

**NURSING RELATIONSHIP ANALYSIS OF NURSING AGENCY
WITH DRUG COMPLIANCE IN THE PUBLIC HEALTH CENTER
OF MALANG DISTRICT**

Rahmania Ambarika, Novita Ana Anggraini, Dedi Saifullah, Alfian Fauzi, Sutrisno, Joko Sutrisno, Erma Retnaningtyas, Nur Yeny Hidajaturokhmah

Department of Nursing, Institute of Health Science Strada Indonesia

Corresponding author: rahmania.ambar@gmail.com

ABSTRACT

The process of treating pulmonary tuberculosis patients must be done regularly so that the disease can be completely cured. Treatment of pulmonary tuberculosis that is incomplete will have an impact on the resistance of *Mycobacterium tuberculosis* so that it will be more difficult in the healing process.

This research design is correlation analytic. The population in this study were all patients with pulmonary TB in the Wajak Public Health Center in Malang Regency, there were 33 respondents, a large sample of 30 respondents with accidental sampling technique. The independent variable is the nurse of nursing agency while the dependent variable is compliance. The test used is rho spearment.

The results showed that 22 (73.3%) respondents thought that the nursing agency of nurses was sufficient, most respondents of family nursing agencies were quite good as many as 16 respondents (53.3%) and the majority of respondents complied with taking medication as many as 21 respondents (70%) .

Based on the results of the analysis using the rho spearment test. The results obtained $p = 0.020$ there is a relationship between nursing agency nurses with medication adherence in TB patients and the research results obtained that $p = 0.033$, which means that there is a relationship between family nursing agency and medication adherence in TB patients in Puskesmas Wajak.

The existence of a family and nurse nursing agency is a psychosocial support that is able to provide emotional strength, family affection and the attention of health workers increases the patient's enthusiasm to spend drugs with the aim of being cured

Keywords: nursing agency, nurses, compliance, TB sufferers

PENDAHULUAN

Latar Belakang

Tuberculosis (TB) is a public health problem in the world, its mortality and morbidity rates continue to increase. Lung TB disease by World Health Organization (WHO) is declared a Global Emergency. Pulmonary tuberculosis is an infectious disease of the respiratory system that is contagious caused by *Mycobacterium tuberculosis* (Nugroho, 2013). Symptoms that often appear in patients with pulmonary tuberculosis such as a long cough or more than 2 weeks that does not go away accompanied by blood, fever, weight loss, sweating at night and easily tired. Pulmonary tuberculosis is a disease that is deadly if it is not properly managed even though it requires a relatively long time (Muttaqin, 2008; Ilyassov et al., 2020; Jubhari et al., 2020; Kadhim et al., 2020; Kankaew, 2020). If tuberculosis is not treated, it will result in airway obstruction, lung parenchymal damage, lung carcinoma and respiratory failure syndrome (Nurfutriana, 2015).

The process of treating patients with pulmonary tuberculosis must be carried out regularly so that the disease can be cured completely. Incomplete pulmonary tuberculosis treatment will have an impact on *Mycobacterium tuberculosis* resistance so that it will be more difficult in the healing process. Pulmonary tuberculosis treatment is divided into 2 stages, namely the first 30 days is an intensive stage and the next is an advanced stage up to 6 months (Riadi, 2009).

Recently, many pulmonary tuberculosis sufferers failed to take category I treatment for 6 months because the patients did not take anti-tuberculosis drugs (OAT) as recommended by the doctor. One of the reasons for the non-compliance of TB patients in taking medication is the lack of family roles, especially those who live in the same house as the patient in monitoring taking medication, as well as motivation in patient treatment and also the role of health workers. The role of family and health workers is closely related to patient compliance to consume Anti-Tuberculosis Drugs (OAT) because the pulmonary tuberculosis treatment process takes a relatively long time so that it does not get interrupted in the middle of the road which results in *Mycobacterium tuberculosis* becoming resistant so you have to use higher level drugs if you want. complete in the treatment of tuberculosis (Nugroho, 2013).

Given the possibility of drug withdrawal, the role of the nursing agency is needed to supervise TB patients. Nursing agency (nursing agency) is someone who is able to fulfill the status of a nurse in social groups. Nursing agencies are individuals, men, women and children or groups of people such as families or communities. For this reason, the role of those closest to the patient (nursing agency) is needed in efforts to increase adherence in the management of TB therapy.

Survey results from the World Health Organization (2013) show that around 685 million people in the world are diagnosed with pulmonary tuberculosis and it is estimated that by 2035 it could reach 850 million people (WHO, 2013). Basic Health Research Data (2013) Ministry of Health of the Republic of Indonesia, the prevalence of pulmonary tuberculosis in Indonesia is 22.56% of the total population. East Java Province is in the 6th position with the most pulmonary tuberculosis patients with a prevalence of 12.6% (RISKESDAS, 2015).

Based on data from the Malang Regency Health Office, the TB incidence rate in 2017 was 1,163 patients and in 2018 there was an increase in TB sufferers by 1,260 patients. In 2019 data obtained for the last 3 months there were 339 TB sufferers. Based on the results of the preliminary study at the Wajak Public Health Center, the TB incidence rate from January to June 2019 there were 35 TB patients with 2 deaths and 1 drop out, and until now they don't want to continue treatment on the grounds that there is no support from their family, they are ostracized at home, the patient chooses to die. This proves the need for the support of the Nursing Agency, namely nurses in providing motivation to sufferers for the successful treatment of TB sufferers.

One of the ways to reduce the failure of pulmonary tuberculosis treatment is the presence of family members who are appointed as Supervisors of Drinking Drugs (PMO) to supervise and provide motivation to take medication so as to increase the enthusiasm of patients to recover from tuberculosis (Juwita, 2014).

The role of a good family can affect the success of pulmonary tuberculosis treatment by always providing motivation to patients to want to take medication regularly. Motivation is defined as an impulse that arises from within a person who consciously or unconsciously makes people behave to achieve goals in accordance with their needs (Uno, 2013). This is in accordance with Muna & Soleha's (2014) study of motivation and social support from families and health workers affecting treatment compliance in pulmonary tuberculosis patients.

The results of this study are sufficient motivation and support from families and health workers who are sufficient to encourage patients to take anti-tuberculosis drugs (OAT) and seek treatment regularly so as to reduce failure in the pulmonary tuberculosis treatment process. Based on the background of the above problems, researchers are interested in doing research on "The relationship between nursing agency nurses and adherence to taking anti-tuberculosis (OAT) drugs in TB patients at Wajak Public Health Center, Malang Regency"

FORMULATION OF THE PROBLEM

Starting from the above problems, the formulation of the problem can be formulated as follows: Is there a relationship between nursing agency nurses and adherence to taking anti-tuberculosis drugs (OAT) in TB patients at Wajak Puskesmas, Malang Regency?

RESEARCH PURPOSES

General purpose

To find out the relationship between nursing agency nurses and adherence to taking anti-tuberculosis (OAT) drugs in TB patients at Wajak Public Health Center, Malang Regency.

Special purpose

1. Identifying nursing agency nurses in pulmonary tuberculosis patients at Wajak Puskesmas, Malang Regency.
2. Identifying adherence to taking anti-tuberculosis (OAT) drugs in pulmonary tuberculosis patients at Wajak Public Health Center, Malang Regency.
3. Analyzing the relationship between nursing agency nurses and compliance with taking anti-tuberculosis (OAT) drugs in TB patients at the Wajak Community Health Center, Malang Regency

BENEFITS OF RESEARCH

Practical Benefits

1. Theoretical Benefits

Can contribute ideas and additional knowledge about compliance with taking anti-tuberculosis (OAT) drugs in terms of family support for pulmonary tuberculosis patients at Wajak Public Health Center, Malang Regency.

2. Practical Benefits

a. For Respondents

Increase respondents' knowledge about compliance with taking anti-tuberculosis (OAT) drugs in terms of the role of the nursing agency in pulmonary tuberculosis patients at Wajak Puskesmas, Malang Regency.

b. For Research Sites

It is hoped that it can be used as a source for the development of further research related to adherence to taking anti-tuberculosis drugs (OAT) in terms of the role of nursing agency in pulmonary tuberculosis patients at Wajak Puskesmas, Malang Regency.

c. For further researchers

As a reference material related to epidemiological studies regarding compliance with taking anti-tuberculosis drugs (OAT) in terms of the nursing agency on pulmonary tuberculosis patients at Wajak Public Health Center, Malang Regency.

RESEARCH METHODS

Research design

This research design is a correlation analytic. The population in this study were all patients with pulmonary tuberculosis in Wajak Public Health Center, Malang Regency, there were 33 respondents, a large sample of 30 respondents with accidental sampling technique. The independent variable is the nurse and family nursing agency, while the dependent variable is compliance. The test used was rho spearment.

Population, Sample and Sampling

1. Population

All pulmonary tuberculosis patients in Wajak Community Health Center, Malang Regency.

2. Samples

The sample in this study were all patients with pulmonary tuberculosis in the Wajak community health center, Malang Regency, as of September 2019, there were 30 TB patients.

3. Sampling

Techniques in taking samples of pulmonary tuberculosis patients in the Wajak community health center, Malang Regency, at the time of the data study, as of September 2019, there were 33 TB patients.

Data Collection Process

- 1) Arranging research permits from the Rector of STRADA Indonesia Kediri
- 2) Manage research permits to the head of the UPT Puskesmas Wajak Malang Regency
- 3) Manage research permits from the Malang District Health Office
- 4) Provide an explanation to the respondent if they are willing to be the respondent to sign the consent inform.

Data analysis

In this study, the collected data were analyzed with the Rho spearman

RESULT RESEARCH

Respondent Characteristics

Table 4.1. Characteristics of Respondents based on age at Wajak Puskesmas December 2019

No	Umur	Σ	%
1	< 36 thn	19	63,3
2	36 - 40 thn	3	10
3	41 - 60thn	8	26,7
Total		30	100

The results showed that most of the respondents were less than 36 years old as many as 19 respondents (63.3%).

Table 4.2. Characteristics of Respondents based on gender at Wajak Puskesmas December 2019

No	JK	Σ	%
1	Male	7	23,3
2	Female	23	76,7
Total		30	100

The results showed that most of the respondents were male as many as 23 respondents (76.7%).

Tabel 4.3.Characteristics of Respondents based on education at Wajak Puskesmas December 2019

The results showed that the most of the respondents were male as many as 23 respondents (76.7%).

No	Pendidikan	Σ	%
1	SD	13	43,3
2	SMP	3	10
3	SMA	11	36,7
4	S1	3	10
Total		30	100

Table 4.4. Characteristics of Respondents based on work at Wajak Puskesmas December 2019

No	Pekerjaan	Σ	%
1	Swasta	19	63,3
2	Farmer	6	20
3	No Work	5	16,7
Total		30	100

The results showed that most of the respondents had private jobs as many as 19 respondents (63.3%).

Table 4.5. Characteristics of Respondents based on economic status at Wajak Puskesmas December 2019

No	Penghasilan	Σ	%
1	< 1 juta	19	63,3
2	> 1 juta	11	36,7
Total		30	100

The results showed that most respondents had an income of less than 1 million as many as 19 respondents (63.3%).

Table 4.6. Characteristics of Respondents based distance age at Wajak Puskesmas December 2019

No	Jarak	Σ	%
1	< 1 km	24	80
2	1 - 5 km	3	10
3	> 5 km	3	10
Total		30	100

The results showed that most of the respondents had a distance of <1 km from the health service as many as 24 respondents (80%).

Variable Characteristic

1. Nursing Agency of Nurse

Table 4.12. Characteristics of Variabels based on nursing agency of nurse at Wajak Puskesmas December 2019

No	Perawat	Σ	%
1	Kurang	4	13,3
2	Cukup	22	73,3
3	Baik	4	13,3
Total		30	100

The results showed that most of the nursing agency respondents were quite good as many as 22 respondents (73.3%).

2. Compliance

Table 4.13. Frequency Distribution Variable characteristics based on compliance at Wajak Puskesmas December 2019

No	compliance	Σ	%
1	No	9	30
2	Yes	21	70
Total		30	100

The results showed that most respondents obeyed to take medicine as many as 21 respondents (70%).

Analysis of Research Statistical Test Results

The results showed that $p = 0.020$ with p value < 0.05 , so H_1 was accepted and H_0 was rejected, which means that there was a relationship between nursing agency nurses and medication compliance in TB patients at Wajak Public Health Center.

DISCUSSION

1. Identification of the Nursing Agency of the Nurses in Pulmonary Tuberculosis Patients at the Wajak Puskesmas, Malang Regency

The results of the research that have been done show that of the 30 respondents, 22 (73.3%) of respondents thought that the nurse's nursing agency was sufficient, while 4 (13.3%) of the respondents thought that the nursing agency was less than the nurse in an effort to increase compliance. taking medication, and 4 (13.3%) respondents showed good nursing agency from nurses.

The role of nurses as educators is considered important, because they can provide direct education to patients. According to Sudiharto (2007) suggests that in nursing practice, nurses perform two main roles that must be performed by nurses, namely as educators where nurses are responsible for providing health education to families, especially for To be independent of the family in caring for family members who have health problems and the second role, namely as a facilitator. Nurses can be a place to ask individuals, families and communities to solve health and nursing problems that they face daily and can help provide solutions to solve problems.

Based on the results of the study, it was found that the role of the nursing agency nurses was good in carrying out their responsibilities armed with the knowledge they had so that they could help patients to improve medication compliance. The presence of patients who still feel less in receiving services from nurses needs attention and evaluation, considering that nurses are the first to receive patients when they start getting treatment and also always be with patients so they should be able to know all the patient's conditions related to the disease they are experiencing.

2. Identification of Compliance with Anti-Tuberculosis (Oat) Medication in Pulmonary Tuberculosis Patients at Wajak Public Health Center, Malang Regency.

Based on the results of the study, it was found that most patients were obedient to taking medication as many as 21 (70%) of respondents and there were 9 (30%) of respondents who did not comply. Adherence is the patient's behavior in undergoing medication, following a diet, or following other lifestyle changes in accordance with medical and health recommendations. Compliance is the main thing because following the recommendations of medical experts is one way to cure patients (Kartika, in Anisha, 2013). Adherence is generally defined as the level of behavior of a person who receives medication, follows a diet, and / or implements a lifestyle in accordance with the health service provider recommendations (WHO, 2003). Compliance is a behavior in adhering to a recommendation of daily habits and can be assessed by a research score. Adherence is influenced by the level of education, where education is the main basis for successful prevention or treatment (Tjokroprawiro, 2002).

Based on the results of the study, it was found that they were not compliant, this was influenced by a lack of knowledge about the dangers of not complying with TB drugs and also because of a lack of family support / most of the respondents had primary school education. The educational factor is one of the factors for easily accepting the information obtained. Non-adherence to treatment is indicated by the drug not being used up on time

3. Nursing Agency Nursing Relationships with Compliance with OAT Drinking in Pulmonary Tuberculosis Patients at Wajak Public Health Center, Malang Regency

Based on the results of the study, it was found that $p = 0.020$ with p value < 0.05 , so H_1 was accepted and H_0 was rejected, which means that there was a relationship between nursing agency nurses and medication compliance in TB patients at Wajak Public Health Center.

Pulmonary tuberculosis is an infectious disease of the respiratory system that is contagious caused by *Mycobacterium tuberculosis* (Nugroho, 2013). Symptoms that often appear in patients with pulmonary tuberculosis such as a long cough or more than 2 weeks that does not go away accompanied by blood, fever, weight loss, sweating at night and easily tired. Pulmonary tuberculosis is a disease that is deadly if it is not properly managed even though it requires a relatively long time (Muttaqin, 2008).

The process of treating patients with pulmonary tuberculosis must be carried out regularly so that the disease can be cured completely. Incomplete pulmonary tuberculosis treatment will have an impact on *Mycobacterium tuberculosis* resistance so that it will be more difficult in the healing process. Pulmonary tuberculosis treatment is divided into 2 stages, namely the first 30 days is an intensive stage and the next is an advanced stage up to 6 months (Riadi, 2009).

To avoid dropping out of treatment for TB patients, the nursing agency role is needed to supervise TB sufferers. Nursing agency (nursing agency) is someone who is able to fulfill the status of a nurse in social groups. Nursing agencies are individual men, women and children or groups of people such as families or communities. These social groups need nurses who have special abilities so that they can help them provide care that will replace limitations or provide assistance in overcoming health problems by fostering a relationship between nurse and client (Orem, 2001). Things that can be done by families, nurses and the community are in the form of supervision of taking medication and implementing a healthy lifestyle (Heru, 2010). In nursing, it is hoped that it can train and develop independence in clients (Orem, 2001). For this reason, the role of the people closest to the patient (nursing agency) is needed in efforts to increase adherence in the management of TB therapy. Nursing agencies can play a role in overseeing the taking of drugs for TB sufferers (Orem, 2001). One of the ways to reduce the failure of pulmonary tuberculosis treatment is the presence of family members who are appointed as Supervisors of Drinking Drugs (PMO) to supervise and provide motivation to take medication so as to increase the enthusiasm of patients to recover from tuberculosis (Juwita, 2014).

This is according to the results of the research, it is found that the relationship between nurse nursing agencies and OAT compliance.

CONCLUSIONS AND RECOMMENDATIONS

Conclusion

1. Based on the research results, it was found that 22 (73.3%) respondents to a nursing agency nurse were sufficient,
2. Based on the results of the study, most of the respondents obeyed to take medicine as many as 21 respondents (70%).
3. Based on the results of the analysis using the rho spearment test. The results obtained $p = 0.020$, there is a relationship between nursing agency nurses and adherence to taking medication in TB patients at Wajak Public Health Center.

Suggestion

1. For Research

Sites Health workers are expected to provide promotional and preventive efforts through counseling and counseling on adherence to taking medication for TB sufferers and also the importance of family support.

2. For Further Research

For research perfection, further researchers should be able to find other factors that can influence medication adherence.

REFERENCE

1. Aditama. (2014). *Dasar – dasar Ilmu Penyakit Paru,Tuberkulosis Paru*. Surabaya : Airlangga Univesity Press.
2. Amin. (2007). *Pengobatan Tuberkulosis Paru dalam Buku Ajar Ilmu Penyakit Dalam*. Edisi V. Jakarta : PPIPD FKUI.
3. Arikunto (2007), *Manajemen Penelitian*, Edisi 2, Rineka Cipta, Jakarta
4. Arikunto, S. (2010). *Prosedur Penelitian*. Jakarta : Rineka Cipta
5. Dinas Kesehatan Provinsi Jawa Timur. *Profil Kesehatan Provinsi Jawa Timur*. 2012. Diakses tanggal 13 Juni 2019 dari <http://www.depkes.go.id/>
6. Friedman, Marilyn M. (2010). *Buku Ajara Keperawatan keluarga : Riset, Teori dan Praktek*. Jakarta : EGC
7. Girsang. (2012). *Tuberkulosis Paru*. (<http://www.tabloidnakita.com>). Diakses tanggal 13 Juni 2019.
8. Hidayat (2008), *Metodologi Penelitian Keperawatan dan Teknik Analisis Data*, Jilid 1, Salemba Medika, Jakarta
9. Hidayat. (2011). *Menyusun Skripsi dan Tesis Edisi Revisi*. Bandung : Informatika
10. Ilyassov, N., Doskaliev, Z., Abdikarimov, A., Yelchibaev, B., Nurgaliyev, Y., Kanaev, R., & Darbayeva, A. (2020). Changes in laboratory data after liver surgery, early postoperative period. *Systematic Reviews in Pharmacy*, 11(12), 134–137. <https://doi.org/10.31838/srp.2020.12.22>
11. Jubhari, E. H., Dammar, I., Launardo, V., & Goan, Y. (2020). Implant coating materials to increase osseointegration of dental implant: A systematic review. *Systematic Reviews in Pharmacy*, 11(12), 35–41. <https://doi.org/10.31838/srp.2020.12.6>
12. Kadhim, K. F., Alrubayae, I. M. N., & Amer, A. M. (2020). Catfish (silurus glanis) remaining parts as a source of biodiesel preparation. *Systematic Reviews in Pharmacy*, 11(12), 167–171. <https://doi.org/10.31838/srp.2020.12.27>
13. Kankaew, K. (2020). The Competencies-Based Development in Pharmaceutical Industry. 11(12), 962–963.
14. Muwarni, Arita dan Sri setyowati. 2010. *Asuhan keperawatan keluarga*. Yogyakarta : fitramaya.
15. Notoatmodjo, Soekidjo (2005), *Promosi Kesehatan Teori dan Aplikasi*, Jakarta, Edisi 1, Rineka Cipta, Jakarta
16. Notoatmodjo. (2010). *Metodologi Penelitian Kesehatan*. Jakarta : Rineka Cipta

17. Nursalam. (2008). *Konsep dan penerapan metodologi penelitian ilmu keperawatan edisi XVI*. Jakarta : salemba medika
18. Nursalam. (2014). *Metodelogi Penelitian Ilmu Keperawatan Pendekatan Praktis Edisi 3*. Jakarta : Salemba Medika
19. Orem, DE (2001). *Nursing Concept of Practice. The C.V. Mosby Company*. St Louis
20. Riset Kesehatan Dasar. *Laporan Nasional*. 2015. Diakses tanggal 20 Juni 2019 dari <http://www.slideshare.net/ssuser200d5e/riskes-das-2013-30782412>
21. Sastroasmoro, S. & Ismael, S. (2010). *Dasar-dasar metodologi penelitian klinis. Edisi Ke-3*. Jakarta: Sagung Seto.
22. Setiadi. (2007). *Konsep dan penulisan riset keperawatan. Edisi pertama*. Yogyakarta.graha ilmu
23. Setiadi, 2008. *Konsep & Proses Keperawatan Keluarga*. Yogyakarta : Graha Ilmu
24. Setyowati, Sri dan Arita. 2008. *Asuhan Keperawatan Keluarga : Konsep & Aplikasi Kasus*. Yogyakarta : Mitra Cendekia Press.
25. Sugiyono, (2010). *Metode Penelitian Kuantitatif Kualitatif*. Bandung : Alfabeta
26. Sukma. (2012). *Konsep dasar keperawatan*. Penerbit PT. Prestasi pustakaraya. Jakarta
27. Smeltzer SC., Bare BG, *Buku Ajar Keperawatan Medikal Bedah Brunner & Suddarth*. Edisi 8 vol. 3 Jakarta: Penerbit Buku EGC, 2002 :2131 – 2137
28. Trihono. 2013. *Riset Kesehatan Dasar Tahun 2013*. Jakarta : Badan Litbangkes Kemenkes RI