

Medication Adherence Behavior Among Patients with Pulmonary Tuberculosis (TB) in West Sumba

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ABSTRACT

The recovery of Tb patients depends on medication adherence. Drug side effects, duration of treatment, health control, and social stigma towards Tb patients influence adherence. The assumption that Tb is a hereditary disease, a curse, and challenging to cure makes patients unmotivated to take medicine and reluctant to go to health services because of shame. These factors are at risk of increasing drug resistance rates and hindering the recovery process in Tb patients. The purpose of this study was to describe drug compliance in patients with pulmonary Tb in West Sumba. This study used a descriptive qualitative method with a case study research design and an indepth interview technique. The sample selection was made by purposive sampling with the age 20-45 criteria. Data analysis was done by reducing, presenting, and drawing conclusions. The results showed that drug adherence behavior in TB patients was influenced by treatment routines, barriers during treatment, and emotional, informational, and financial support from the social environment. According to the community, Tb is a curse, contagious and dangerous disease, not a cursed one. Therefore, the results of this study should serve as a basis for health workers and health policymakers in the West Sumba region to design health promotion programs on the importance of social support on treatment adherence of Tb patients so that Tb patients can maintain treatment adherence.

Keywords: *Tb compliance; Stigma; Tuberculosis*

ABSTRAK

Kesembuhan pasien Tb bergantung pada kepatuhan minum obat. Kepatuhan dipengaruhi oleh efek samping obat, lamanya pengobatan, kontrol kesehatan dan stigma sosial terhadap penderita Tb. Anggapan bahwa Tb merupakan penyakit turunan, kutukan dan sulit sembuh, membuat penderita tidak termotivasi untuk minum obat dan enggan ke pelayanan kesehatan karena malu. Hal ini beresiko terhadap peningkatan angka resisten obat dan menghambat proses kesembuhan pada pasien Tb. Tujuan penelitian ini adalah menggambarkan kepatuhan

minum obat pada pasien Tb Paru di Sumba Barat. Penelitian ini menggunakan metode kualitatif deskriptif dengan desain penelitian studi kasus dan teknik indepth interview. Pemilihan sampel dilakukan secara purposive sampling dengan kriteria usia 20-45. Analisa data dilakukan dengan mereduksi data, menyajikan data dan penarikan kesimpulan. Hasil penelitian menunjukkan perilaku kepatuhan minum obat pada penderita TB dipengaruhi oleh rutinitas pengobatan, adanya hambatan selama menjalani pengobatan, dukungan emosional, informasi, dan finansial dari lingkungan sosial. Menurut masyarakat, Tb merupakan penyakit kutukan, menular dan berbahaya dan bukanlah penyakit kutukan. Oleh karena itu, hasil penelitian ini kiranya dapat menjadi landasan bagi para tenaga Kesehatan dan pemangku kebijakan Kesehatan di wilayah Sumba Barat untuk merancang program promosi Kesehatan tentang pentingnya dukungan sosial terhadap kepatuhan pengobatan pasien Tb agar para penderita Tb dapat mempertahankan kepatuhan pengobatan.

Kata Kunci: Kepatuhan pengobatan; Stigma; Tuberkulosis

INTRODUCTION

Pulmonary Tuberculosis (TB) is an infectious disease that has not been completely eradicated in Indonesia. Indonesia's TB treatment success rate in the last four years (2020-2024) has fluctuated and has yet to reach the national target 2024 (90%). The highest treatment success rate in 2021 was 86%, but it fell in the following two years to 2023 (84.81%) (KEMENKES RI, 2024). Basic Health Research (Riskesdas) data in 2016 showed that the pulmonary TB treatment success rate in East Nusa Tenggara in 2017 was 83.0%, which has not yet reached the target set by the Ministry of Health, which is $\geq 90\%$ (Kemenkes RI, 2018). In a smaller area, West Sumba district ranks third with the highest cases of pulmonary TB in East Nusa Tenggara. The number of pulmonary TB cases in West Sumba Regency in 2016 was 92 (NTT Central Bureau of Statistics, 2018). This data shows that the success rate of TB requires program planning that is a

continuum of care supported by various public service sectors that use a *people-centered framework*.

TB case management in the West Sumba district has been carried out using the DOTS (Directly Observed Treatment Shortcourse) strategy. This WHO-recommended program focuses on the supervision of taking medication, the provision of free drugs, and the provision of supplementary food packages (WHO, 2022a). However, the decline in TB cases in West Sumba has not yet reached the success rate of TB treatment even though the DOTS program has been implemented. In 2019, there were 90 cases of pulmonary TB in West Sumba Regency, and the number of drug withdrawal cases at the Weekarou Health Center in West Sumba was 6 out of 23 people. (Badan Pusat Statistik NTT, 2018)

Many factors influence the incidence of drug withdrawal. Research shows that gender, age, financing, education level, and length

of treatment are factors that determine whether patients do not take their medication regularly (drug withdrawal). (Aviana et al., 2021). Non-compliance can lead to low cure rates, bacterial resistance to antibiotics (Drug Resistant Tb), and risk of recurrence and death. (Alipanah et al., 2018) According to preliminary studies conducted by researchers, there is a decrease in motivation in Tb patients to undergo treatment. The stigma of West Sumba communities that TB is a sensitive condition is associated with HIV disease, only experienced by people with low incomes and easily transmitted by sufferers to others. Therefore, people stay away from people with TB. The community's stigma and fear of the disease make patients feel unmotivated to undergo treatment and check-ups at the patient's health service, impacting the risk of not getting an evaluation of treatment progress and increasing the risk of Drug-Resistant TB (Tb-RO).(Cervantes, 2016a)

Public perception can influence a person's behavior in maintaining health. According to the holistic care theory developed by Leininger (Sunrise Model), seven aspects influence individual behavior, namely (1) technology, (2) religion and philosophy, (3) social, (4) culture, (5) politics, (6) economics, and (7) education. (McFarland & Wehbe-Alamah, 2019). The life of the people

of West Sumba, which is influenced by tribal culture and religion in daily life, may influence community perceptions about disease, prevention, and treatment. Research on patient compliance in undergoing treatment has never been done in West Sumba. With the characteristics of a community that is strong with culture, is the holistic care theory approach appropriate to determine TB treatment adherence behavior in patients in West Sumba? Research on the same topic has been conducted, but quantitative research methods have been used so that the causes of non-compliance have yet to be explained in detail. (Luh et al., 2019; Tuty Putri et al., 2015)

METHOD

This study applied descriptive qualitative method with a case study research design to determine the description of drug compliance behavior among Tubercular patients (John.W. Creswell, 2007). This study was conducted from November to December 2020 in the working area of the Weekarou Community Health Center (Puskesmas), West Sumba Regency. The sample selection was determined using purposive sampling with the principles of appropriateness and adequateness. (Lyn Richards, 2015). About Five TB patients (under treatment) at Weekarou health center in West Sumba district aged 20-45 years agreed to participate in this study. All

participants willing to be interviewed in-depth and able to speak Indonesian. The data collection technique used was in-depth semi-structured interviews and collected through audio recording and interview notes. Furthermore, the data has been analyzed descriptively using data reduction, data presentation, conclusion drawing, and verification. (John.W. Creswell, 2007).

Data validation techniques were carried out using data triangulation techniques in the form of source triangulation to each family member closest to the participant. This research has gone through an ethical feasibility test and was declared feasible by the Ethics Commission of Satya Wacana Christian University (057/KOMISSETIK/EC/XI/2020).

RESULT AND DISCUSSION

1. The overview of Tb Patients

This study involved 5 participants are TB patients who undergoing treatment in the Puskesmas Weekarou West Sumba accompanied by families (as a triangulation sources to validate data from TB patients) Each participant was interviewed once using the Indonesian language. The average age of participants was 22 to 48 years. The last education of two participants was elementary school education; two had junior high school education, and one had high school education. Two participants'

occupations were not working, and two were farmers, and one was self-employed.

2. Treatment Routine

Based on the results of interviews conducted by researchers, participants in this study stated that several efforts were made to achieve recovery, namely by taking medication regularly and conducting regular controls. This was expressed by the participants as follows:

“Sudah 1 bulan bulan ini saya minum obat yang dari Puskesmas, ada 2 jenis itu obat dari Puskesmas yang saya minum” (P3, Desember 2020)

“Sudah 3 bulan ini minum obat, dan tiap bulan selalu ke Puskesmas untuk ambil obat dengan periksa” (P4, Desember 2020)

Hal yang sama diungkapkan oleh keluarga partisipan sebagai berikut:

“Selama berapa bulan ini suami minum terus obat” (P9, Desember 2020)

“Iya dia minum terus itu obat selama 2 bulan ini” (P10, Desember 2020)

2. Communities Support during treatment

Based on the results of the interviews, participants received three types of support while undergoing TB treatment: emotional support, information support, and financial support. In supporting adherence to taking medication, TB patients received emotional support from family, health workers, and the surrounding community. Emotional support

received by participants during treatment was receiving attention by constantly being reminded to take medicine, get plenty of rest, and stop smoking.

“Keluarga, mereka selalu kasih ingat untuk minum obat, berhenti rokok dengan banyak istirahat Kalau dari petugas kesehatan waktu pergi ambil obat mereka hanya kasih ingat supaya rajin minum obat” (P2)

Information support affects the behavior of TB patients in terms of their compliance with medication. The existence of information about the patient's disease from health workers can help patients understand more about their disease and how to get rid of the disease. Information support received by participants is receiving information and education about the treatment process from health workers. “Dari dokter saja, dokter sarankan untuk ke Puskesmas untuk ambil obat dan rajin minum selama 6 bulan kalau berhenti minum harus ulang dari awal lagi” (P3)

In supporting adherence to taking medication, TB patients receive financial support. The financial support received by participants during the TB treatment process was assistance with medical expenses. “Ada juga keluarga yang kasih uang untuk bantu pengobatan” (P3)

“Selama ini berobat selalu pake KIS, kalau tidak ada KIS mungkin sudah tidak pergi ambil obat lagi” (P4)

3. Obstacles during treatment

Based on the results of the interviews, participants felt that there were several obstacles during the treatment process, including the burden and impact experienced during the treatment process.

The results of the interviews conducted found that the burden felt by participants during treatment was a psychological burden. This feeling is due to the negative stigma of the community about pulmonary TB, namely that pulmonary TB is a contagious and incurable disease. “Jangankan orang lain, saya punya saudara kandung sendiri sampai tidak pergi jenguk di rumah sakit karena takut” (P2)

This was also conveyed by the participant's family as follows:

“Keluarga saja yang berani bilang di saya kalo itu penyakit menular jadi tidak boleh terlalu dekat, saya tidak mau saya punya anak di bilang sakit yang aneh-aneh karna saya juga jadi stress”

The TB treatment process, which requires an extended period, affects the survival of patients, such as hampering work and even losing their jobs.

“Saya harus berhenti kerja terus pulang kembali ke kampung karena sakit” (P2)

“Iya, karena saya harus berhenti bekerja dan pulang kampung. Sampai kampung juga saya tidak bisa kerja hanya bisa dirumah saja urus kebun” (P3)

4. Perception of Community about TB

Based on the results of in-depth interviews with participants regarding community perceptions of TB, two categories were obtained: the definition of TB and socio-cultural influences. Some participants still did not know the cause of pulmonary TB and how it is transmitted.

“Saya tidak tahu juga bagaimana awalnya, tiba-tiba saja terkena TB” (P1)

“Saya tidak tahu juga bagaimana awalnya saya bisa kena penyakit ini, awalnya saya pikir hanya sakit biasa karena saya hanya pusing dan muntah-muntah, terus saya batuk-batuk selama 1 bulan.” (P3)
In addition, people in Sumba also consider tuberculosis a disease that is acquired after doing something that violates custom.

” Kalau di Sumba kalau kita tanya orang yang agama Marapu¹, dorang² bilang kita bisa kena ini penyakit karena ada sesuatu yang kita buat” (P3)

Some participants also revealed that tuberculosis is a contagious disease.

”Masyarakat sini percaya kalau ini penyakit berbahaya dan menular di orang lain” (P1)

“Masyarakat disini anggap itu penyakit menular yang berbahaya” (P4)

Some participants revealed that pulmonary TB is not a hereditary disease.

“Sebagian besar tidak ada anggapan apa-apa karna sudah disosialisasikan bahwa ini penyakit bukan penyakit keturunan, memang penyakit menular asal bisa jaga supaya jangan ada yang terkena lagi” (P5).
They also think that taking traditional medicine can reduce or even cure their illness besides taking medicine from the health center.

“Kalo pengobatan saya minum juga obat tradisional seperti akar-akar dengan kulit kayu” (P1)

“Kalo pengobatan saya pakai obat tradisional juga yang bapak buat, obat-obatan dari air kelapa muda, jamur dengan daun ungu, setelah saya minum itu obat saya rasa saya punya kondisi lebih baik, setelah itu bulan ketiga saya sudah tidak pergi ambil obat lagi karena saya rasa sudah sembuh” (P2)

“Pergi berobat ke Dukun juga, dan selain minum obat dari Puskesmas saya minum obat tradisional juga” (P3)

5. Dealing with living expenses during TB treatment

Based on the results of the study, it is known that all participants come from relatively

low economic groups. The interview results found that three out of five participants felt economic difficulties and met the needs of living costs during illness only from farming and gardening.

“Iya, sulit sekali karena harus berhenti bekerja juga” (P2)

“Iya, karna saya harus berhenti bekerja dan pulang kampung. Sampai kampung juga saya tidak bisa bekerja hanya bisa dirumah saja urus kebun” (P3)

“Istri saja yang jualan sayur dengan untungnya ada hasil kebun juga jadi masih bisa penuhi kebutuhan sehari-hari” (P4)

6. Expectation of recovery

During TB treatment, participants have expectations to recover through the treatment process, as evidenced by the following:

“Iya saya lakukan itu nasihat-nasihat yang keluarga dan perawat bilang supaya saya bisa sembuh” (P3)

“Iya ada nasihat-nasihat dari keluarga dorang saya ikut saja supaya saya sembuh” (P4, Desember 2020)

“Saya lakukan supaya saya bisa sembuh” (P5)

DISCUSSION

Patient compliance is the patient's willingness to complete treatment routinely. Patients who have completed the consumption of Anti Tuberculosis (OAT)

drugs will be documented on medical records without any absence of taking regular antibiotics, even though the final examination of sputum does not apply yet to the patients (Opperman & Du Preez, 2023a). on the other hand, Furthermore, the patient's recovery status is determined by a sputum examination that shows the TB bacteria are harmful or inactive (BTA-). Of course, to achieve this cure, patients must be compliant with both drug consumption and regular medical check-ups to health services.

TB treatment also has an impact on preventing disease transmission. According to the Ministry of Health (2011), compliance with regular antibiotics will inhibit the bacteria's life cycle and break the transmission chain. (Soedarsono et al., 2023).

Regularity of taking medication means regularly taking Anti Tuberculosis Drugs for 14 consecutive days in the initial phase (2 months) and 14 consecutive days in the continuation phase (4 months) without delay. Based on the results of the study show that participants during the initial phase took OAT regularly and did control to the hospital when the drug had run out. All participants strive to achieve recovery during the treatment process. Participants take medicine daily and are accompanied by

their families for their medical checkup routine. (Putri et al., 2021).

The recovery of TB patients is the goal of treatment. Support to achieve this goal is not only the motivation of the patient but also the efforts made by the family and social community. (De Fretes et al., 2020). Hasil The study showed that Tb patients provided emotional, information, and financial support. Emotional support includes forms of attention and care for participants. Information support includes providing information and advice related to pulmonary TB treatment. Financial support is direct assistance provided by families and health services in the form of assistance with medical expenses. The results showed that participants received emotional support through attention and care by constantly being reminded to take medicine, stop smoking, and get plenty of rest. This support is received from family, other people, and health workers, which states that good family support is related to patient treatment compliance. Informational support received by participants during the treatment process was receiving information such as the process and the length of treatment from health workers. Information provided by health workers is that tuberculosis treatment must be carried out for six to eight months. If the patients stop taking medicine, they repeat with the higher doses of antibiotics.

Information support from health workers dramatically influences the treatment process of TB patients.(Putri et al., 2021). In addition, participants received financial support while undergoing treatment, such as money from the family to help with medical expenses and free treatment at the Puskesmas. Therefore, support for people with pulmonary TB is needed in undergoing the treatment process so that clients remain compliant with taking medication so that relapse and re-treatment do not occur. (De Fretes et al., 2020)

TB clients on treatment may experience barriers. Factors that influence non-adherence are poverty, stigma, social environment, unsupportive work, helplessness, and hopelessness. All participants experienced barriers such as negative stigma from the community and the impact of undergoing TB treatment. Participants obtained negative stigma; this can occur because of the community's assumption that TB disease is a dangerous infectious disease. The existence of negative stigma can make participants experience psychological burdens. In addition to negative stigma, all participants experienced impacts due to TB treatment, including decreased income and job loss. As expressed by participants, while undergoing treatment, they had to stop working. Someone who undergoes TB treatment will experience a

reduction in working hours because they have to undergo a prolonged treatment.(Dodor, 2012). However, the study's results found that despite the various obstacles experienced, although sometimes bored, all participants underwent treatment properly and regularly. This boredom is not an obstacle to continuing the treatment process.

The community thought that TB disease might be a curse from the ancestors. The existence of this belief makes participants not only seek treatment at the health center but entrust healing to traditional healers as well. In addition, the study results also showed that participants chose to use traditional medicine as a habit of the local community. Traditional medicines are believed to help cure pulmonary TB faster. These things are influenced by the local solid knowledge that exists in the community. Based on the research, there was one participant who stopped taking pulmonary TB medication because he felt he had recovered after taking traditional medicine. Participants believe in the use of traditional medicine to cure TB disease. Participants' beliefs related to the treatment also varied, one of which was by consuming leaves and herbal medicinal materials, one of which functions to relieve cough. The participants' choice to do traditional treatment resulted in participants not

completing the TB treatment process thoroughly. However, four participants continued to take Tb program drugs even though they also took traditional medicines. Participants' trust influenced this in health services, health workers, and treatment.

Most participants considered pulmonary TB a contagious disease, not hereditary. The perception affected their compliance behavior in taking medication, such as being embarrassed to take treatment. The community stigma that pulmonary TB disease is a shameful disease and the belief that the disease cannot be cured by medicine are considered to be the causes of people's embarrassment to seek treatment at the Puskesmas and fear of being diagnosed with pulmonary TB (Cervantes, 2016b). This aligns with Leininger's theory that a person's recovery is not only influenced by medical or physical problems. (McFarland & Wehbe-Alamah, 2019). But various social and cultural factors also considerably influence a person's recovery. (Opperman & Du Preez, 2023b). To achieve recovery, patients must free themselves from the stigma. Patients must be given the community's and environment's support and trust. Based on the researcher's analysis, participants continue to undergo their treatment regularly despite the negative stigma due to the support received by participants. From the study results, it is known that all participants

come from poor economic groups. The difficulties experienced by participants were economic problems during illness and undergoing treatment; the participants' weak condition and having to rest a lot made them unable to work. Three participants experienced economic difficulties, while two revealed that their economic needs were still sufficient. Participants fulfill their needs during illness only from farming and gardening. This study found that although participants experienced economic difficulties during Tb treatment, they could finance their daily needs by utilizing the proceeds from farming and gardening so that participants could still undergo treatment regularly. The economic impact during the treatment process of TB patients often occurs in developing countries, such as Indonesia and Nigeria. (Iswari et al., 2020;

CONCLUSION

Patients with TB undergo treatment by the recommendations of health workers. This adherence is formed due to the routine of TB treatment, the community environment, and health workers. The stigma in the community about TB, the economic difficulties caused by it, the hope for recovery, and the community's belief in the disease have an impact on the consistency of Patients undergoing treatment. Therefore, the results of this study can serve as a basis

Onazi et al., 2015). Therefore, countries are trying various ways to minimize the economic impact. Researchers tried to solve the problem in China by financing TB patients according to the case, but it has not yielded the maximum results. (Jiang et al., 2019). The participants' expectation of undergoing treatment is to recover from the disease. High patient expectations will increase their health behavior, in this case, compliance with taking medication. Hope is one of the important things for healthy coping with illness. Based on the study results, they recover from their illness to carry out their usual activities and return to work. The long time makes clients unable to work anymore. Motivation for recovery must come from the patient and also social support (WHO, 2022b).

For health workers, especially nurses in the community area, both as implementers and health policymakers in the West Sumba region, to design health promotion programs and programs that focus on the community (people-centered) to support the treatment compliance of Tb patients.

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