

FACTORS THAT INFLUENCE TUBERCULOSIS PATIENTS POSITIVE POWDER AFFORDABLE USING TRADITIONAL TREATMENT IN MUNICIPIO AILEU IN 2019

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ABSTRACT

The occurrence of traditional treatment for smear-positive pulmonary TB patients in the municipality of Aileu in 2018 is an act of negligence of patients against conventional treatment given through direct observation treatment short cost (DOTs) programs which are influenced by several driving factors, levers, and triggers so that the transfer of the patient to treatment traditional. To determine the factors that influence smear-positive pulmonary TB patients to tend to use traditional medicine in the municipality of Aileu in 2018.

The research stimulus was constructed using a quantitative analytic cross-sectional study, using a categorical scale with a sample of 106 smear-positive pulmonary TB patients who were taking the dots program. Data were analyzed cross-sectionally by establishing a relationship between one variable and another

The results of the analysis are presented (1) the influence of knowledge on the use of traditional medicine ranges from age group 18-37.32 (100%) with a P-value of 0.655, and the highest at ages 38-57 with a total of 33 (100%), from the second interval of the age group above, is in the productive age when associated with traditional treatment variables there is a possible relationship.

In this study, based on SPSS chi-square analysis, it was revealed that men ranked the highest 67 (100%) with a P-value of 0.736 while women 39 (100%), associated with traditional treatment in TB patients, had no significant relationship. In terms of education it can be seen that of 106 respondents, not going to school and primary school education 24 (22.64%) patients, still tend to use traditional medicine, and 39 (36.79%) of them did not use traditional medicine, with a Prevalencia Ratio value (RP) 0.065. Therefore it can be analyzed that there is no relationship between the level of education and the tendency of tuberculosis patients to use traditional treatments for tuberculosis in the municipality of Aileu in 2018. (2) Access to health facilities with TB incidence is a risk factor. Respondents who have access to inadequate health facilities have a 1,847 times greater risk of suffering from TB than those who have good access to health facilities.

According to Weraman P, Haslinda Baun (2016) said that with difficult access give impact to the community, especially TB sufferers using traditional drugs. (3) Drugs Supervisor (PMO) is a coordinator whose duty is to guarantee the regularity of treatment so that it can be quickly recovered or successful treatment according to the Ministry of Health (Kemenkes 2011). The drug supervisor has duties and functions as follows: (1) Supervise TB sufferers to ingest medicine regularly until the end of the treatment period (2) Provide encouragement to patients to seek regular treatment in the DOTs program and not to traditional medicine (3) Motivate patients to double-check the sputum at the time specified by the program (4) Provide

counseling to family members of tuberculosis patients who have symptoms of TB suspects to immediately check with health workers (5) Help accompany patients in taking anti-tuberculosis drugs in health facilities. Provide counseling about the benefits of conventional medicine with the effects of traditional medicine. The role of the supervisor of taking medication (PMO) is always to provide counseling about tuberculosis because the problem of tuberculosis has a lot to do with issues of knowledge and people's behavior. The aim is to increase awareness, willingness, and community participation in tackling tuberculosis. Irregularity in taking medication is a risk factor for TB in children under five. Respondents who did not take medicine regularly had a risk of getting TB 4,295 times more than respondents who took medicine regularly.

Keyword: Tuberculosis, Affordable, Traditional Treatment

INTRODUCTION

Traditional medicine is the total knowledge, expertise, and skills based on theories, beliefs, and experiences of people from various cultural backgrounds, who use traditional medicine to maintain health, whether for prevention, diagnosis, cure of disease, both physically and mentally. Traditional medicine, born and developed in the community, cannot be separated from the influence of the cultural development of the local community (WHO 2008).

Meanwhile, TB is a contagious infectious disease caused by germs (*Mycobacterium tuberculosis*) and is a major public health problem globally, regionally, and in Timor Leste, thus requiring effective treatment to break the chain of disease transmission (WHO, 2010). The tendency of smear-positive pulmonary TB patients to use traditional medicine does not guarantee the efficacy of these traditional medicines to kill *Mycobacterium tuberculosis* bacteria and cure patients from TB disease, apart from conventional TB treatment through the Directly Observation Treatment Short Course (direct observation treatment short course) program.

However, the global picture shows that in developed countries such as Australia 48.5% of the people can use traditional medicine, France as much as 49% and in Taiwan, 90% use conventional medicine in

combination with traditional medicine from China. Moreover, the results of the Indonesian National Socio-Economic Census report that traditional medicine activities have increased, namely: 15.04% in 1999 to 30.24%. in 2001 and 2002 it decreased to 29.73%, in 2003-2006 it increased from 30.67% to 38.30% (WHO 2011).

Meanwhile, the results of research by Ernawati K. et al (2017) in North Sulawesi Indonesia, that the behavior of seeking treatment for pulmonary TB is shown by the following data: (1) Continuing treatment for TB programs with 4 (5%) Yes and No 4 (5%) categories. 5%) (2) Go back for treatment to health workers with category Yes 3 (3.8%) and no by 26 (33.3%) (3) Buy drugs at pharmacies with category Yes 3 (3.8%) no 24 (30.7%) (4) Taking herbal/traditional medicines with categories Yes 0 and No 7 (8.9%) (5) Not treated with categories Yes 1 (1.2%) and No 6 (7.6%) with P-value = 0.037 (*Unpublished*)

In contrast to the results of research by Ervina L. et al (2018) in Bengkulu Indonesia that the number of patients who can use traditional medicines is 127 (66.8%) and those who are not as many as 63 (33.2%), the frequency of using traditional medicines is 2 times as much as 30 (37.5%), more than 3 times as many as

25 (32.9%), types of traditional medicine such as herbal medicine 52 (40.9%), herbalists as many as 46 (36.2%), traditional treatment methods such as herbs / herbal 78 (61.4%), consumption of herbal medicine 71 (55.9%) belief in traditional medicine with high category 75 (74.3%) low 52 (58.4%) with P value = 0.03, traditional medicine in terms of gender, women were 70 (66.7%), men 57 (67.1%) with P value = 1.00, traditional medicine in terms of education was below junior high school/equivalent 43 (81.1%) and high school and PT 84 (61.3%) with P value = 0.01

According to Soemardjan et al (1996) traditional medicine in terms of the cultural development of the community is divided into stages: (a) Early irrationalism, namely this cultural development, humans see themselves as part of nature, such as plants, animals, and according to the understanding that, they are born and die according to nature's will. Therefore, society has a belief that people become sick because of the actions of " subtle beings " then the way of healing is directed directly to these spirits (b) Dawn irrationalism is that people have belief in supernatural powers whose source is from the spiritual environment that is not visible in human form (c) Early rationalism, is a knowledge obtained by way of thinking and the principle of flow is that reason should be given the main role. Humans by chance or based on experience, know the forces contained in natural materials, and humans empirically or based on real events know the dangers of poison, the power of healing diseases, the power of body refreshment, and others hidden in the natural environment. , some shamans who used to work on supernatural powers, now devote some of their attention to scientific powers (d) the advanced stage of Rationalism

begins to realize that humans can control forces in nature rationally and no longer believe in something that cannot be rationally reasoned based on facts real and objective.

Based on the results of research conducted by Muture N. (2011) in Kenya Africa, the number of dropout cases was 32 (26.7%) who could use *herbal medication* and 88 (73.3%) who did not use herbs, while the controls who could use herbs were as many as 5 (3.3%) and 149 (96.7%) did not use with an OR value of 10.7 CI 4.0-28.6. Followed by the results of the study by Finlay A. et al in Africa, it was shown that cases of withdrawal from TB drugs using traditional medicine (traditional *healers*) were 30/159 (19%) and controls who could use traditional healers were 52/757 (7%) with a value of OR 3.2 CI 1.8-5.3.

The rational use of traditional medicine is defined, that is, patients receive drugs according to clinical needs, in doses that meet their own individual needs, for an effective time at a cost that is low enough for the local community. (WHO 2016)

According to Rahayu et al. (2012), the results of the study indicate that the dominant factors for choosing alternative traditional medicine include: (a) own household treatment, (b) traditional medicine, (c) and medical treatment carried out by doctors, nurses, at the Puskesmas and Hospital with occasional category only.

Based on the WHO report (2011) half a percent of the world's population was attacked by TB disease and most of them were in developing countries between 2009-2011 almost 89% of the population suffered from TB. In 2001, there were around 12 million people with TB worldwide or 178 per 100,000, and every

year 8.5 million patients were found, with 1.1% mortality. In 2009 it was reported that around 39% of TB diseases attacked in Asia, especially 22 countries with high TB burden, where every year around 9.4 million new TB cases are found with a pulmonary TB death rate of 3.8 million, and 14 million attacks the productive age group. Between 15-50 years.

According to Anengsih (2015), the report shows that in 1990-2011 almost 80% suffered from smear-positive pulmonary TB, and every year 3.4% of new cases were reported. Moreover, in Indonesia, according to the WHO report (2015), pulmonary TB cases by location are grouped into three regions, namely Sumatra, 33%, Java and Bali, 23%, Eastern Indonesia, 44%.

The results of Martins N. et al (2004) research show that pulmonary TB is still a serious problem in Timor-Leste, which is influenced by education, knowledge about TB disease, belief in traditional medicines, economy, and geographical conditions that do not allow it.

While the results of research by Silva V. et al (2012) in Timor-Leste are based on the results of the Bivariate statistical analysis with Chi-Square for cases of drug withdrawal who can use traditional medicine as many as 44 (77.2%) while cases of dropouts who cannot use traditional medicine 13 (22.8%) with an OR value of 3,631 Confidence Interval 1,768 – 7,456, meaning that patients who take traditional medicines have a 3 times greater risk of dropping out of drugs compared to cases that do not consume traditional medicines. Followed by the results of Reis j. 2016 suggests several factors that influence the adherence of TB patients to treatment in Timor-Leste, namely the role of health workers, social communication and socio-demography,

Geographically, Timor-Leste has a direct land border with Indonesia, there is the potential for buying and selling transactions of traditional herbal medicines between people in border areas and used for traditional medicine to continue in Timor-Leste. In addition, the World Health Organization (WHO) has identified several problems that hinder the implementation of stop TB in Timor Leste, and become risk factors, including an unhealthy environment, smoking habits, food nutrition, air pollution, and drinking habits (WHO, 2008).

Based on data from the National TB Program (NTP) report of the Ministry of Health of the Democratic Republic of Timor Leste in 2010 that the discovery of new cases of smear-positive as many as 1,530 (32%): and smear-negative TB 2,884 (60%), Extrapulmonary TB 354 (8%). In 2011, New case finding AFB (+) was 1,609 (37%) and TB AFB negative (-) 2,401 (55%) Extrapulmonary TB 337 people. In 2012 the discovery of new cases of smear-positive 1546 (32%), smear-negative 2823 (59%) cases of Extra Pulmonary TB as many as 420 (9%).

The Aileu Municipio Census data in (2015) shows that the population is 53,368 people spread over four sub-districts with health problems not much different from other Municipio in Timor-Leste such as the number of new smear-positive cases, extrapulmonary cases, and negative smears. Based on the statistical data report of the District TB Coordinator (DTC) of the municipality of Aileu the new case findings are as follows:

In 2015, 66 (74%) patients with smear-positive pulmonary TB were running the Direct Observation Treatment short course program, 4 (6%) of them were receiving treatment for recida, while 42 (21%)

extrapulmonary and pediatric TB cases in 2016 were 89 (79%), patients Positive smears running the Direct Observation Treatment short course program, patients who finished treatment 69 (42%), patients with complete treatment 5(6%), patients who did not do follow-up as many as 9 (10%), and patients on recite medication as many as 12 (13.4%). Meanwhile, pulmonary TB patients were smearing negative and extrapulmonary 21 (19.2%). In 2017 there were 66 (74%) new smear-positive case-patients who took part in the Direct Observation Treatment short course program, 8 (12%), and 7 (11%) patients who did not follow-up. In 2018, 45 cases of smear-positive smear patients, BTA negative 22 cases, extrapulmonary 3 cases, pediatric 1 patient.

Based on the data above, it can be concluded that new cases of smear-positive pulmonary tuberculosis (+) from 2015 to 2018 amounted to 266(100%) patients who were running the Direct Observation Treatment short course program, patients who had complete Direct Observation Treatment Short-course were 5(2%), patients who did not have Direct Observation Treatment short course. did follow-up 17(6.3%), patients who received stage two or recite treatment 23(8.6%) and patients with negative laboratory results, extrapulmonary TB patients, and pediatric or pediatric TB patients 89(33,4%). From the results above, what the researcher thinks is why only 5(6%) patients received complete treatment, while patients with the Direct Observation Treatment short course program were not followed up 23(8.6%) and patients became recalcitrant and 17(6.3%) it is possible due to the presence of traditional medicine during the running of the Direct Observation Treatment short course program is not regular.

Based on the researcher's observation that Timor Leste until now no data is showing

how many patients with smear-positive pulmonary TB are using traditional medicine (traditional Heller) as an alternative treatment, so in this paper, the researchers do not present data on traditional Timor Leste treatment as Remi data. . However, in reality, there are people who practice traditional medicine illegally, including treating patients with cases of tuberculosis. This happens because no government regulation regulates every practitioner of traditional medicine to follow good procedures so that pulmonary TB patients can only be treated with conventional medicine through (Direct Observation Treatment) recommended by the world health organization (WHO) and the Timorese Ministry of Health. Leste.

In terms of education, in general, some people in the research location are educated and some are uneducated, so they are easily influenced by traditional medicine practitioners, even from an economic level, not only people who have a low economy, but people with moderate economic factors participate or are involved in choosing traditional medicine for various reasons. However, the problem of traditional medicine in Timor-Leste has not been explored so researchers are interested in choosing the problem of traditional medicine to be studied.

Problem Identification

Based on the problems in the background, several problems can be identified as follows: (1) The low level of patient knowledge, can affect conventional TB treatment where patients tend to use traditional medicine (2) The role of drug-taking supervisors ((DTS)) continues to supervise, encourage TB patients who are being treated through the Direct Observation Treatment short course program do not switch to traditional treatment. (3) The distance the patient travels to health care facilities can affect

smear-positive pulmonary TB patients unable to complete treatment and eventually drop out of medication, so they switch to traditional treatment. (4) The role of the family in helping to motivate, control and supervise smear-positive pulmonary tuberculosis patients, to carry out regular treatment, so that patients continue to consistently take conventional medicine through the DIRECT OBSERVATION TREATMENT SHORT COURSE program.

LITERATURE REVIEW

Definition of Pulmonary Tuberculosis.

Is an infectious disease caused by rod-shaped bacteria (bacilli) known as *Mycobacterium Tuberculosis* (WHO 2012)? The spread of this disease is through the intercession of saliva or phlegm of patients containing pulmonary tuberculosis bacilli (Depkes RI 2007). The patient's saliva or phlegm flies in the air and is inhaled by healthy people and enters the lungs which then causes Pulmonary Tuberculosis (Hiswani, 1999). Furthermore, Hiswani explained that Micro bacteria are aerobic bacteria, rod-shaped, which do not form spores. Although it is not easy to color, if it has been stained it is resistant to acid or alcohol decolorization, hence the name acid-fast bacteria or acid-fast bacilli. (Hiswani, 1999). If a person is infected with the bacteria that cause tuberculosis, it will have bad consequences such as coughing, weight loss, lack of appetite, reduced work power or work productivity, and transmit it to other people, especially to families who live in the same house. and can cause death. The tissue most frequently attacked by tuberculosis is the lungs (95.9%). *Mycobacterium tuberculosis* can survive in dry air or cold conditions or can live for years in the refrigerator. This can happen when the germs are in a dormant nature (sleep). In this dormant nature, the

tuberculosis germs at some point allow conditions to grow and can rise again.

Types of TB disease

The most common type of TB disease found in the community is the type of Pulmonary Tuberculosis (Pulmonary TB) where the bacteria that causes tuberculosis attack and infect the respiratory tract and then slowly but surely infect and corrode the lungs. In addition to pulmonary tuberculosis, there is also tuberculosis lymphadenopathy of glandular tuberculosis. , TB of bone and TB of the brain or TB Meningitis (Santosa, I et al).

Causes of Pulmonary Tuberculosis (TB)

Lung: Pulmonary

tuberculosis (TB) is one of the infectious diseases caused by the bacteria "*Mycobacterium tuberculosis*". These germs can attack all parts of the human body, especially the lungs, and this disease is one of the leading causes of death in the world, an estimated 8.6 million TB cases, of which 1.1 million people (13%) are HIV-positive TB. (WHO, 2013)

Symptoms of TB Disease

Patients with pulmonary tuberculosis when exposed to the agent causing the disease may show signs such as the following: (a) Coughing with phlegm for more than two weeks. (b) Coughing up blood or bleeding. (c) Chest pain or tenderness (d) Feeling short of breath when breathing (e) Weight loss (f) Night sweats (g) lack of appetite. The incubation period for pulmonary tuberculosis is from infection to primary lesions. appears, while the time ranges from 4 - 12 weeks for pulmonary tuberculosis. In progressive pulmonary and extrapulmonary, tuberculosis usually takes longer, up to several years. The period of potential transmission, as long as tubercle bacilli are present in the sputum. Some cases without treatment or irregular treatment may be recurrent with positive

sputum for several years. The rate or degree of transmission depends on the number of tuberculosis bacilli in the sputum, the virulence of the bacilli, and the chance of air pollution from coughing, sneezing, and general loud talking. Sensitivity to infection with this disease is all population, there is no difference between men and women, young and old, infants and toddlers. The highest sensitivity in children less than three years old, the lowest in children aged 12-13 years, and can increase again at age youth and early old age.

Pathophysiology of Pulmonary TB

The course of TB begins with the implantation of respiratory bronchial bacteria or alveoli which then develops into primary TB and/or post-primary TB. Primary infection occurs when a person is first exposed to TB germs. Inhaled droplets are very small in size, so they can pass through the mucociliary defense system of the bronchi, and continue to travel until they reach the alveolus and stay there. Infection begins when TB germs successfully reproduce by dividing themselves in the lungs. Lymph ducts will carry TB germs to the lymph nodes around the hilum of the lung, and this is referred to as the primary complex. The time from infection to primary complex formation is about 4-6 weeks. The presence of infection can be proven by a change in the tuberculin reaction from negative to positive (Widyastuti, 2016). Continuation after primary infection depends on the number of germs that enter and the magnitude of the immune response (cellular immunity). In general, the immune reaction can stop the development of TB germs. However, some germs will stay as persistent or dormant (sleeping) germs. Sometimes the immune system is not able to stop the growth of germs, as a result, within a few months, the person concerned will become a TB patient. The incubation period, which is the time it

takes from infection to becoming sick, is estimated to be around 6 months. Post-primary tuberculosis usually occurs after several months or years after primary infection, for example, due to decreased immune system due to HIV infection or poor nutritional status. Post-primary tuberculosis is extensive lung damage with cavitation or pleural effusion.

TB Disease Transmission

According to Widyastuti (1999), Tuberculosis transmission from a patient is determined by the number of germs contained in the patient's lungs, the spread of these germs in the air through phlegm in the form of droplets. Patients with pulmonary TB that contain lots of germs can be seen directly with a microscope on examination of their sputum (smear-positive patients) are highly contagious. Patients with smear-positive pulmonary TB expel germs into the air in the form of very small droplets when coughing or sneezing. These very small droplets dry quickly and become droplets containing tuberculosis germs. And can survive in the air for several hours. Droplets containing these germs can be inhaled by other people. If these germs have settled in the lungs of the person who inhaled them, the germs begin to divide (multiply) and infection occurs from one person to another.

Case Findings of pulmonary tuberculosis

Case finding aims to obtain TB cases through a series of activities ranging from the screening of TB suspects, physical and laboratory examinations, determining the diagnosis, and determining the classification of TB disease, so that treatment can be carried out to recover and not transmit the disease to others. Patient discovery activities consist of screening for suspected suspects, diagnosis, determination of disease classification, and patient type (Ministry of Health, 2011).

Patient transmission is the first step in the management of TB patients. The discovery and cure of positive TB-CBTA patients will significantly reduce transmission and reduce morbidity and mortality due to TB. Health promotion about TB transmission in the community is the most effective TB transmission prevention activity to make people aware to always be aware of the disease.

Primary prevention

Health promotion by involving patients and the community in advocacy campaigns, counseling on infection control, safe collection of sputum, improving room air ventilation, capacity building, and monitoring of infection control practices (WHO2015). Specific Protection: BCG vaccine can significantly reduce the risk of TB and use of equipment personal protection in the workplace who are at risk for TB, and antiretroviral therapy (ART) for people with HIV (WHO 2015).

Secondary prevention

Screening or finding of new cases that are truly positive for TB by performing sputum smear-positive pulmonary TB sputum examination at least the results of a positive sputum examination. Pulmonary tuberculosis with negative sputum examination results and clinical and radiological features support TB or negative smear with positive TB culture results. Extra-pulmonary tuberculosis is established by clinical, bacteriological, and/or the histopathological examination taken from the affected body tissue (Kemenkes RI, 2011).

Treatment of pulmonary tuberculosis

The “ *Directly Observation treatment short course* ” (direct observation treatment short-course) strategy is a recommended TB treatment strategy (WHO, 2015) with combination drugs to ensure regularity in taking medication, avoid discontinuation of

TB drugs, and prevent the occurrence of resistance of Mycobacterium tuberculosis to TB drugs or *Multidrug-resistant (MDR)*. According to the instructions suggested by the doctor or by other people, for a minimum period of 6 months to 8 months. (WHO 2015). Several factors influence patient behavior towards cases of traditional medicine in the municipality of Aileu based on Theory (Lawrence Green). in Notoatmojo 2007) is determined by 3 main factors in the following description.

Understanding Knowledge (Knowledge)

Knowledge is the result of knowing and this occurs after someone, senses a certain object (Widodo 2006). Knowledge is one component in the formation of a person's attitude, with inadequate knowledge, making patients tend to take the wrong attitude. This means that if pulmonary TB patients have sufficient knowledge about conventional TB treatment, it will make the patient less inclined to traditional medicine (Traditional Healer). And knowledge consists of four kinds, among others:

Factual Knowledge

Factual knowledge, in the form of fragmentary information or basic elements that exist in a particular scientific discipline, includes certain symbols that are verbal and non-verbal such as traditional medicine for diseases based on elements of knowledge. While nonverbal, namely, treatment based on the instructions of the patient's complaints does not go through a diagnostic examination. For example, the treatment of coughing up blood does not go through medical and laboratory diagnostic enforcers.

Knowledge (Conceptual Knowledge)

Conceptual knowledge shows the interrelationships between basic elements in a larger structure and all of them function together, including schemas, models of thought, and theories, both

implicit and explicit, namely knowledge of classification and categories: in the sense of classifying diseases and the treatment that will be carried out by the patient.

Metacognitive Knowledge (Metacognitive Knowledge)

Includes knowledge of cognition in general and knowledge of metacognitive-related research which shows that along with the development and emergence of more and more thoughts and knowledge about cognition contained in the dimensions of the new cognition process and taxonomy, namely: Memorizing (*remembering*), Understanding (*Understanding*) and Applying (*playin*). In positive pulmonary TB patients who can not carry out treatment (direct observation treatment short course) regularly and stop taking medication and switch to traditional medicine because they do not have metacognitive knowledge: Memorizing or remembering TB treatment procedures. or carry out according to treatment instructions through the program (direct observation treatment short course). To realize the three points, the role of the supervisor taking medication is very important for the patient to consistently take the medication that has been programmed to completion with satisfactory results.

Procedural knowledge (Procedural knowledge)

Knowledge of how to do something both routine and new. Procedural knowledge contains steps or stages that must be followed in doing certain things, for example, the steps or procedures for treating TB through the program (direct observation treatment short course) that are set for drug-taking officers (DTS) and patients.

The Role of the Drug Administration Supervisor

The drug-taking supervisor ((DTS)) is a coordinator whose job is to ensure regularity

of treatment for a speedy recovery or successful treatment, according to the Ministry of Health (Kemenkes 2011). Drug-taking supervisory officers have the following duties and functions: (a) Supervise TB patients to take medication regularly until the end of the treatment period (b) Encourage patients to want regular treatment in the Direct Observation Treatment short course program and not to traditional medicine. (c) Motivating patients to recheck their sputum at times determined by the program (d) Providing counseling to family members of tuberculosis patients who have symptoms of suspected TB to immediately check with health workers (e) Assisting in assisting patients in taking antituberculosis drugs in health facilities. Provide education about the advantages of conventional medicine with the effects of traditional medicine. The role of the drug-taking supervisor ((DTS)) is to always provide counseling about tuberculosis because the problem of tuberculosis is related to the knowledge and behavior of the community. The aim is to increase awareness, willingness, and community participation in the prevention of tuberculosis. Tuberculosis counseling can be carried out by conveying important messages directly or using the media. The role of (DTS) in serving pulmonary TB patients is expected to be able to build good relationships between patients, (DTS)s and their families. The existence of an element of cooperation between health workers, patients, and their families influences the quality of health services, including treatment services for pulmonary TB patients, either directly or indirectly, which will determine the regularity of patients with treatment which ultimately recovers from TB disease.

The Role of the Family of Reinforcing Factors (Reinforcing Factors)

The driving factor is a behavioral factor that provides a domain role for how a behavior persists, which is manifested in

the role of the family, which is the potential to encourage patients from community behavior. *Lawrence Green in Notoatmodjo (2007)*. Families are people who are close to patients, so their role is needed in paying attention to the treatment of family members. The tendency of patients to use traditional medicine is very dependent on the family where a healthy family is considered the decision-maker. The role of the family is the involvement of family members of pulmonary TB patients to help patients seek treatment, seek medicine when health care facilities are closed during holidays, as well as mental support that is given actively so that patients are motivated to remain consistent with conventional treatment.

Coverage of Health Services Supporting Factors (Enabling Factors)

Access is measured by the distance traveled and the length of travel costs, the type of transportation that facilitates patients to obtain health services. The unavailability of transportation from the patient's residence to the place of drug administration (direct observation treatment short course), becomes an obstacle to patient behavior, does not regularly take medication, and switches to traditional medicine as an alternative. A patient who does not take advantage of health services at an existing health facility, perhaps not because he does not know the dangers of his illness or because he does not believe in the facility, but because the location of his residence is far from health facilities, which is supported by the unavailability of transportation facilities. public access to health facilities is difficult and expensive. *According to Notoatmodjo (2003)*, even though they live far from health care facilities, if there is easy transportation to health services, they will come on time.

Place of residence

A residence is a building, where a person or several people live permanently for a

certain time, in a certain place. The location of a patient's residence is a supporter of access were living across a river or mountain will make it difficult for patients and their families to reach public facilities including health facilities.

Medicine

The involvement of traditional medicine (*traditional healers*) in the treatment of tuberculosis will have a direct negative impact on TB treatment through the DTs program where several health facilities convey about the patient's non-adherence to treatment due to undergoing traditional treatment (*Badan POM 2005*). (Dos Reis) that the involvement of *traditional healers* in TB treatment has a direct impact on the Direct Observation Treatment short course implemented so that if patients experience drug side effects, they will encourage them to switch to traditional medicine.

Most health professionals already know and believe that non-compliance with TB patients taking medication is one of the causes is the influence of traditional medicine (*Traditional Healers, DosReis, J.2016*). Traditional medicine has advantages, among others, relatively small side effects if used properly, components in one ingredient have mutually supportive effects, a medicinal plant has several pharmacological effects that are more suitable for degenerative metabolic diseases, namely the right dose, the right time, and method of use, the right selection of materials and review of information and according to indications for use, among others: Relative side effects small if used properly will be beneficial and safe if used by considering at least certain aspects of the setting.

Combination of effects of chemical constituents in traditional medicinal ingredients. Complementary effects. A traditional medicinal herb generally consists of several types of medicinal plants

that have the effect of supporting each other to achieve treatment effectiveness. The synergistic effect is that in an OT ingredient or ingredient several active compounds have the same or similar effects.

Absorption Barrier Factors. A phenomenon in natural medicine is called absorption inhibition. For example, coffee stimulates the central nervous system more strongly than tea. Apart from the advantages and disadvantages of traditional medicine, it is an obstacle in development, including informal health care efforts. Weaknesses include weak pharmacological effects, raw materials are not standardized and are hygroscopic and voluminous, clinical trials have not been carried out, and are easily contaminated by various types of organisms.

Relevant Previous Research Studies

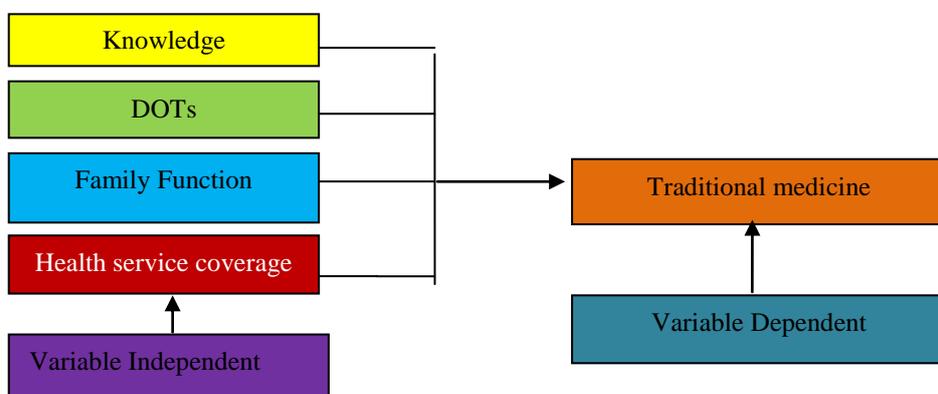
This previous research has become one of the authors' references in researching so that the authors can enrich the theory used in reviewing the research conducted. From

previous research, the author did not find a study with the same title as the author's research title. Based on a cross-sectional study by Mulenga (2010) explaining that in Zambia it indicated that patients wanted to carry out traditional medicine on the grounds of access to health facilities, as was the case with the results of a case-control study in West Africa by Tachfouti, Slama Berraho, and Nejjari (2012) explaining that the close distance to health facilities also has low quality of care, treatment of TB patients (Tachfou et al., 2012).

The following is a previous study in the form of several journals related to the research conducted by the author.

Conceptual framework

Based on the formulation and research objectives, the researcher can describe the research conceptual framework as follows. The framework can be described according to Lowrance Green's theory.



Theoretical framework

The theoretical framework is the ability of a researcher to explain his thinking patterns in systematically compiling theories that support research problems that have been formed within the conceptual framework. Lawrence Green's theory explains three factors, including Knowledge as a

predisposing factor. Knowledge is the result of knowing and this occurs after people have sensed a certain object (Soekidjo Notoadmodjo 2003) while the level of knowledge according to education expert Benjamin Bloom (1956) categorizes knowledge into 6 categories, namely: Knowledge (knowledge) Understanding

(Comprehension) Application (application) Analysis (Analysi) Synthesis The occurrence of traditional treatment in cases of smear-positive pulmonary tuberculosis is due to the low level of knowledge and understanding of patients about traditional medicine, the advantages and disadvantages of traditional medicine compared to TB disease treatment with conventional (modern) TB drugs. Each individual (patient) to determine treatment options for his own sake.

The role of the drug-taking supervisory officer (DTS)

Supervising officers for patients taking medication have the most important role in encouraging patients to take medication regularly, namely: supervising and encouraging TB patients to take medication regularly until completion of treatment, motivating family members of tuberculosis patients to always help patients adhere to medication and always do check-ups to ensure that the disease is cured through the results of laboratory tests. According to Nuraini (2003), the duties of a patient supervisor taking medication in pulmonary TB patients are: Knowing the signs of suspected pulmonary TB patients.

Supervise patients taking medicine every day regularly. Take the patient's medicine once a week. Remind the patient to re-examine the sputum. Provide counseling to patients and their families. Refer patients if there are side effects of drugs taken. To increase awareness and willingness of patients and their families to treat TB, (DTS) always reminds patients that tuberculosis is neither a hereditary disease nor a curse of God, but by the bacteria *Mycobacterium tuberculosis*, therefore treatment for this disease must be with conventional medicine through the direct observation treatment short course program, to kill these germs so that they are not transmitted to other people.

The role of (DTS) is to monitor, encourage and motivate patients to actively run Direct Observation Treatment short course, so as not to divert traditional medicine as an alternative, because the effectiveness of traditional medicine cannot be measured. Direct Observation Treatment short course conventional medicine by involving the patient's family as a drug-taking supervisor. Then monitored by health workers. This happens considering the limitations faced by both patients and health workers associated with the four variables above as problems to be studied which will later be able to find a solution. The more patients the more difficult it is for health workers to control and will hinder the success of the program, one of the efforts To ensure that patients continue to be enthusiastic about taking medicine until they recover, is to prepare someone to accompany TB sufferers, namely the Drug Drinking Supervisor through the family.

Family Role (Pushing Factor)

The family is the smallest unit of society consisting of the head of the family and several people who gather and live in one place under one roof in mutually beneficial conditions (Effendy (2005) describes a set of interpersonal behaviors and activities that are personally related in certain positions and conditions. The role of the family is the most important factor that can encourage, motivate and supervise patients to make choices about one of the treatments they receive.

As the smallest unit in society and the main factor that plays a role in helping TB sufferers to carry out treatment to completion, families need to be actively encouraged by (DTS) through home visits to directly observe direct observation treatment short course to motivate patients to complete treatment and do not turn to traditional medicine. Transmission of TB transmission in the community through the

air (airborne transmission) is affected by the health of the family's residential environment where a bad environment can increase the risk of TB transmission significantly. For example, lack of space and ventilation, humidity and density of housing, low social awareness of family members suffering from TB.

Enabling factors (reach of health services)

The distance to the facility is an obstacle that allows patients to stop taking TB drugs so that patients switch to traditional medicine. The scope of health services is part of the function to foster community participation in health services and to maintain communication between patients and (DTS)s to increase awareness, willingness, and ability of patients and their families to remain consistent with conventional treatment through the Direct Observation Treatment short course program to recover from TB disease and live a healthy life through comprehensive integrated and sustainable health service activities that are acceptable and affordable by the community with active community participation. (Ministry of Health, 2009). Low access to health services can also be affected. This is due to the lack of knowledge about the importance of TB Direct Observation Treatment Short course, inadequate transportation facilities from the village to health facilities, as well as other social factors that also affect access to both patients and their families and officers.

Access is a challenge that is an object that inspires determination to improve the ability to overcome problems or a stimulus to work harder and needs to be addressed by all parties, both the government and the local community. The Millennium Development Goals 2005 describes several challenges in the TB eradication and control program, namely to carry out the

government's political commitment for optimal support in upholding basic management resources, ensuring the availability of anti-tuberculosis drugs, and establishing a communication system between residents, both urban and rural. above, regional autonomy (decentralization) causes a paradigm shift as the demands of the implementation of community needs-oriented development make local governments more creative and innovative in supporting their regions, including the health sector.

RESEARCH METHODS

Research design

Based on the research objectives, the design that was built using the *Cross-Sectional Study* method is quantitative analytic, and the Guttman scale can be used. This form of study is measured once through an interview (Sastroasmoro and Ismail, 2011).

Population and Sample

- **Target Population:** What is meant by the target population is all TB patients throughout the municipality of Aileu who are currently participating in the direct observation treatment short course program with a total of 106 people.
- **Affordable population:** The affordable population is all pulmonary TB patients with a smear (+), totaling 106 people who are running Direct Observation Treatment short course with an age of more than 18 years, male and female spread throughout the sub-district of Municipio Aileu.
- **Inclusion criteria:** (a) AFB (+) pulmonary TB patients who follow the Direct Observation Treatment short course program and are more than 18 years old. (b) AFB (+) pulmonary TB patients are male and female. (c) Permanent residence and domicile at SSM Aileu.

- Criteria: Exclusion criteria include: (a) Patients who refuse to be interviewed. (b) Patients or prospective respondents who are sick are admitted to the hospital (c) Patients with smear-negative pulmonary TB (d) patients with pulmonary TB smear-negative and aged less than 18 years.

Research sample size

The research sample size is for Analytical Cross-Sectional. On this occasion, the researcher needs to explain that, the number of pulmonary TB patients in the study area is limited so that the total population is taken as a sample with a total of 106 people as respondents.

Research Instruments

In Analytical Cross-Sectional research, researchers can use a Questionnaire that contains for all variables 40 question items with 10 items for each variable. Can use the Guttman Scale, which will test the validity with the Product Moment Correlation Technique, the degree of significance is $5\% = 0.05\%$. Meanwhile, to test the reliability, it can be done together on all questions, and the results are compared with the alpha value > 0.06 .

Sampling technique

The sampling technique used in this research is Non-Random Sampling with a Purposive Sampling approach. According to Notoatmodjo (2012), purposive sampling is based on certain considerations made by the researcher himself, based on the characteristics or characteristics of the population that have been previously known.

Research Hypothesis

Based on the formulation of the problem and the specific objectives of the research, the researcher can express the following research hypotheses:

- 1) There is an effect of knowledge on cases of traditional medicine in positive pulmonary TB patients in Municipio Aileu.
- 2) There is an effect of the reach of health services on access to services for patients with smear-positive pulmonary TB in the municipality of Aileu
- 3) There is a family influence on cases of traditional medicine in patients with pulmonary TB with AFB in the municipality of Aileu.
- 4) There is an influence of the supervising officer taking medicine on the case of traditional medicine in the municipality of Aileu.

Data Collection Procedure

The process of collecting and collecting data in this study by using observation or survey to smear-positive pulmonary TB patients with the research instrument in the form of a questionnaire containing questions that have been prepared by the researcher. The research was carried out after receiving recommendations from academics, research location permits from the authorized agency Hidayat (2007), through questionnaires given to respondents after emphasizing ethical issues which include: (a) (Informed Consent) when taking samples, the researcher first asked permission from the respondents individually. verbally for their willingness to become a respondent. This is a procedure to obtain availability as an object for research. (b) Anonymity (without a name) on the agreement sheet and the interview question sheet will not write the name of the respondent but only give a symbol. (c) Confidentiality (confidentiality) justification of information by the respondent and all data collected will be a private collection, and will not be disseminated to others without the consent of the respondent.

Research Location and Time

- Research location: In Municipio, Aileu covers four sub-districts.
- Research time: Research activities for 2 months starting from January 2019 to February 2019.

Data Analysis Techniques

Data analysis technique researchers can use Cross-Tabulation then calculate the Ratio Prevalence 95% Confidential Interval Lower and Upper values with the help of SPSS version 22 program.

Data Processing Techniques

Data processing techniques according to Notoatmodjo (2012), there are two ways, namely manually and computer using 4 steps, namely: (a) *Editing* Efforts to re-check the correctness of the data obtained or collected, editing can be done at the data collection stage or after the data is collected (Hidayat 2009) Or the results of interviews or questionnaires obtained or collected through questionnaires are edited first if there are incomplete data or re-interviews are carried out. (b) *Coding* Coding is an activity of assigning numeric codes (numbers) to data for several categories (Hidayat 2009). The researcher gives a code according to the respondent's answer in the column that has been provided according to the code specified. The code sheet or card is an instrument in the form of columns to record data manually, the code contains the respondent's number and the number of questions. (c) *Enter/Processing* Namely filling in the column or code sheet box following the answers to each question from the respondent and processing as needed. (d) *Tabulation and Interpretation* Tabulation is the presentation of data in the form of a table consisting of several rows and several columns. Tables can be used to describe variables resulting from observations, surveys, or research so that they are easy to read or understand (Chandra, 2008).

Research Ethics

Research ethics is scientific integrity, a principle of scientific thinking that emphasizes honesty (Richard Feynman "Cargo Coult Science" 1974) Ethics includes norms for behavior, separating what should be done and what should not be done In carrying out research must adhere to a scientific attitude (*scientific attitude*) as well as using research ethical principles that do not have risks that can harm or harm research subjects. However, researchers must consider socio-ethical aspects and uphold human dignity (Jacob, 2004). The principles that need to be considered by researchers include: (a) Before conducting research, researchers need to ask for the willingness of the object to be studied through a statement by the object (*informed consent*) which is an agreement between the researcher and the respondent, the goal is for the object to understand the intent and purpose and know the impact. (b) Researchers must try to protect the object under study, avoid physical or mental harm or discomfort (*confidentiality*) maintain the confidentiality of the respondent, the confidentiality of information that has been collected from the subject is guaranteed by the researcher and is only promised if needed by the researcher at the time of accountability. (c) The subject has the right to decide voluntarily whether he wants to participate in research, without risking being punished, coerced, or unfairly treated (d) The right to get a full explanation (*full disclosure*). related to his illness.

RESULTS AND DISCUSSION

A. Research Results

5.1 Overview of Research Locations

The total area of the study area is the total area of the municipality of Aileu with 723 sq km with boundaries: The northern part is bordered by the municipality of Dili and the

southern part is bordered by the municipalities of Ainaro and Manufahi while the eastern part is bordered by the municipality of Manatutu and the western part by the municipality of Ermera. According to the number of residents per sub-Distrito, among others: Aileu Vila 26090, Remexio with a total of 11899 Lequidoe 7317, Laura 7708 a total of 53009. Distribution by TB disease in 2018

in Aileu Vila with a total of 76 people, in Remexio 15 people, Laura 10 people, a total of 109 people who suffer smear-positive TB disease.

Distribution of Characteristics of Respondents by Age Group, Gender, Education Level, Employment, Family Status, and Income

Characteristics	P, Traditional (Y)		Total N(%)	P Value
	Yes N (%)	Not N (%)		
Age group				0.901
o 18-28	8 (53.3)	7 (46.7)	15 (100)	
o 29-39	6 (31.6)	13 (68.4)	19 (100)	
o 40-50	16 (59.3)	11 (40.7)	27 (100)	
o 51-61	11 (52.4)	10 (47.6)	21 (100)	
o 62-72	9 (40.9)	13 (59.1)	22 (100)	
o 73-80	1 (50.0)	1 (50.0)	2 (100)	
Gender				0.594
o Man	43 (65.2)	23 (34.8)	66 (100)	
o Woman	24 (60.0)	16 (40.0)	40 (100)	
Education				0.242
o	32 (59.3)	22 (40.7)	54 (100)	
o Primary School	9 (50.0)	9 (50.0)	18 (100)	
o junior high school	7 (77.8)	2 (22.2)	9 (100)	
o senior High School	15 (71.4)	6 (28.6)	21 (100)	
o University	4 (100)	0	4 (100)	
Work				0.395
o Farmer	54 (60.7)	35 (39.3)	89 (100)	
o Household	8 (88.9)	1 (11,1)	9 (100)	
o civil servant	4 (66.7)	2 (33.3)	6 (100)	
o -	1 (50.0)	1 (50.0)	2 (100)	
Family Status				0.410
o 1	10 (83.3)	2 (16.7)	12 (100)	
o 2	46 (60.5)	30 (39.5)	76 (100)	
o 3	5 (71.4)	2 (28.6)	7 (100)	
o 4	6 (54.5)	5 (45.5)	11 (100)	
Income				0.084
o More USD 50	51 (59.3)	36 (40.7)	87 (100)	
o Less USD 50	16 (80.0)	4(20,0)	20 (100)	

Distribution of Characteristics of Respondents by Age, Gender, Education, Occupation, Family Status, Income

The results of the cross-tabulation in table 1 show that in particular, the data on the characteristics of respondents in the dominant age group with cases of traditional medicine 40-50 years old were 16 people (59.3%) when compared to those without traditional medicine, only 11 (40.7%). 11 people (52.4 %) used traditional medicine for the age group 51-61 years old.

On the characteristics of respondents according to gender who can use traditional medicine male as many as 43 people or (65.2 %) while for female gender only 24

people (60.0%) Next on the characteristics of respondents according to education level when compared to those who use and do not use traditional medicine for illiterate education with a value of 32 people or (59.3%) who do not use as many as 22 people or (40.7%) so on for high school level who can use traditional medicine as many as 15 people or 71.4%)

Then for the characteristics of respondents according to the type of work farmers who can use traditional medicine as many as 54 people or (60.7%) who do not use 35 people (39.3%) On the income side of more than USD 50.00 as many as 51 people or 59.3 %) who can use traditional medicine, who do not use 36 people or (40.7%)

Distribution of Knowledge Factors, Monitoring of Direct Observation Treatment Short course, Role of Family, Outreach of Yankees to Cases of Traditional Medicine

Variable	P.Traditional (Y)		Total N(%)	Mark RP	95% CI	
	Yes N(%)	Not N(%)			Lower	Upper
Knowledge (X1)						
o Yes	26 (61.9)	16 (38.1)	42 (100)	0.966	0.716	1.304
o Not	41 (64.1)	23 (35.9)	64 (100)			
Peng. Direct Observation Treatment short course (X2)						
o Yes	35 (64.8)	19 (35.2)	54 (100)	1.053	0.787	1.409
o Not	32 (61.5)	20 (38.5)	52 (100)			
Family Role (X3)						
o Yes	35 (74.5)	12 (25.5)	47 (100)	1.373	1.029	1,831
o Not	32 (54.2)	27 (45.8)	59 (100)			
Distance (X4)						
o Yes	34 (59.6)	23 (40.4)	57 (100)	0.886	0.663	1.183
o Not	33 (67.3)	16 (32.7)	49 (100)			

Source: Primary data

Distribution of Knowledge Factors, Supervision of Direct Observation Treatment Short course, Family Roles,

Distance health Community Outreach to Cases of Traditional Medicine

The results of the cross-tabulation in table 2, we pay close attention that among the factors of knowledge, supervision, family roles, and the reach of health services that were tested statistically with the results that only the inadequate family role variable contributed to respondents using traditional medicine with a value of (RP) Ratio Prevalence 1.373 95% Confidence Interval Lower 1.029 and Upper 1.831, while for the control variable Direct Observation Treatment short course on the use of traditional medicines act as protectors. For other variables, such as knowledge value (RP) Ratio Prevalence 0.966 with CI Lower 0.716 Upper 1.304, and health service coverage (RP) Ratio Prevalence 0.886 with CI Lower 0.663 Upper 1.183

DISCUSSION

Traditional medicine is one of the traditional health services carried out by respondents if the characteristics are assessed based on the age group of 40-50 years who choose to use traditional medicine a total of 16 people or (59.3%) and who do not use traditional medicine 11 people or (40.7%) the age group that is considered second place is 51-61 years who choose to use traditional medicine as many as 11 people (52.4%) and 10 people who do not use traditional medicine (47.6%) When compared with the results of the study Silva V. 2016 from Udayana University Denpasar Bali, 40 people (74.1%) who use traditional medicine with the age group of 15-24 years can use traditional medicine because the people of Timor-Leste feel bored taking conventional medicine as many as 52 people (91.2%)

In the characteristics of respondents by gender when compared with men and women, it turns out that men with a value of 43 people (65.2 %) are more than women, only 24 people (60.0%) when compared to the results of Silva V. 2016's study that male sex 86 people or (69.4%) and women 31 people (66.0%) both of the results of the study that the male gender remained the top score because they were bored with taking conventional medicine seen in the value of 52 people (91.2%)

On the other hand, for the characteristics of the literacy level of education as many as 32 people (59.3%) who can use traditional medicine, when compared with the results of Silva V. 2016 research in Timor-Leste that the level of literacy education using traditional medicine is 22 people (68.8%) due to the problem of boredom taking medicine with a value of 52 people (91.2%) For work status who can use traditional medicine the most are IRT as many as 46 people (60.5%) while the results of research from Silva V. 2016 in Timor -Leste results with 54 people (68.4%) of IRT who can use traditional medicine.

Factors that can be tested in terms of traditional medicine include knowledge, control of Direct Observation Treatment Short course, family roles, and reach of health services. Among these factors, after being tested statistically, it turned out that the family role factor was inadequate so that respondents chose to use traditional medicine with the results of RP 1.373 95% Confidential Interval Lower 1.029 and Upper 1.831, while the knowledge variable was RP: 0.966 with 95% CI Lower 0.716 and Upper 1.304, and Direct Observation Treatment short course Supervision variable with RP: 1.053 95% CI Lower 0.787 and Upper 1.409. When compared with the results of research in Timor-Leste

according to Silva V. 2016 the problem of monitoring Direct Observation Treatment short course against Traditional Medicine was 60 people or (67.4%) with an analysis that respondents used traditional medicines because they were bored of taking medicine according to the results shown 63 people (72, 4%)

Enclosed

CONCLUSION

The results of this study after being tested with statistics, it is shown that from the variables studied, including Knowledge, Direct Observation Treatment short course Supervision, Family Role, and Health Service Coverage, it turns out that the Family Role variable which is a risk factor for respondents using traditional medicine with RP (Prevalence Ratio) 1,373 and 95 % Convidential Interval Lower 1.073 and Upper 1.831 while the other variables have not been a risk factor for the incidence of traditional medicine.

Suggestions

On this occasion, the researcher humbly recommended DHS (District Health Service) to focus more on planning health promotion for families to take a more active role in running the program so that the number of TB cases could be reduced on a land-acquisition basis.

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