services for Government Hospitals and Islamic Hospitals in Medan

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Abstract

Differences in service characteristics between government and Islamic hospitals highlight the importance of translating the Islamic sharia system into measurable and objective health service quality. This study, therefore, aimed to determine the comparison of queuing time, perception and patient satisfaction related to the queue of outpatient services at the hospital. Analytical survey approach with cross sectional research design through observation of queue duration with the help of a stopwatch and questionnaire sheets related to patient perception. The study was conducted at the Dr. Pirngadi Government Hospital (PGH) and Malahayati Islamic Hospital (MIH) in Medan, involving as many as 300 patients. The mean difference test was used with the Jeffreys's Amazing Statistics Program (JASP) application 0.9.1 version. This study found that there were significant differences in poly queue time (p=0.000), outpatient waiting time (p=0.043), pharmacy queue time (p=0.001), and total time (p=0.002) between the two hospitals. The findings of this research indicate substantial variances in poly queue time, outpatient waiting time, pharmacy queue time, and total time between the two hospitals, although no significant disparities were observed in terms of satisfaction.

Keyword: Government hospital, Health service, Islamic hospital, Satisfaction, Queue

INTRODUCTION

The quality of health services is a key indicator of how to assess the success of management implementation in health facilities (WHO et al., 2018). Time is a valuable resource, reducing waiting time is an important topic for analysis (Rumapea, 2019). There is an imbalance between the speed of arrival of participants who need services and the facilities provided by the service, which triggers the occurrence of queues (Sakinah, 2019).

The patient queuing situation is still a problem that is often associated with the quality of health services received. The quality of health services can be seen from access to services which are marked by patient waiting times (Breton et al., 2020; Gartner & Padman, 2020). A number of studies have shown that patient satisfaction is significantly negatively correlated with waiting time (Xie et al., 2019). The fact that often happens is that patients spend more time waiting, while the actual duration of services - such as diagnosis and consultations - is relatively less (Sabatina et al., 2020; Xie et al., 2019).

Hospitals are institutions where people can come to get healing services (Veonita et al., 2017). In hospitals, there are often quite a lot of queuing activities at the service section at the patient registration counter. The number of queues affects people's satisfaction. People want a

fast, precise, and clear service process. Other study revealed on the difference in the level of satisfaction of BPJS (*Badan Penyelenggara Jaminan Sosial Kesehatan* / Social Security Agency for Health) patients and non BPJS with registration services at the Tobelo Hospital shows that there is a significant difference between the satisfaction levels of BPJS and Non BPJS patients with registration services at the Tobelo Hospital (Bitjoli et al., 2019; Heryana et al., 2019). Pono's research (2018) on analyzing the performance of the queuing system in optimizing outpatient services at the Haji Makassar Hospital concluded that the queuing model applied to the outpatient registration section at the regional public hospital had not shown such good performance, causing a long queue process (Pono, 2018).

The Islamic Health Efforts Council / *Majelis Upaya Kesehatan Islam Indonesia* (MUKISI) and the National Sharia Council of the Indonesian Ulema Council (DSN-MUI) in 2016 issued fatwa Number 107 containing provisions for contracts and services according to sharia which became the basis for the implementation of Sharia Hospitals (Ismail et al., 2018). Until now, the discussion on minimum service standards for sharia hospitals has always been an important discussion (Mardiyati & Ayuningtyas, 2021; Shariff & Rahman, 2016).

The characteristics of the Islamic hospitals that maintain gender *ikhtilat* (free mixing) and the provisions of aurah (body limits that can be seen) in obtaining services allow the condition of the hospital service queue to also be different (Ismail et al., 2018; Latifah & Imam Mawardi, 2020). Therefore, a discussion of the characteristics of this hospital service needs to be studied more deeply. Moreover, during the current COVID-19 pandemic, provisions for limited queuing rooms and long waiting times have made queuing conditions worse. The situation of piling up queues makes things worse because there is the potential for virus transmission. This situation is possible to be a *rukshah* (relief) to change the existing shari'ah provisions of the service.

When drawn into the hospital queue service, information that measures the comparison of the service quality of government hospitals and islamic hospitals are still limited. The initial survey results at the hospital revealed that waiting times were relatively longer at government hospitals, with patients expressing frustration over the outpatient services provided. Meanwhile, although longer waiting times were observed at Islamic hospitals, patient satisfaction levels were higher.

Comparison of service descriptions and queuing satisfaction from the two hospitals that have different characteristics is important to develop a design or queuing scheme that is more suitable for critical situations. Based on the description above, research on the queuing process

must be investigated more deeply, especially during the COVID-19 pandemic where patients have to wait a long time to get health services. Meanwhile, both hospitals have different service characteristics in treating patients who come. This research is ultimately expected to describe the most appropriate queuing scheme and encourage hospital management to manage queue risk in order to ensure patient safety and comfort.

METHODS

This study uses an analytical survey approach with a cross-sectional design with research variables including outpatient queue waiting time (from queuing at registration until going home), patient perception of queue services, and patient satisfaction. We compared the waiting time and patient perceptions regarding the queue for outpatient services at the Government Hospital and Islamic Hospital in Medan City. Observation of lead time data collection was carried out with the help of a stopwatch to calculate the patient's waiting time from entering the hospital until the end of receiving services. The collection of patient perception data was carried out with the help of a questionnaire consisting of 8 statements with alternative answers Satisfied, Quite Satisfied, Dissatisfied where categorization is based on the median overall score (Imaninda & Azwar, 2018). The location of this research is the city of Medan with the unit of analysis of the Dr. Pirngadi Government hospital (PGH) and Malahayati Islamic Hospitals (MIH) which were carried out from August to September 2022 with a sample of 300 respondents were outpatients who used services when the research was conducted from both Hospitals. The data collected were then analyzed descriptively in the form of distribution, percentage, proportion and average of the variables studied. Bivariate analysis on the variables studied was carried out to determine the comparison of queue lead times and the comparison of the level of patient perception at the two hospitals using Mann-Whitney Test with the Jeffreys's Amazing Statistics Program (JASP) application on 0.9.1 version. This research has passed the ethical test from the UISU Health Faculty with certificate number 285/ EC/ KEPK.UISU/VIII/2022.

RESULTS

Characteristics of Respondents

The description of the characteristics of the respondents in this study can be seen in the table 1. It is known that the majority of the age of patients who visited PGH and MIH were in the adult category, which were 64.9% and 63.3%, respectively. Characteristics of respondents based on gender at PGH, the prevalence of patients with female gender (60.9%) was higher

than patients with male gender (39.1%). This is inversely proportional to the MIH where there are far more male (68%) patients than female (32%).

Based on education, at PGH patients who have a high educational background (82.1%) are much more than patients who have a low educational background (17.9%). In MIH, there are also patients who have the latest education in the high category (86.7%) far more than patients with the last education status in the low category (13.3%).

Table 1. Characteristics of Respondents (n=300)

Variable	Dr. Pirngadi Government Hospital (PGH)		Malahayati Islamic Hospital (MIH)	
	n	%	n	%
Age				
Baby	1	0.7	-	-
Children	4	2.6	3	2
Teenager	4	2.6	3	2
Adult	97	64.9	95	63.3
Elderly	44	29.1	49	32.7
	Me (sd) : 47,5 (17,8) Min – Max : 0,25 - 80		Me (sd) : 49,1 (16,8) Min – Max : 3 - 90	
Gender				
Man	59	39.1	102	68
Woman	91	60.9	48	32
Education				
Low	27	17.9	20	13.3
High	124	82.1	130	86.7

Univariate Analysis

An overview of queuing time, respondents' perceptions of queuing services, respondents' satisfaction with queuing services based on research results will be presented in the table below:

Table 2. Description of Outpatient Queue Time

Hospital	Mean	Median	SD	Min	Maks
PGH (*n=151*)					
Queue List	43	30	26	5	180
Polytechnic Queue	26	20	19.3	0	120
Polish Service	12.2	10	9.3	0	60
Pharmacy Queue	22.9	20	24.7	0	180
MIH (*n=150*)					
Queue List	44.3	37.5	31.7	0	240
Polytechnic Queue	33.5	30	21.6	0	135
Polish Service	12.1	10	6.8	1	35
Pharmacy Queue	31.6	30	25.5	0	122

Based on the table above, it can be seen that the registration queue for PGH average patient waits for 43 minutes with a minimum queue time of 5 minutes, and a maximum queue time of 180 minutes. Then the patient queue to enter the intended polyclinic the average patient spends 26 minutes with a minimum time of 0 and a maximum time of queuing 120 minutes. The duration of service at the polyclinic obtained by patients is an average of 12 minutes 2 seconds and a maximum time of 60 minutes, and to get medicine, patients queue at the pharmacy installation with an average queue time of 22 minutes 9 seconds, with a maximum queue time of 180 minutes.

The length of the queue at the MIH itself, it can be seen that the average queue for patient registration is 44 minutes 3 seconds with a maximum queue time of 240 minutes. In the queue to enter the polyclinic room that is intended for itself, patients queue with an average time of 33 minutes 5 seconds with a maximum queue time of 135 minutes. Then in poly services, the average patient gets services at the poly for 12 minutes 1 second with a minimum time of 30 seconds and a maximum time of 35 seconds, and the queue at the pharmacy installation for patients to get drugs, the average queue time is 31 minutes 6 seconds, with a maximum time of 122 minutes.

Based on Kepmenkes No. 129 of 2008, the standard queuing time for registers is 10 minutes, the standard time for polyclinic services is 30 minutes, the standard queuing time for pharmacy is 30 minutes. So when referring to these provisions, the following categories will be obtained:

Table 3. Description of outpatient queuing time categories based on Ministry of Health standards

The Perceptions of Respondents	Suitable*		Not Suitable	
	n	%	n	%
PGH				
Queue List	24	15.9	126	84.1
Polygraphic Service Time	146	97.4	4	2.6
Pharmacy Queue	123	82.1	27	17.9
MIH				
Queue List	2	1.3	148	98.7
Polygraphic Service Time	148	98.7	2	1.3
Pharmacy Queue	87	58	63	42

* Minimum service standards (MSS) Kepmenkes No. 129/Menkes/SK/II/2008:
- Outpatient waiting time 60 minutes
- Customer satisfaction 90%
- Time for providing medical records (list) 10 minutes
- Waiting time for pharmacy services (finished drugs) 30 minutes

The table 3 above shows the queue time for the list of PGH tends not to comply with the rules for MSS MoHRI (The Minimum Service Standards of the Ministry of Health in

Indonesia). However, for polyclinic service times and pharmacy queues, most of them have been implemented in accordance with SPM. On the other hand, the queue for registering MIH is also dominated by registration services that do not comply with SPM standards, and pharmacy queues that are not yet in a high proportion according to SPM. However, the time for polyclinic services has adjusted the recommended duration in the RS MSS. Referring to the table, it can also be compared that proportional compliance with the MSS standard is more widely applied in PGH than MIH.

Table 4. Categories of patient perception and service satisfaction in the hospital outpatient queue

Variable	PGH		MIH	
	n	%	n	%
Service Perception				
Bad	8	5,3	3	2
Good	142	94,7	147	98
Service Satisfaction				
Not satisfied	22	14,6	16	10.7
Satisfied	128	85,4	134	89.3

Based on the table 4, it can be seen that the perception of respondents who queued for outpatient services at PGH in the bad category amounted to 8 people (5.3%) and in the good category as many as 143 people (94.7%). In the MIH itself, the perception of respondents in the bad category is 3 people (2%) and in the good category as many as 147 people (98%). From the percentage perception of the good category in the two hospitals above, the value is above 90% (> 90%), this means that respondents feel that the outpatient queuing services available at both hospitals are good.

Meanwhile, based on respondents' satisfaction with outpatient queuing services, it can be seen in the table, at PGH himself respondents who are dissatisfied with queuing services are 22 (14.6%) and respondents who are satisfied with queuing services are 129 (85.4%). At the Malahayati Hospital, 16 people (10.7%) were dissatisfied with the queuing service, and 134 respondents (89.3%) were satisfied with the queuing service. Due to the minimum standard of patient satisfaction based on KEPMENKES Number 129 of 2008 (90%), it can be concluded that, based on the percentage of the number of respondents who are satisfied at PGH (85.4%) and MIH (89.3%) both still have not reached the minimum service standard in accordance with the KEPMENKES provisions.

Bivariate Analysis Results

Because the numerical data obtained was not normally distributed, an alternative test was carried out for mean differences using the Mann-Whitney test. Based on the table 5, it can be seen that the MIH has a higher mean rank in every point compared to the PGH. Based on the Mann Whitney test table above, it is known that several points such as poly queues, WTRJ (minutes), pharmacy time, and total time have a sig p-value which is smaller than the probability value of 0.05, which means that these points indicate that there is a significant comparison between MIH and PGH regarding these points.

Table 5. Mann-Whitney Test Results

Variable	Mean rank		P - value
	PGH	MIH	
Outpatient waiting time	140.87	161.19	0.043**
Poli Service	145.62	156.42	0.269
Pharmacy Time	134.70	156.42	0.001**
Total Time	135.49	166.62	0.002**
Perception Score	141.83	160.23	0.063
Satisfaction Score	148.41	153.61	0.593

** significant

DISCUSSION

From the results of the research conducted, it was found that the queue time for the services provided was both at PGH and MIH have a long enough time duration, which is more than the MSS time. This is in line with Susilawati (2022) where the results of her research show that as many as 80% of respondents are queuing with a waiting time of >60 minutes, this is because the officers return to interviewing old patients and new patients who want treatment to be re-registered (Susilawati & Gunawan, 2022). This study is in line with research where the hospital queue under study where the duration of patient service queues had a long duration of 157.13 minutes where the time exceeded the MSS MoHRI (The Minimum Service Standards of the Ministry of Health in Indonesia) time which was <60 minutes (Torry et al., 2016). Whereas in the perception of previous research, the length of time waiting for patients queues affects patient satisfaction with patient satisfaction because they feel they are not cared for or cared for. This certainly raises a question that the length of the queue time is not yet clear as an indicator that determines patient satisfaction with the service even though it is easy to do.

From the results of research data that has been obtained, it is known that there are points that must be considered again by the hospital, both PGH and MIH to further increase positive perceptions and patient satisfaction with the outpatient service queues that are provided by the hospital to patients. At PGH, things that must be considered include air circulation in the queuing room, the availability of the number of counters, the availability of the number of

seats, the speed of waiting time and the guarantee of timeliness of service. For the MIH, things that must be considered are not much different from the MIH where the differentiating point is only in air circulation.

The waiting room for outpatient service queues must of course be comfortable for outpatients in the queue. Convenience for patients queuing for a long time must also be considered by both hospitals where the room capacity is wide enough but the long queues make the queuing rooms of the two hospitals very crowded with patients so that air circulation in the queue rooms both at PGH and MIH became less good or bad for the patients of both hospitals. Poor air quality can lead to upper and lower respiratory tract infections (ARI), pneumonia and chronic obstructive pulmonary disease (COPD) (Dong et al., 2021).

Another thing is related to the availability of the number of counters, where PGH has 14 registration counters, but only 11 are active. This happens because of the lack of available computer facilities or those that have not been repaired. This is certainly a concern for the hospital management where it will certainly affect the length of the queue for each patient which increases in arrival. Different things happened to the MIH which has 4 registration counters where the number is still lacking considering the large number of outpatients who visit. This amount will certainly affect the waiting time of the queue which is getting longer and takes a long time. If the number of counters can meet the number of patients, patients will not queue longer so that the services provided are faster so that patients can feel more satisfied (Krishna, 2020; Sriram & Noochpoung, 2018).

Likewise, the availability of seats in the outpatient queuing room at PGH and MIH. This of course can be influenced by the long queue factor, while patients who want to register for outpatient services will have more patient queues waiting. The limited number of seats certainly makes some patients waiting in line have to stand for a long time until there is an empty seat. This certainly makes some patients give a negative perception of it. If the number of seats can meet the number of patients, the communication between health workers and patients will be fulfilled properly, and services for patients will feel comfortable and in the end patients will feel satisfied (Ferreira et al., 2023).

In addition, the speed of waiting time must also be considered by the hospital, both PGH and MIH where the waiting time for the queues for these two hospitals is slightly longer than the standard MoH number 129 of 2008, the standard queuing time for registers is 10 minutes, the standard time for polyclinic services is 30 minutes, the standard queuing time for pharmacy is 30 minutes. This, of course, must be a concern for hospital management, although patient satisfaction and perspectives are still high for both hospitals, of course there must be

improvements to increase patient satisfaction in the future. The standard waiting time for outpatients is no more than 60 minutes (Rofi'i & Jarihatunningsih, 2014). Meanwhile, at PGH, the average waiting time for patients is 147 minutes, which means that the waiting time is still far from the MSS MoH standard.

Guaranteed timeliness of service is also something that must be a concern for both hospitals. Timeliness guarantees where when the hospital provides guarantees for patients, it is necessary for patients if they experience dissatisfaction or bad perceptions they feel there is a responsibility given by both hospitals for the services they provide so that there is still patient confidence in the health services provided by both hospitals. This is also explained by previous study which in his research said that providing guarantees to patients which include knowledge, ability, politeness, punctuality will create a sense of patient trust in the hospital (Pantih et al., 2021). Providing guarantees to patients including information, skills, offering types of assistance, and capacity will create certainty between patients and hospital staff so that no party feels disadvantaged (Astiena & Azmi, 2020; Krishna, 2020).

Besides the points that need to be considered by the PGH and the MIH, of course, the estimated patient satisfaction with outpatient services is certainly bad or the patient feels dissatisfied or even dissatisfied. However, from respondent data regarding patient satisfaction with outpatient services, patients are satisfied with the services provided. The same thing happened to the patient's perception of the services provided by the patient to the hospital (Ward et al., 2017). This can happen because there are other indicators that were not examined in this study that affect the level of patient satisfaction such as the services provided by hospital staff both physically and mentally although further research is needed on this later (Sun et al., 2017).

Research has not found sharia services that are very specific in outpatient services, for example there is no separation between male and female patients for queuing lines or seats in the MIH waiting room. However, in inpatient services, MIH does several things, such as the availability of spiritual service information forms, visits by the cleric to the patient's room every day as well as education on how to worship patients. Other studies also show that hospitals with the initials "Islam" do not necessarily apply the principles of seclusion and contract as required in sharia hospital service standards (Sulistiadi et al., 2022; Yusuf & Sari, 2019). However, the provision of clothing to cover the genitals has become a strict internal regulation throughout Islamic hospitals.

This study arrived at the determination that notable disparities exist in outpatient services between IPH and RPH, specifically in the domains of poly queue durations, pharmacy

waiting times, and overall service duration. Nevertheless, it is important to note that there was a consistent level of patient satisfaction observed across both hospitals, with no discernible difference in levels of patient dissatisfaction. Additional investigation is warranted, particularly with the involvement of sharia-certified healthcare institutions, and with a more extensive sample of respondents, in order to substantiate the significant influence of sharia-compliant hospital services on patient satisfaction.

CONCLUSIONS

The findings of this research indicate substantial variances in poly queue time, outpatient waiting time, pharmacy queue time, and total time between the two hospitals, although no significant disparities were observed in terms of satisfaction.

Limitations in this study includes there are other unmeasured factors that may affect the high level of patient satisfaction, such as the treatment of doctors and nurses and the emotional closeness of the patient. In addition, the study was conducted in the post-pandemic period with health protocols so that it was not able to reach all patients. Furthermore, the practice of MIH services is not fully in accordance with sharia principles, so further research is needed by choosing a sharia-certified hospital from MUKISI to describe the actual portrait of hospital queue services according to Islamic principles. This study also has not conducted a sampling of all polyclinics, due to the differences in the location of the buildings that are far away.

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