
Tuberculosis as a Global Health Problem: A Review of the Literature on Its Prevention and Development in Indonesia

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ABSTRACT

KEYWORDS

Tuberculosis, Global Health, Prevention and Development in Indonesia

Indonesia is the country with the second highest burden of Tuberculosis (TB) in the world. It is estimated that there are 845,000 new cases of TB every year with a death rate of 98,000 cases or equivalent to 11 deaths/hour. Tuberculosis control is directed to accelerate TB elimination by 2030. The transmission and development of TB disease is increasingly widespread because it is influenced by social factors such as poverty, urbanization, less active lifestyles, tobacco use, and alcohol. This research uses the literature review method and obtained 7 relevant journals. The results of this study show that the implementation of TB control programs in several health centers still faces various obstacles, especially in terms of funding, limited human resources, lack of SOPs, and not optimal technical implementation such as the discovery of active cases and the involvement of cadres.

INTRODUCTION

Tuberculosis (TB) is an infectious disease caused by a bacterial infection called *Mycobacterium tuberculosis*. This disease attacks the respiratory organs of the lungs and can partially attack organs outside the lungs such as lymph nodes, and brain membranes. TB transmission occurs when there are splashes (droplets) of saliva or phlegm of a person who has BTA pulmonary TB positive when coughing or sneezing that is spread through the air. Tuberculosis (TB) mostly infects individuals of productive age, namely 17-55 years old (Nurjannah et al., 2022)

WHO estimates that approximately 10 million people worldwide are affected by tuberculosis from various age groups and genders, with an estimated 5.8 million men, 3.5 million women and 1.3 million children (World Health Organization, 2023). Based on the latest data from the 2023 Indonesian health survey, the number of people with pulmonary tuberculosis reached 877,531 people with a prevalence of 0.30% (Wahyudi et al., 2024)

Tuberculosis (TB) is still a health problem in Indonesia and poses complex problems both medically and socially, economically, and culturally. Based on the WHO Global TB Report 2020, Indonesia is the country with the second highest burden of Tuberculosis (TB) in the world. It is estimated that there are 845,000 new cases of TB every year with a death rate of 98,000 cases or equivalent to 11 deaths/hour. The transmission and development of TB disease is increasingly widespread because it is influenced by social factors such as poverty, urbanization, less active lifestyles, tobacco use, and alcohol (Global Tuberculosis Report, 2020). TB is a challenge for Indonesia's development because 75 percent of TB patients are in the productive age group, 15-54 years old (Riskedas, 2018). More than 25 percent of TB

patients and 50 percent of drug-resistant TB patients are at risk of losing their jobs due to this disease (Ministry of Health of the Republic of Indonesia, 2020)

In Indonesia, the tuberculosis control program is directed to accelerate TB elimination by 2030, through increasing the case discovery rate to at least 90%, and the treatment success rate at least 90% and the prevention rate reaching at least 80% (Directorate General of Prevention, 2023). Meanwhile, the incidence rate of tuberculosis in Indonesia in 2022 is 354 per 100,000 population, which means that out of 100,000 people, there will be 354 people who are sick with tuberculosis (Indonesia, 2003). If in 2023 the population of Indonesia reaches 278,700,000 people (Anugerah, 2023), the number of suspected TB sufferers is estimated to reach 986,598 sufferers throughout Indonesia (Benito et al., 2022)

Literature review is also considered important because literature review is the basis for why researchers decide to choose certain themes or titles (Ridwan et al., 2021). Based on the results of the previous research, literature studies are very important to determine the prevention and development of Tuberculosis in Indonesia.

METHOD RESEARCH

This study uses the literature review method to collect data and information related to the prevention and development of tuberculosis. Search literature through Google Scholar and relevant journals with the keywords Tuberculosis, Global Health, Prevention, health policy and 7 relevant journals were obtained.

RESULT AND DISCUSSION

Based on the keywords entered, a total of 664 articles were obtained. The first step taken was to eliminate the selection of full text and topic suitability so that 664 articles were obtained. Based on the 664 articles obtained, a feasibility examination was carried out based on inclusion criteria. So that finally the number of articles used in this literature study is 7 articles taken from 2020-2024

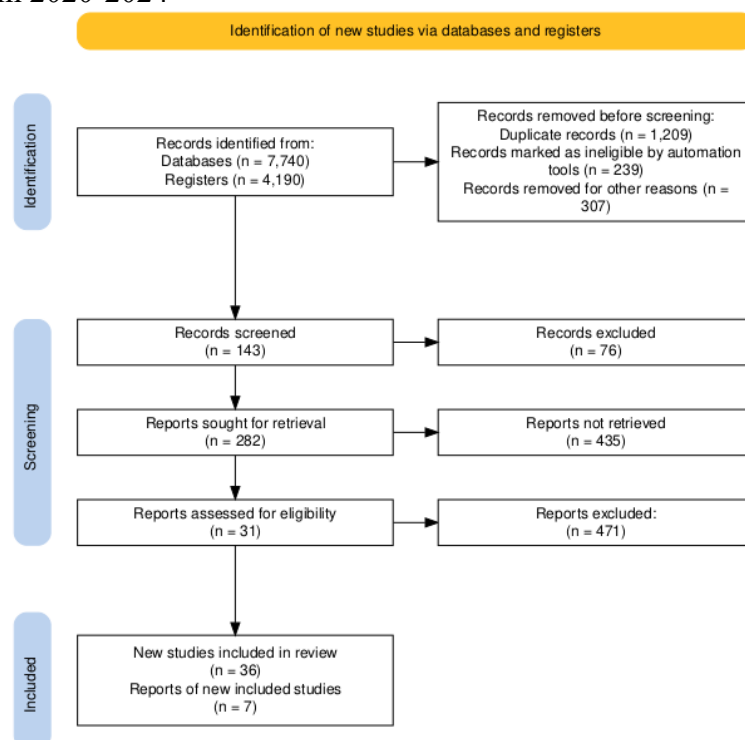


Figure 1. Prism Flow Diagram

| No. | Researchers | Research Title | Research Methods | Result |
|-----|----------------------------------|---|------------------|---|
| 1. | (Alfian et al., 2021) | Pelaksanaan Promosi Kesehatan Dalam Penanggulangan Penyakit Tuberkulosis | Qualitative | Community empowerment is still lacking because community empowerment has not been optimally carried out, such as training that is carried out only once and is carried out on pulmonary tuberculosis cadres only. |
| 2. | (Mulya, 2023) | Analisis Program Penanggulangan TBC di Indonesia dalam Upaya Pencapaian Target Eliminasi TBC Tahun 2030 | Qualitative | The policy aspects and infrastructure have reached the target and the implementation is quite good, but it still needs to be improved. |
| 3. | (Lutfiyah Ulfa & Mardiana, 2021) | Implementasi Penemuan Kasus TB Paru dalam Penanggulangan Tuberkulosis di Puskesmas Karangmalang Kota Semarang | Qualitative | policy standards and targets are clear, the readiness of resources is good, the quantity of TB cadres is lacking, communication and coordination between organizations is good, the dissemination of information related to Tuberculosis to the community is lacking, there is no SOP for the discovery of Pulmonary TB cases, the understanding and performance of implementers is still lacking, and community participation needs to be increased. |
| 4. | (Alfian et al., 2021) | Evaluasi Pelaksanaan Program Penanggulangan Tuberkulosis Paru (P2TB) Di Puskesmas Bandarharjo Kota Semarang | Qualitative | The input component is good, the process component still has several activities that are not optimal, the output component has not met the national TB target in the TB |

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|----|-------------------------------------|--|-------------------------|--|
| | | | | control program at the Bandarharjo Health Center. |
| 5. | (Nofianti & Wijaya, 2023) | Analisis Pelaksanaan Program Penanggulangan TB Paru pada Masa Pandemi Covid-19 di Puskesmas Medaeng Sidoarjo | Qualitative | The implementation of the Pulmonary TB control program during the Covid-19 pandemic at the Medaeng Sidoarjo Health Center has not been carried out optimally. Expected |
| 6. | (Andi Akifah Rezkiani et al., 2021) | Implementasi kebijakan penanggulangan tuberkulosis pada masa pandemi covid-19 | Qualitative | The implementation of tuberculosis control policies at the Kassi-Kassi health center is still not running well because there are still obstacles in terms of communication, resources, disposition and bureaucratic structure. |
| 7. | (Kleden et al., 2024) | Analisis capaian pelayanan penanggulangan tuberkulosis (tbc) di nusa tenggara timur: tantangan dan peluang | Secondary data analysis | NTT faces significant challenges in handling TB, including limited access to health services, lack of adequate health infrastructure, and social and economic issues that affect efforts to control. |

Pembahasan

According to research conducted by (Alfian et al., 2021), advocacy for pulmonary tuberculosis control carried out by the Rejosari Health Center has not been maximized, because there is still a lack of funding in the control of pulmonary tuberculosis which only expects funds from the BOK, and also the efforts of the health center to improve financing sustainability are still lacking. Rejosari Health Center has established partnerships with health services such as? clinics, independent doctor practices and cooperation with the village in the working area of the Rejosari Health Center. It is recommended that with the condition of the Rejosari Health Center's large working area and remote access, the researcher? recommends the need for additional cooperation with related partners in the management of pulmonary tuberculosis in the work area of the Rejosari Health Center.

TB disease is a major health problem in the world and in Indonesia. Until now, there are still many indicators of TB control programs that have not been achieved. From the results of the analysis, several aspects have reached the target and the implementation has been good, namely the availability of policies and infrastructure. However, several other aspects such as funding, human resources, ACF, the provision of TPT, and surveillance still need massive

improvements in order to increase readiness to achieve the TB elimination target in 2030 (Mulya, 2023)

According to research (Lutfiyah Ulfa & Mardiana, 2021) the standards and targets for TB case discovery are clearly listed in the TB patient discovery module set by the Ministry of Health. However, in its implementation, the implementers did not carry out several activities such as case discovery in special and risky places, cough monitoring, and mass screening. The readiness of resources has been sufficient, but the number of field officers and the participation of TB cadres in the discovery of pulmonary TB cases is still lacking. Communication and coordination within the health center and with the health office are good. The characteristics of implementing agencies/agencies in the implementation of TB case discovery at the Karangmalang Health Center are still lacking. There is no SOP for the discovery of pulmonary TB cases at the Karangmalang Health Center. The organization of the TB TIM is also not written structurally. The attitude of the implementers in carrying out the discovery of pulmonary TB cases at the Karangmalang Health Center is still less than optimal. Environmental conditions in supporting the implementation of the discovery of pulmonary TB cases at the Karangmalang Health Center are good.

The implementation of tuberculosis control policies during the Covid-19 pandemic at the Kassi-Kassi Health Center has been quite good and there have been no comprehensive changes after the Covid-19 pandemic, but there are obstacles in conducting group meetings, the TB service room is joined to the leprosy room and the sputum booth does not provide cleaning tissues and the administration of OAT is shortened by a certain period. There has been a change in commitment during the pandemic, namely coaching and monitoring treatment using communication media such as Whatsapp or phone numbers. During the Covid-19 pandemic, the division of duties and responsibilities is still not optimal because there are still health workers who have dual jobs (Andi Akifah Rezkiyani et al., 2021)

CONCLUSION

The implementation of TB control programs in several health centers still faces various obstacles, especially in terms of funding, limited human resources, lack of SOPs, and suboptimal technical implementation such as the discovery of active cases and the involvement of cadres. Although policies and infrastructure are available, it is necessary to strengthen coordination, partnerships, and innovations in the field to support the achievement of the target of eliminating tuberculosis by 2030.

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