


Analysis Of the Health Services of Tuberculosis Patients Regarding Compliance with Drinking Drugs In Puskesmas Of Medan

¹Yulia Afrina Nasution, ²Siti Permata Sari Lubis, ³Esraida Simanjuntak

¹Faculty of Medicine University of Muhammadiyah North Sumatra

^{2,3} Diploma of Medical Record University of Imelda Medan

Article Info	ABSTRACT
<p>Keywords: Tuberculosis, Pharmacy Service, Nursing Service, Medication Compliance</p>	<p>Tuberculosis is the second most deadly infectious disease. Indonesia is in the top three countries after India and China. The number of patients in North Sumatra in 2019 was recorded at 37,865 people while in 2020 there were 33,779 cases. Medan has the highest number of cases, which were 12,105 cases in 2020. This research aims to analyze health services such as pharmacy services and nursing services for tuberculosis patients in relation to medication compliance in Puskesmas of Medan. This research uses an observational method with a cross-sectional design. The number of samples is 100 people with purposive sampling technique. The analysis used is univariate, bivariate and multivariate. The pharmaceutical service shows that there is an effect of pharmaceutical service with medication compliance (p= 0.004; 95% CI 1.550-9.309). The OR value is 3.798 meaning that people who experience less effective pharmaceutical service have a risk of 3.798 time to not comply with medication compared to people who experience effective pharmaceutical services. The nursing service shows that there is an effect of nursing service with medication compliance (p= 0.002; 95% CI 1.671-10.602) with an OR value of 4.209, meaning that people who experience ineffective nursing services have a risk of 4.209 times to not comply with medication compared to people who experience effective nursing care. There is an influence of pharmacy services and nursing services with medication compliance in tuberculosis patients in Puskesmas of Medan.</p>
<p>This is an open access article under the CC BY-NC license</p> 	<p>Corresponding Author: Yulia Afrina Nasution University of Muhammadiyah North Sumatra Medan, Sumatera Utara yuliaafrina@umsu.ac.id</p>

INTRODUCTION

Tuberculosis is the second deadliest infectious disease, making it a public health problem that is a global challenge. In 2018 the United Nations held its first high-level meeting on TB, namely - United to End TB: An Urgent Global Response to a Global Epidemic - regarding the need for action to accelerate progress in ending the TB epidemic by 2030 (Dinkes Sumut, 2019).

Indonesia has been ranked third after India and China with the number of TB cases, namely 824 thousand cases with 93 thousand deaths per year or the equivalent of 11 deaths per hour. TB cases in North Sumatra in 2019 were 37,685, an increase compared to all TB cases found in 2018, namely 26,418, while in 2020 there were 33,779 cases. The highest number of cases were in Regencies/Cities, namely Medan City with 12,105 cases and Deli Serdang Regency with 3,326 cases (Dinkes Sumut, 2019; Kemenkes RI, 2023).

Efforts to control tuberculosis have been carried out by the central and regional governments. Puskesmas as the main health service facility for the community has made efforts to overcome it by improving health services such as nursing services and pharmaceutical services. Based on this, researchers are interested in analyzing the health services of tuberculosis patients on adherence to taking medication at the Medan City Health Center.

METHODS

This research uses an observational method with a cross-sectional design that emphasizes the time of measurement or observation of independent and dependent variable data only once. The number of samples is 100 people. The instrument used is a questionnaire with a purposive sampling technique. The analysis used is univariate, bivariate and multivariate.

RESULTS AND DISCUSSION

Univariate analysis

Univariate analysis based on the characteristics of the respondents based on gender, occupation and age as follows:

Table 1. Frequency Distribution of Respondent Characteristics by Gender, Occupation and Age

No.	Respondent Characteristics	F	%
1.	Gender		
	1. Male	65	65.0
	2. Female	35	35.0
2.	Accupation		
	1. Jobbless	12	12.0
	2. Civil Servant	28	28.0
	3. Self-employe	25	25.0
	4. Privat employe/employe	35	35.0
3.	Age		
	1. 25-30 year	25	25.0
	2. 31-45 year	36	36.0
	3. >45 year	39	39.0
	Total	100	100.0

The table shows the frequency distribution of the number of men more than women, namely 65% men and 35% women. Characteristics of respondents based on the most jobs are private employees/employees, namely 35%. For age characteristics, the highest number of respondents was at > 45 years of age, 39%.

Table 2. Frequency distribution of pharmacy services and nursing services to tuberculosis patients

Variable	Medication Adherence				Total	%
	Not Obey	%	Obey	%		
Pharmacy services						
1. Ineffective	30	30.0	21	21.0	51	51.0
2. Effective	16	16.0	33	33.0	49	49.0
Nursing Seervices						
1. Ineffective	34	34.0	25	25.0	59	59.0
2. Effective	12	12.0	29	29.0	41	41.0
Total	46	46.0	54	54.0	100	100.0

Based on table 2, it shows the frequency distribution of pharmacy services that are ineffective and not obey in taking medication as many as 30 people (30%) while in nursing services that are ineffective and non-compliant with taking medication as many as 34 people (34%).

Bivariate Analysis

The influence of pharmaceutical services and nursing services can be seen from the P value as shown in the following table:

Table 3. Effect of Pharmaceutical Services and Nursing Services on Medication Adherence

Variable	Medication Adherence						P Value
	Not Obey	%	Obey	%	Total	%	
Pharmaceutical Services							
1. Ineffective	30	30.0	21	21.0	51	51.0	0.009
2. Effective	16	16.0	33	33.0	49	49.0	
Nursing Services							
1. Ineffective	34	34.0	25	25.0	59	59.0	0.005
2. Effective	12	12.0	29	29.0	41	41.0	
Total	46	46.0	54	54.0	100	100.0	

The results obtained show that there is an influence of pharmaceutical services and nursing services on adherence to taking medication where the P value $< \alpha$ 0.05.

Multivariate Analysis

Multivariate analysis is an analysis to find out which variable has the most dominant influence. multivariate test using multiple logistic regression with enter method.

Table 4. Effect of Pharmaceutical Services and Nursing Services on Medication Adherence

Variable	B	Sig.	Exp(B)	95% C.I.for EXP(B)	
				Lower	Upper
Pharmaceutical Services	1.335	0.004	3.798	1.550	9.309
Nursing Services	1.437	0.002	4.209	1.671	10.602
Constant	-3.818	0.000	0,022		

The table above shows that the most dominant variable influencing adherence to taking medication in tuberculosis patients is nursing services, with an Exp (B) value of 4.209 (95% CI 1.671-10.602) meaning that ineffective nursing services can result in 4.209 times that patients with tuberculosis do not adherence to taking medication compared to people who receive effective nursing services.

Discussion

Ineffective pharmaceutical services have an effect on tuberculosis patients taking medication, resulting in patient and community demands regarding the quality of pharmaceutical services at the Puskesmas. Pharmaceutical services are direct and responsible services to patients related to pharmaceutical preparations in improving the patient's health status. Pharmacy services at the Puskesmas are an integral part of the implementation of health efforts, which play an important role in improving the quality of health services for the community. Pharmaceutical services provide information regarding communication/consultation, information and education (IEC) services to patients, other health workers, institutions, professional and community organizations. This is done so that people who suffer from tuberculosis can adhere to taking drugs and prevent tuberculosis (Permenkes, 2014).

Good nursing services will determine the success of the treatment program for tuberculosis patients, in nursing services it is necessary to supervise the treatment of patients in monitoring patient compliance with taking medication. Nursing services can assist patients in recognizing and dealing with pressing psychological and social problems to foster improved interpersonal relationships, and to enhance personal development. Things that are done to tuberculosis patients are to support and encourage, listen to patient complaints, assist in resolving conflicts related to disease. This can make the patient feel comfortable so that the patient will comply in taking the drug (Indasari et al., 2019).

CONCLUSION

The results of the analysis that was carried out at the Medan City Health Center showed that there was an influence of pharmaceutical services and nursing services on adherence to taking medication in tuberculosis patients.

Conflict of interest

Tuberculosis is an infectious disease which is still a public health problem until now. The number of tuberculosis sufferers increases every year so this research needs to be done to overcome the problem at the health center level.

Funding

Sources of funding are from researchers or their own costs

Ethics

Institute of research and community service at the University of Imelda Medan with the number 08/LPPM-UIM/VII/2022/e.

Author contributions

The author makes the same contribution in this study.

REFERENCE

- Dinkes Sumut. (2019). Profil Kesehatan Provinsi Sumatera Utara Tahun 2019.
- Indasari, M. P., Djoar, R. K., & Mayesti, S. G. (2019). Peran perawat dan tingkat kepatuhan minum obat pada penderita tb paru. *Jurnal Penelitian Kesehatan*, Jilid 5, nomor 2, hlm 92–97.
- Kemkes RI. (2023). Deteksi TBC Capai Rekor Tertinggi Tahun 2022. Website. <https://www.kemkes.go.id/article/view/23033100001/deteksi-tbc-capai-rekor-tertinggi-di-tahun-2022.html>
- Permenkes. (2014). Peraturan Menteri Kesehatan Republik Indonesia Nomor 75 Tahun 2014 Tentang Pusat Kesehatan Masyarakat.