



## Factors Affecting Tardiness of Part-Time Medical Specialists at the Polyclinic of X Hospital

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### Abstract

Service waiting time in an outpatient is an indicator of minimum hospital quality service standards. The amount of waiting time at the X hospital's polyclinic in 2018 was 84.75 minutes, exceeding the hospital quality service standard in 2009 at 60 minutes. The preliminary research shows that the waiting time for medical services by part-time medical specialists was 60.75 minutes. This study aims to identify factors that affect part-time medical specialists' tardiness at X Hospital's polyclinic. This study performed an analytical survey using a cross-sectional approach from May to June 2020. It collected data from 67 part-time medical specialists who conduct medical practices at the polyclinic. Univariate, bivariate Spearman correlation and multivariate multiple linear regression tests with the Backward method were performed to analyze data. The bivariate analysis shows a significant effect of biographical characteristics factor where practice hours are less the standard time of 60 minutes ( $p=0.01$ ) and extrinsic factor of the work environment ( $p=0.019$ ) on the tardiness of part-time medical specialists. Work environment was the most affecting factor in late medical practices ( $p=0.016$ , Exp B/OR -0.433). This study could be a reference for the hospital to manage the human resources in terms of proper practice hours and a supportive work environment for patient medical services.

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## INTRODUCTION

According to the Regulation of the Indonesian Ministry of Health No. 129 of 2009 concerning the Minimum Hospital Standard Service, service waiting time at a polyclinic is an indicator of hospital service quality. Service waiting time is the number of time patients spend for registration and consultation with medical specialists/ According to the Regulation of the Indonesian Ministry of Health No. 129 of 2009, service waiting time takes typically  $\leq 60$  minutes (Peraturan Menteri Kesehatan No 129, 2008). Service waiting time is one of the medical services issues and may be dissatisfaction with services (Basta Yletc, 2016; David et al., 2013). Buhang states that patient waiting time for services is a vital aspect that may determine the quality of medical services in a unit. Data of outpatient service waiting time at X hospital in 2018 was 84.75 minutes, which exceeds the standard waiting time of 60 minutes in 2009. The overall process shows an average patient waiting time for registration was only 3-5 minutes, while 75-98 minutes were waiting time for consultation. Further observation on the data discovers 4494 physicians (26.04%) were late to serve patients at the polyclinic. Of this number, 95.6% were part-time medical specialists.

The preliminary study at the hospital found long waiting time in some places other than at the polyclinic. For example, 1) due to many patients coming and waiting, the parking lot is full. In 2018, there were 47 written complaints about the inpatients and outpatients in the parking lot. 2) The use of polyclinic rooms is overlapping. A regular span hour for one medical specialist to another is 30 minutes. However, the medical specialists who come late still occupy the rooms for others in the next shift. 3) The patient waiting room is inconvenient due to the abundant number of patients waiting. The polyclinic rooms are full of patients waiting for physician practice; moreover, patients who want to see physicians in the shift await them. 4) Waiting time for supporting medical check-up, such as radiology and laboratory examination, is longer due to the

full number of patients. 5) Waiting time for pharmaceutical service also takes longer due to the packed list of prescriptions submitted altogether. 6) A long queue in cashier occurs when plenty of patients wait for registration in the same hours.

Some studies show a significant relationship between waiting time and outpatient satisfaction at Indramayu General District Hospital with  $p=0.042$  (Nur laeliyah, 2017). Another study finds a significant relationship between service quality and punctuality of physicians ( $p=0.000$ ) on the re-utilization of outpatient services at Kotamobagu General District Hospital (Fajriah Dayoh et al., 2016). Other studies also discover patient waiting time at polyclinics was affected by physician tardiness (Sun J, Lin Q, Zhao P, Zhang Q, Xu K, Chen H, et al., 2017; Zhu Z, Heng BH, Teow KL, 2012; Mehra P, 2016; Miller R, 201; Harper PR, Gamlin HM, 2003; Mohebbifar R et al., 2014)

Robbin mentions three variables that determine individual behavior in an organization: the input variable, process variable, and output variable, respectively affected by some factors. The input variable, for example, is affected by biographical characteristics, behavioral personality, and values. The process variable is affected by motivation (intrinsic factor and extrinsic factor), perception, decision making, emotion, and moods (Robbins and Judge, 2017).

This present study aims to identify factors affecting part-time medical specialists' tardiness at the polyclinic by considering some variables. For example, biographical characteristics are studied, such as age, gender, latest education, work period, number of practice locations, number of practice days, practice schedule where other hospitals set less than 60 minutes compared to the hospital studied. Besides, this study also identified intrinsic motivation factors (achievement, responsibility, other's recognition, and development) and extrinsic factors (policy and administration, supervision, work relationship, medical service, and work environment).

This study is expected to give recommendations and evaluations on physician performance at the X hospital, especially about outpatient service waiting time. Therefore, it could give implications for improving the quality service and public health in general.

## METHOD

This study was correlational quantitative and used a cross-sectional approach. This study was conducted at X Hospital Semarang from May to June 2020 after receiving ethical approval from the Ethics Commission, Diponegoro University. The population of the study was all part-time medical specialists at the polyclinic of X hospital. The sample was 67 respondents who agreed to participate in this study. This study was conducted in some stages, such as formulating questionnaires, validating questionnaires, collecting data, and processing data.

A structured questionnaire was tested for validity and reliability to 15 medical specialists in another hospital, similar to X hospital. The validity test was conducted using the Pearson Product Moment correlation test, where a valid question should obtain a positive value of  $r_{xy} > r$  table. The  $r$  table value from 15 respondents was 0.370- 0.903, with a significance level of 0.05. The reliability test on the questionnaire measured Cronbach alfa's value at 0.517- 0.923 with the final value of  $> 0.514$ , meaning the questionnaire was reliable.

The data collection distributed the questionnaire from May to June 2020. Respondents' characteristics were presented in frequency and percentage. The bivariate analysis of the respondents' characteristics was done using the Spearman correlation test with a significance level and  $p < 0.05$ . The multivariate analysis was done using multiple linear regression with the Backward method to identify factors that affect medical specialists' tardiness the most with correlation coefficient ( $r$ ) and  $P < 0.025$ . All analyses were processed in SPSS.

## RESULTS AND DISCUSSION

Table 1 presents the respondents' characteristics. Nearly half of the respondents were male (52.5%) and aged 51-60 years (43.2%). Most of them completed specialist education (68.7%). The majority (70%) had worked at the hospital for more than nine years. Of 67 respondents, 35 respondents (52.2%) worked in three different hospitals, while only 9% worked at the hospital studied.

Regarding their frequency of practices at the polyclinic, 32.8% worked once and twice a week, and 37.3% worked every day. Apart from taking a part-time practice at the hospital, about 32.8% worked at other hospitals for  $\leq$  one hour. This study shows nearly fifth-eighths (64.2%) of part-time medical specialists and subspecialists sometimes came late, but only one respondent never came late to the hospital.

**Table 1.** Respondents' characteristics

No	Respondents' characteristics	Frequency (n)	Percentage (%)
1	Gender		
	Male	35	52.2
	Female	32	47.8
2	Age		
	30-40 years	12	17.9
	41-50 years	11	16.4
	51 -60 years	29	43.2
	>61 years	15	22.3
4	Education		
	Specialist	46	68.7
	Subspecialist	21	31.3
5	Number of Practice Locations		
	Only at X hospital		
	At two hospitals		
	At three hospitals	6	9
		26	38.8
		35	52.2
6	Frequency of Practice Schedule at X hospital		
	1-2 times per week		
	3-4 times per week		
	Every day	22	32.8
		20	29.8
		25	37.3
7	Practice schedule for $\leq$ 1 hour before serving at X hospital		
	Yes	22	32.8
	No	45	67.2
8	Tardiness in Medical Practice		
	Never		
	Occasionally		
	Sometimes	1	1.5
	Often	43	64.2
		16	23.9
		7	10.4

Table 2 illustrates the results of the Spearman correlation bivariate test on biographical characteristics, intrinsic motivation factor (achievement, responsibility, other's recognition, and development), and extrinsic factors (policy and administration, supervision, work relationship, medical service, and work environment) on the tardiness of medical specialists. The table shows extrinsic factors with  $p < 0.05$  were practice schedule at other hospitals ( $p = 0.010$ ) and work environment ( $p = 0.19$ ).

#### **Effect of Biographical Characteristics**

Respondents' biographical characteristics include age, gender, latest education, work period, number of practice days, and practice schedule. In terms of practice schedule, the part-time medical specialist spent  $\leq 60$  minutes at other hospitals and their practice at the studied hospital. The results show that the schedule variable has a significant relationship with part-time medical specialists' tardiness.

Twenty-seven respondents who had another schedule at  $\leq 60$  minutes (96.29%) were late to the hospital. The matter is that they spend more time traveling to the second practice location since the X hospital is located in an overcrowded city and jam-packed traffic.

#### **Effect of intrinsic motivational factors**

Malayu Hasibuan, in his book entitled *Organization and Motivation*, mentions one factor that affects individual behavior is the intrinsic motivation (Hasibuan MS, 2010). Some studies also assert that intrinsic motivational factors affect individual behavior (Wijsman LA, Saab N, Schuitema J, van Driel JH, Westenberg PM, 2019; Muhajir I, 2016). This study analyses aspects of these factors, such as achievement, responsibility, other recognition, and development, proven to affect the part-time medical specialists' tardiness. It indicates that if

the hospital provides those aspects well, the specialists might not prioritize practices at other hospitals since facilities available, there are enough for their development path.

#### **Effect of Extrinsic Motivational Factors**

Extrinsic factor is a factor that affects individual behavior in an organization. Aspects of the extrinsic factor studied include policy and administration, supervision, job reports, medical services, and work environment. This study only finds a work environment with a significant relation to part-time medical specialists' tardiness at the polyclinic. This lies upon the respondents' responses. Twenty-three respondents stated that alternative rooms for consultation are not available, which becomes a cause of tardiness. As a result, the hospital carried a control sheet on the physician schedule, and rooms often occupied at 70-80%. There was an overlapping schedule between medical specialists in the previous and upcoming shifts. When they have identified their colleagues' practice duration, they tend to come late because they do not want to wait too long. The hospital also does not provide a waiting room for doctors. Forty-six respondents (68.7%) agreed, and seven respondents (10.4%) strongly agreed that this room's unavailability would make doctors come late. The third factor is that the hospital sets physicians' schedules too close to their other hospitals' other practice schedule. Thirty-one respondents (46.3%) agreed, and three respondents (4.5%) strongly agreed with this statement.

From the patient perspective, 39 respondents (58.2%) agreed that late patients might cause physician tardiness. Late patients perceive that their respective doctors come late to practice. Similarly, Rogers (1974), as cited by Notoadmaja (2003), mentions that before individuals adopt a new behavior, some order processes take account of the decision.

**Table 2.** Bivariate analysis on factors affecting tardiness of part-time medical specialists at the polyclinic of X hospital

Variable	Late Attendance				p	r
	TP	KK	CS	S		
Age	67 ± 0.0	53 ± 12.1	56 ± 10.0	50 ± 9.1	0.717	0.045
Gender						
Male	1 (100)	20 (46.5)	11 (68.8)	3 (42.9)	0.548	-0.072
Female	0 (0)	23 (53.5)	5 (31.3)	4 (57.1)		
Latest education						
Specialist	1 (100)	31 (72.1)	9 (56.3)	5 (71.4)	0.353	0.119
Subspecialist	0 (0)	12 (27.9)	7 (43.8)	2 (28.6)		
Work period	15 ± 0.0	Ten ± 4.8	12 ± 3.9	12 ± 2.1	0.516	0.081
Number of practice						
At X hospital	0 (0)	3 (7)	0 (0)	3 (42.9)	0.421	-0.096
At 2 hospitals	1 (100)	16 (37.2)	7 (43.8)	2 (28.6)		
At 3 hospitals	0 (0)	24 (55.8)	9 (56.3)	2 (28.6)		
Number of working days	3.0 ± 0.0	3.6 ± 1.8	3.5 ± 2.0	4.6 ± 1.7	0.331	0.121
Schedule at other hospitals ( < 60 minutes compared to that at X hospital)						
Yes	1 (100)	8 (18.6)	8 (50)	5 (71.4)	0.010	-0.358
No	0 (0)	35 (81.4)	8 (50)	2 (28.6)		
Achievement	7.0 ± 0.0	6.9 ± 2.5	7.9 ± 1.9	7.9 ± 1.6	0.148	0.179
Responsibility	9.0 ± 0.0	9.6 ± 1.1	10 ± 1.0	9.7 ± 1.3	0.169	0.170
Other's recognition	10 ± 0.0	9.0 ± 2.2	9.9 ± 2.4	9.6 ± 2.1	0.187	0.163
Development	7.0 ± 0.0	6.4 ± 3.1	8.0 ± 2.5	6.4 ± 2.1	0.095	0.206
Policy & administration	6.0 ± 0.0	6.9 ± 1.2	6.9 ± 1.2	7.4 ± 1.1	0.229	0.149
Supervision	14 ± 0.0	11 ± 2.1	12 ± 1.9	11 ± 1.8	0.587	0.068
Job rapport	14 ± 0.0	15 ± 2.5	15 ± 2.7	13 ± 3.6	0.979	-0.003
Medical services	8.0 ± 0.0	8.6 ± 3.1	9.0 ± 2.7	8.4 ± 2.1	0.425	0.099
Work environment	24 ± 0.0	28 ± 3.7	30 ± 3.2	30 ± 1.1	0.019	0.287

First, people will have an awareness of the stimulus. Then, they will start to put their interest in the stimulus. After that, they will evaluate the positive and negative consequences of the stimulus. When they are into this process, their behavior acceptance is way better. In the next process, they give a trial to adopt a new behavior. When they have consolidated their knowledge, awareness, and behavior towards the stimulus, they will ultimately adopt the new behavior (Notoadmaja, 2003). If individuals can accept the new behavior and respond positively, they will maintain to act in a long way and vice versa (McShane, Steven L, and Marry Ann Von Glinow, 2000).

Besides, this study also finds the fifth factor, a work environment that may affect tardiness. There were 36 respondents (53.7%) who agreed that the parking lot is too crowded. The parking lot area is only 1.636 m<sup>2</sup>, of which 537 m<sup>2</sup> of the area is for 276 motorcycles, and 1.099 m<sup>2</sup> is for 73 cars. The parking lot accommodates cars or motorcycles of 20-26 doctors, inpatients, and outpatients with BOR 70-80% of 70 beds and 300 health staff in the same hours. As a result, physicians need to wait long to park their cars or motorcycle due to the packed parking lot. In overcoming this matter, the hospital has rent near land, limited staff's cars, and schedule

patients' appointment. Unpredictable jam-packed traffic is considered another factor by 48 respondents (71.6%) since the hospital is located in an overcrowded city. In certain circumstances, physicians may prolong treatment which takes some time to finish. Thirty-six respondents (53.7%) agreed, and nine of them (13.4%) strongly agreed with this factor. At the hospital, there are senior specialists and subspecialist who take part-time practice at other hospitals. Moreover, surgeons might have some

unpredictable incidental condition in their practice so that they come late to the practice due to this matter.

Additionally, overlapping schedules between physicians are thought by 33 respondents (49,2%) agreed that are to be another factor. Such overlapping schedules may be caused by late practice, which does not match the minimum standard of patient consultation. Thus, the hospital needs to manage this matter over and over again.

**Table 3.** Multivariate analysis on factors affecting tardiness of part-time medical specialists at the polyclinic of X hospital

Variable	B	p	Notes
Schedule at other hospital	-0.433	0.016	Significant
Achievement	-0.010	0.827	Not significant
Responsibility	0.077	0.306	Not significant
Others' recognition	0.029	0.445	Not significant
Development	0.002	0.963	Not significant
Policy & Administration	-0.055	0.533	Not significant
Work environment	0.040	0.094	Not significant

Table 3 presents the result of multivariate linear regression with Backward method on variables with  $p < 0.25$  obtained from the bivariate analysis. The result shows that only practice schedules at other hospitals were the only factor affecting part-time medical specialists' tardiness.

The multivariate multiple linear logistic with Backward method also discovers the practice schedule at other hospitals had  $p = 0.016$ . It means only this variable significantly affects the tardiness of part-time medical specialists. From here, the hospital should pay attention to re-arranging their schedule in order not to overlap or rush with other schedules at other hospitals.

According to Stephen P Robbin, work environment is an extrinsic motivation that affects the process of individual behavior. Such work environment may include work ambience and facilities which can affect staff to carry their tasks. The ambience includes serenity, comfort, safety, and security. This aspect can be observed

from room cleanliness, temperature, noise, and placement. While, work conditions include facilities and infrastructures provided, such as space, room decoration, advanced tool kit, and others. Good vibes in work may support staff productivity. Some studies show there was a significant relationship between work environment and productivity.

**CONCLUSION**

The only biographical characteristic that affected part-time medical specialists' tardiness is schedules at other hospital, which is 60 minutes less than at X hospital ( $p = 0.010$ ). While, the extrinsic factor that had a significant effect on their tardiness is work environment ( $p = 0.019$ ). In the same line, the multivariate analysis, schedule at other hospitals that only take 60 minutes less than the X hospital schedule significantly affected their tardiness with a P-value of 0.016.

The X hospital needs to re-arrange the schedule for part-time medical specialists not to overlap their schedule at other hospitals. Moreover, providing alternative rooms for consultation, waiting room for doctors, a more spacious parking lot, and management of patient appointments is essential to reduce the number of physicians who come late. Further study can research on other variables and theories that have not been discussed yet in this study.

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#### REFERENCES

- Basta YL, Tytgat KMAJ, Klinkenbijl JHG, Fockens P, Smets EMA. Waiting time at a fast-track diagnostic clinic. *Int J Health Care Qual Assur* [Internet]. 2016;29(5):523–35.
- David, et al.. Hubungan keterlambatan kedatangan dokter terhadap kepuasan pasien diinstalasi rawat jalan.Tesis manajemen rumah sakit. Tidak diterbitkan. 2013;
- Fajriah Dayoh et al.. Hubungan persepsi pasien tentang pelayanan dokter dengan minat pemanfaatan ulang pelayanan rawat jalan di poliklinik umum di RSUD Kota Kotamobagu. 2016;
- Harper PR, Gamlin HM. *Reduced outpatient waiting times with improved appointment scheduling: a simulation modelling approach*. 2003;207–22.
- Hasibuan MS. *Organisasi and Motivasi*. Jakarta: Bumi Aksara; 2010.
- McShane, Steven L and Marry Ann Von Glinow. *Organizational Behaviour*. United States. McGraw-Hill Companies; 2000.
- Mehra P. *Outpatient clinic waiting time , provider communication styles and satisfaction with healthcare in India*. emerald insight. 2016;
- Miller R. *Studying the efficiency of inpatient and outpatient pharmacies using lean manufacturing*. Emerald Insight. 2015;
- Mohebbifar R, Hasanpoor E, Mohseni M, Sokhanvar M, Khosravizadeh O. *Outpatient Waiting Time in Health Services and Teaching Hospitals: A Case Study in Iran*. 2014;6(1):172–80.
- Muhajir I. PEengaruh Faktor Ekstrinsik (Hygiene) And Faktor Intrinsik (Motivator) Terhadap Etos Kerja Pegawai PT. Karsa Utama Di Kota Gorontalo. 2016;
- Notoadmaja. *Pengantar Pendidikan Kesehatan and Ilmu Perilaku Kesehatan*. Yogyakarta: Andi Offset; 2003.
- Nur laeliah. Waktu tunggu pelayanan rawat jalan dengan kepuasan pasien terhadap pelayanan di rawat jalan RSUD Kabupaten Indramayu. *J Kesehat Vokasional*,. 2017;Vol 1 no 2.
- RI P. Peraturan Menteri Kesehatan No 129 years 2008 tentang Standar Pelayanan Minimal Rumah Sakit. 2008.
- Robbins and Judge. *Perilaku Organisasi*. Cetakan Ke. Jakarta: Salemba Empat; 2017.
- Sun J, Lin Q, Zhao P, Zhang Q, Xu K, Chen H, et al. *Reducing waiting time and raising outpatient satisfaction in a Chinese public tertiary general hospital-an interrupted time series study*. 2017;1–11.
- Wijsman LA, Saab N, Schuitema J, van Driel JH, Westenberg PM. *Promoting performance and motivation through a combination of intrinsic motivation stimulation and an extrinsic incentive*. *Learn Environ Res* [Internet]. 2019;22(1):65–81.
- Zhu Z, Heng BH, Teow KL. *Analysis of Factors Causing Long Patient Waiting Time and Clinic Overtime in Outpatient Clinics*. 2012;707–13.