Since 2002

Governance Efforts for TB-Friendly Village Development during the COVID-19 Pandemic: Lessons Learned from Depok City, West Java, Indonesia

Dumilah Ayuningtyas[1]* , Rulliana Agustin[2] , Rini Prasetyo[3] , Theresa Febrianti[3] , Ester Ulibasa[3] ,Sandra Barinda[3]

[1]Department of Health Policy and Administration, Faculty of Public Health, University of Indonesia, Depok, Indonesia; [2]Undergraduate Study Program, Faculty of Medicine, University of Indonesia, Depok, Indonesia

Abstract

BACKGROUND: In 2020, TB patients in Indonesia reached 8.5% of the total number of TB patients globally, as the country with the second-highest TB cases. Depok is the city in the West Java region that has experienced an increase in TB cases. The existence of tuberculosis-friendly villages will reduce the stigmatization of tuberculosis (TB) patients and increase treatment compliance.

AIM: This study aims to analyze various aspects of Depok City's readiness to develop TB-friendly village governance — including government commitment, infrastructure, resources, and organizational culture — within the scope of academic, business, community, government, and media (ABCGM)'s role or penta-helix.

METHODS: The initial stage of preparation involved conducting a literature review. This research employed an online survey of 230 respondents and 40 TB patients using a quantitative approach. The qualitative approach involved 15 stakeholders through interviews, discussions, and a website-based search.

RESULTS: Overall, the respondents were well-informed about TB, but attitudes (50.9%) and behavior (41.3%) regarding TB prevention need improvement. The government budget is adequate, but coordination is lacking between stakeholders and community involvement.

CONCLUSION: Depok City is not yet ready to develop TB-friendly villages in terms of human resources and organizational aspects. It is necessary to improve communication, information, and education regarding TB prevention and establish leadership policies as a legal basis to strengthen the governance and management of TB-friendly villages. Moreover, community involvement is an essential pillar of developing these villages.

Introduction

Tuberculosis (TB) is an infectious disease that has become the No. 1 contributor to death globally and has caused a global emergency. This situation is exacerbated by the fact that undetected patients still exist, and TB treatment is not implemented correctly, which causes drug resistance. The TB incidence rate in Southeast Asia is 220 per 100,000 population, while the incidence rate of drug-resistant TB is 9.2 per 100,000, and TB treatment coverage is around 73%. The World Health Organization's (WHO) target for 2030 is a 90% decline in the number of deaths due to TB and an 80% decrease in incidence of TB cases (new cases per 100,000 population per year). The milestones for 2025 are a 75% decrease in the number of deaths due to TB and a 50% decrease in incidence of TB cases [1].

In 2020, TB patients in Indonesia reached 8.5% of the total number of TB patients globally, positioning Indonesia as the country with the second-highest TB cases after India. It is estimated that one in three TB cases has not been touched by the TB treatment program, which is a factor in eliminating TB. Other factors such as poverty, weak political commitment (particularly funding), inadequate TB services in health facilities, poor recording and reporting, non-standardized drugs, and stigmatization and discrimination against TB patients occur in the community, presenting obstacles to eliminating TB [2].

West Java has a high case notification rate, with 161 cases per 100,000 people. This figure is exacerbated by the number of treatment successes in 2020, at 84.5%, compared with a national rate of 90%. Considering that the number of cases and the success of TB treatment are indicators of TB control, this should concern the government [3].

Depok City is one of 27 cities/municipalities in the West Java region that has experienced an increase in TB cases, to 171/100,000 from 161/100,000 population

in 2018. In 2020, the Depok City Health Office stated that TB cases totaled 2746, that is, toward the end of the year, TB case detection decreased compared when 2019, when it totaled 4965 patients. These findings follow the results from the 2020 report regarding the discovery of suspected TB cases following the Minimum Service Standards, or *Standar Pelayanan Minimal* (SPM). Minimum Service Standards are provisions/ regulations regarding the type and quality of basic services that every citizen has the right to obtain at a minimum and is a Mandatory Government Affair. The basic services referred to are public services to meet citizens' basic needs. Basic services in the Minimum Service Standards are provided by regional, provincial, and city/district governments. Mandatory Government Affairs relating to basic services that become SPM comprise education, health, public works, spatial planning, public housing, residential areas, peace, public order and community protection, and social services.

Based on the 2021 Global TB Report, Indonesia occupies the second highest position globally on number of TB sufferers. West Java is the province with the most significant number of TB sufferers, in which Depok City ranks eighth as a contributor to cases. Only 42.09% of all TB cases were discovered, far from the 100% SPM achievement target. The report's results complement data on TB treatment's success in Depok City in 2020 (through November), which only reached 82.10%, lower than the indicator of treatment success (90%). Therefore, a TB-friendly village is an activity expected to be part of a successful TB elimination effort.

With the existence of a TB-friendly village, it is hoped that knowledge, understanding, and public awareness of TB — including transmission, treatment, and prevention — can be disseminated to all levels of society so that TB treatment becomes more effective. Furthermore, it also is hoped that the stigma around TB sufferers and disease will be removed/improved so that the TB elimination process can take place more quickly.

At present, TB elimination has become one focus of the United Nations Sustainable Development Goals (SDGs). Goal 3 aims to end the TB epidemic by 2030. The strategy entails a unified response to ending TB deaths, disease, and suffering by building on three strategic pillars underpinned by four fundamental principles. The 2030 targets comprise a 90% reduction in TB deaths and an 80% reduction in TB incidence compared with 2015 levels. The 2035 targets comprise reductions of 95% and 90%, respectively. A third target — that no TB-affected households experience catastrophic costs due to the disease by 2020 — was also agreed on [4].

The government's commitment also was stated in the United Nations High-Level Meeting (UNHLM), attended by leaders and high-ranking officials of countries with high rates of TB cases. One of the agreements reached was a commitment to scale up the implementation of TB preventive treatment in countries with a high TB caseload and reach 40 million people worldwide, including 3.5 million children under 5 years old and 1.5 million people with TB drug resistance by 2022 [5].

According to the theory that knowledge influences behavior, treatment success is influenced by adherence to medication. TB patients comply when they have sufficient knowledge [6]. Health behaviors in general and TB treatment adherence — particularly stakeholders and patients' knowledge, attitudes, and behaviors (KAPs) — often are explained using Rosenstock's Health Belief Model (HBM). The HBM, one of the oldest and most widely applied health behavior theories, originated as part of the US Public Health Services' (USPHS) work investigating low uptake in mobile clinic-based free TB screening programs across neighborhoods in the US in the 1950s. HBM is used to assess a person's health beliefs about TB. For an individual to take action to avoid disease, he would need to believe (1) that he was personally susceptible to it, (2) that the occurrence of the disease would inflict at least moderate severity on some component of his life, and (3) that taking a particular action would be beneficial by reducing its severity, and that it would not entail overcoming significant psychological barriers such as cost, convenience, pain, and embarrassment. An individual will take precautions against disease if he feels threatened by the symptoms of the disease from which he is suffering. Factors that influence individual behavior in preventing a disease are perceived susceptibility (individuals feel attached to the disease), perceived seriousness (individual perception of the severity of the disease — clinical and social), perceived benefits (benefits obtained from treatment), barriers to action (inconvenient, expensive, unpleasant, painful, or upsetting), cues to action (behavioral triggers — internal and external), and self-efficacy [7].

The community also needs to know about TB, considering the stigmatization of TB patients in an environment that does not understand the transmission process, causes, and prevention [8]. This stigmatization and discrimination became more complicated during the COVID-19 pandemic, as many people thought that being exposed to TB also meant being exposed to COVID-19. A study revealed that out of 190 respondents, 55.8%, or as many as 106 people, stigmatized TB patients [9].

It was hypothesized that the government's role, infrastructure and organizations' readiness, and community knowledge, attitudes, and behavior affected Depok City's efforts to develop TB-friendly villages. In connection with stigmatization, three things often occur: discrimination; prejudice; and stereotypes. Stigma arises from inadequate knowledge that emerges from a group of people, and then spreads outward, leading to a lack of understanding and, thus, a lack of motivation and a tendency to ignore actions that are

not yet implemented clearly. In this context, we can add stigma against TB sufferers as an example [10]. It is crucial to understand and deal with this stigma through each stakeholder's contribution, such as TB program implementers or policymakers [11].

To create an environment that cares about and understands TB patients, effective governance is needed to achieve decisions and implementation that can be accounted for jointly. A consensus should be reached by the government, citizens, and the private sector for governance in a country [12]. The state plays a role in providing services for the people's welfare with a fair judicial system and a government system accountable to the public. This aligns with the three pillars of sustainable development: Economic development; environment; and human development. Along with the desire to actualize effective governance in the regional government administration system in the current autonomy era, a need exists to pay attention to the principles of democracy, empowerment, service, responsiveness, transparency, accountability, participation, partnership, decentralization, wisdom, and legal certainty [13].

Innovations in the TB-friendly village concept provide an environment that encourages increased compliance and reduce stigmatization. The emergence of opportunities and the positive response to the policy regarding child-friendly villages were used to form TB-friendly villages. Article 8 of the 2013 Depok City Regional Regulation regarding child-friendly villages explains that "friendly" is a condition created by social movements in which the community's cultural values, ethics, attitudes, and behavior are practiced and developed consciously to provide a sense of pleasure, comfort, and joy. This definition of "friendly" indicates that to develop TB-friendly villages, community and stakeholder coordination are needed regarding effective governance in Depok City. Active citizen participation is the primary resource for solving problems [14]. Active participation by stakeholders and the community leads to a stronger, more targeted, and entrenched policy foundation [15], [16]. Stakeholders' involvement also increases the likelihood of community acceptance. For stakeholders' influence to create a positive society and environment for TB patients, development is needed that prioritizes the community, community-based empowerment, and cross-sector collaboration and integration. Cross-sector collaboration using the penta-helix model — often referred to as academics, business, communities, government, and media (ABCGM) — has been endorsed by West Java's governor in West Java Governor Regulation No. 12 of 2019. This regulation states that addressing TB is not only a responsibility for the health sector but also requires government coordination to actualize TB-friendly villages [17].

The penta-helix approach taken to control COVID-19 — with the existence of a "COVID-19 Alert Village" under Circular No. 443/166-Huk/DPKP,

stipulated by Depok City's mayor — is a step that can be carried out in coordination with TB-friendly villages as a regional and community empowerment concept. This is important considering the need for a positive perspective when dealing with TB patients' stigmatization, particularly during the COVID-19 pandemic [18]. This study aims to analyze various aspects of Depok City's readiness to develop TB-friendly village governance — including government commitment, infrastructure, resources, and organizational culture — within the scope of ABCGM's role. Therefore, the research questions in this study are: How strong is the government's commitment, infrastructure readiness, and Depok City organizations' readiness for developing TB-friendly villages? What is the picture of the public KAP in Depok City on TB?

Materials and Methods

The initial stage of preparation involved conducting a literature review. Inclusion criteria were defined in the literature search. The search used a combination of the keywords "tuberculosis program," "stakeholder," "governance," and "community involvement." Critical appraisal was performed by utilizing PRISMA method on the articles selected. A literature review was conducted on several data sources: ProQuest, SpringerLink, ScienceDirect, Emerald Insight, and Taylor and Francis. The language used was English, and search range being 2019–2021. Based on these criteria, the articles obtained based on the search were 117 articles.

The next process included screening, checking for duplication of articles and filtering articles based on inclusion criteria. So that the articles obtained are 5. The articles were appraised to obtain a synthesis of results related to the topic of this research (Figure 1).
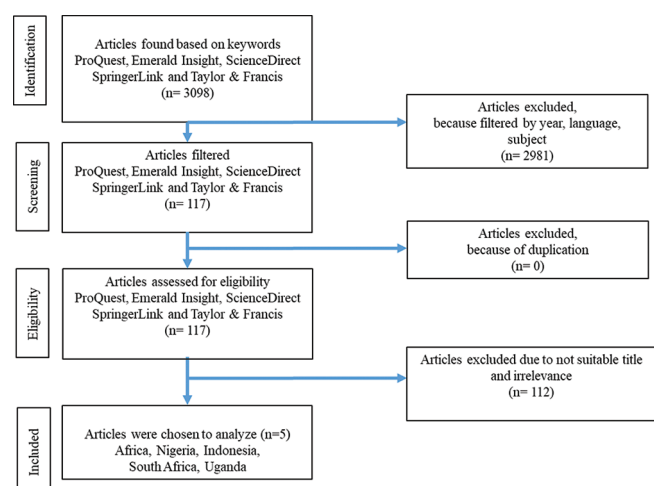

Figure 1. Flowchart of the Article Selection Process

This study also used a mixed-methods research method that simultaneously employed descriptive

qualitative and quantitative approaches with an explanatory sequential design. The quantitative approach used an online survey through Google Forms to measure knowledge, attitudes, and behavior. The survey content was divided into two questionnaires for the general public and TB sufferers. The total number of question items was 52 consisting of 24 for the general public and 28 for TB sufferers. A quantitative analysis was conducted to describe the frequency distribution of the respondent's answers. Each questionnaire was grouped into three categories comprising questions about their knowledge, attitudes, and behavior. The research instrument has been tested for validity and reliability. Altogether, 230 respondents throughout Indonesia and TB sufferers in Depok City completed the general public questionnaire (Table 1), and also 40 TB patients (Table 2).

Table 1: Distribution of characteristics of respondents and description of respondents' knowledge, attitudes, and behaviors (community)

Variable	Amount, n (%)
Distribution of characteristics of respondents	
Age	
14–24	36 (15.7)
25–35	103 (44.7)
36–46	57 (24.8)
47–57	31 (13.5)
58–69	3 (1.3)
Total	230 (100)
Recent education	
Junior high	2 (0.9)
Senior high	34 (14.8)
D1 College	2 (0.9)
D3 College	61 (26.5)
D4 College	10 (4.3)
Bachelor	86 (37.4)
Master degree	35 (15.2)
Total	230 (100.0)
Residence	
Bali	4 (1.7)
Banten	60 (26.1)
DKI Jakarta	36 (15.7)
West Java	92 (40)
Central Java	4 (1.7)
East Java	1 (0.4)
Central Kalimantan	1 (0.4)
Lampung	4 (1.7)
Maluku	3 (1.3)
NTB	12 (5.2)
NTT	2 (0.9)
South Sulawesi	3 (1.3)
North Sulawesi	2 (0.9)
West Sumatra	1 (0.4)
North Sumatra	2 (0.9)
Yogyakarta	3 (1.3)
Total	230 (100)
Profession	
Not working	2 (0.9)
Housewife	20 (8.8)
Student	17 (7.4)
Teacher/Lecturer	8 (3.5)
Private employees	76 (33)
Civil workers pensioner	3 (1.4)
Civil workers	38 (16.6)
Health workers	47 (20)
Entrepreneur	11 (4.9)
Freelance	5 (2.2)
Temporary employee	3 (1.3)
Total	230 (100.0)
Description of respondents' knowledge, attitudes, and behaviors	
Knowledge	
Less	0
Enough	0
Good	230 (100)
Total	230 (100)
Attitude	
Good	113 (49.1)
Bad	117 (50.9)
Total	230 (100)
Behavior	
Good	113 (58.7)
Bad	117 (41.3)
Total	230 (100)

The sample was determined using the convenience sampling technique, in which the sample is taken simply because they "accidentally" received the Google Forms. To strengthen the quantitative survey results, explore on a more profound level, and discover how and why a phenomenon occurs, a qualitative approach was used to analyze further efforts to develop TB-friendly villages using in-depth interviews and focus-group discussions (FGDs) conducted through Zoom meetings as a triangulation method. Interviews and FGDs were conducted using a semi-structured technique.

The researcher used interview guidelines that referred to the study's aims, namely, stakeholders' views and roles in the development of TB-friendly villages. To ensure the questions' validity, the researcher conducted a questionnaire test to prevent bias from double meaning and ensure that the questions were clearly understood. Website-based observations and searches complemented data mining to triangulate methods and sources. Referring to the penta-helix model, this study's consist 15 informants from ABCGM stakeholders comprising one respondent Academic

Table 2: Description of respondent characteristics and description of knowledge, attitudes, and behaviors of tuberculosis patients

Variable	Amount, n (%)
Description of respondent characteristics	
Age	
14–24	9 (22.5)
25–35	12 (30)
36–46	8 (20)
47–57	5 (12.5)
58–69	6 (15)
Total	40 (100)
Recent education	
Elementary	2 (5)
Junior high	4 (10)
Senior high	29 (72.5)
College diploma	2 (5)
Bachelor degree	3 (7.5)
Total	40 (100)
Profession	
Not yet/not working	5 (12.5)
Housewife	15 (37.5)
Student	3 (7.5)
Teacher/lecturer	1 (2.5)
Private employees	11 (27.5)
Freelance	1 (2.5)
Labor	4 (10)
Total	40 (100)
Phase of medication (month)	
One (1)	3 (7.5)
Two (2)	8 (20)
Three (3)	7 (17.5)
Four (4)	3 (7.5)
Five (5)	5 (12.5)
Six (6)	7 (17.5)
> 6	7 (17.5)
Total	40 (100)
Previous TB experience	
Yes	19 (47.5)
Not	21 (52.5)
Total	40 (100)
Description of knowledge, attitudes, and behaviors	
Knowledge	
Less	0
Enough	0
Good	40 (100)
Total	40 (100)
Attitude	
Good	20 (50)
Bad	20 (50)
Total	40 (100)
Behavior	
Good	20 (50)
Bad	20 (50)
Total	40 (100)

from University of Indonesia nursing lecturers, one Businessman; Communities are five Cadres and one PPTI Depok Branch, Government is one leader of the Health Office, three Puskesmas (Public Health Center) officers, one DPRD (Regional House of Representatives) member, and two people from media. The researchers conducted the context analysis as the main instrument of the qualitative research through transcription stages, coding, and a matrix of in-depth interviews as a basis for obtaining thematic phenomena related to government commitment, readiness in terms of infrastructure, resources, organizational culture, coordination between institutions, and stakeholders' role in the governance of TB-friendly village development based on the penta-helix model and the input-process-output model (Figure 2). Participants were asked for informed consent before filling out a questionnaire (for the quantitative section) and verbal consent after the study was explained to them (for in-depth interviews and FGDs for the qualitative section). This study secured ethical approval from the Research and Community Engagement Ethical Committee Faculty of Public Health Universitas Indonesia (323/UN2.F10. D11/PPM.00.02/2020).
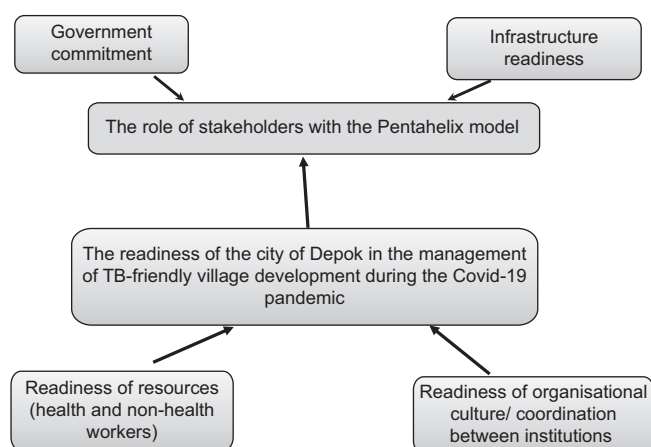

Figure 2. Governance model for TB-friendly village development

Results

117 studies were found through searching for the keywords and through other sources (date, language, and publication title). After applying the exclusion criteria and removing the duplicates, five studies remained that focused on governance of tuberculosis control program. The research that was included in the analysis was performed in Africa, Nigeria, Indonesia, South Africa, and Uganda (Table 3).

Based on the results of the literature review, there are several factors that need to be considered in carrying out the TB program readiness program, namely:

1. Readiness of the government, seen from the readiness of regulations, resources, organizations in conducting cross-sectorial coordination, including the role of leadership.
2. Participation of various stakeholders to support the program. This can involve such as academics, businesses, communities, government, and the media.

Government commitment

The government's TB commitment remains weak, according to the informants, with no firm policy in place to form the legal basis for developing TB-friendly village governance. Policies need to be prepared based on input and accurate data regarding community needs. Obtaining data from healthcare facilities every month is difficult, a predicament that the following informants confirmed:

"Policymaking requires data. However, we have difficulty obtaining accurate data. Data is needed to synergize TB-friendly programs with existing programs" (G1).

"There has not been any cooperation to report TB cases. They should have coordinated with the Puskesmas, but until now, there has been no report" (G3).

These unformed policies have resulted in poor communication, coordination, and collaboration between health offices, subdistricts, and the DPRD. The DPRD supports alleviation of the TB problem, but communication channels have not been well-established, which the following responses demonstrate:

"DPRD is very supportive. Unfortunately, the communication with the agency is not effective" (G2).

"Subdistricts communicate with the head of the Puskesmas through mini-workshops once every three months, one of which discusses TB" (C1).

Fiscal support from the government is essential, and this comes from Depok City, provincial, and national budgets. The results from a document review of Depok City's health profile in 2020 indicate that the health budget increased between 2017 and 2019, indicating that the adequacy of health program funding is improving:

"There is a special budget for achieving minimum TB service standards" (G1).

"The budget is set aside for infectious diseases. In some subdistricts, they can collaborate with TB cadres because the community should not sacrifice their finances" (G2).

Infrastructure readiness

The qualitative data were generated from observations, in-depth interviews, FGDs, and data

Table 3: Summary of literature review

Serial number	Title, author, and year	Study design	Summary
1	Governance of TB control program in Nigeria [19]	Scoping review	Governance dimension of NTP in Nigeria: Constraints: Strategic vision, rule of law, responsiveness, poor infrastructure, frequent changes in leadership of NTP, poor service delivery infrastructure, weak human resources capacity, poor staff attitude Enablers: Strong stakeholder involvement in policy development and service delivery, use of community volunteers, strong civil society involvement, standards for TB care exist, existence of infection control guidelines
2	Community engagement and ethical global health Research [20]	Desk review	Providing (quality) health care can help to build institutional trust, where health systems are weak. Inter-personal trust can be fostered through building relationships, which are built over time through day-to-day interactions
3	Implementation, interrupted: Identifying and leveraging factors that sustain after a program interruption [21]	Ethnographic observation and semi-structured interviews	Exploring the sustainability of a program that implemented DM screening within TB clinics, which described inconsistent supply for testing (resources)
4	"It has become everybody's business and nobody's business:" Policy actor perspectives on the implementation of TB IPC policies in South African public sector primary care health facilities [22]	Interviews	Drivers of poor policy implementation: fragmentation of institutional responsibility and accountability; struggles by advocating; barriers to policy innovation; and neglecting of TB risks for some doctors and nurses
5	The impact of local government characteristics on the accomplishment of SDGs [23]	Multiple regression analysis	The impact of local government's characteristic on the accomplishment of SDGs where it needs to be supported by strong leader of local government and good infrastructure as well as the system

TB: Tuberculosis, NTP: National TB Control Programme, DM: Diabetes mellitus, IPC: Infection prevention and control, SDGs: Sustainable Development Goals.

analysis as a form of triangulation to describe a model of readiness to develop a TB-friendly village. The results from observations during home visits of TB patients on September 15 and 16, 2020, indicate the conditions of TB patients' houses. They mostly lived in densely populated areas, and their houses usually lacked ventilation and lighting, were flanked by other dwellings and had no windows. One residence was integrated with a warehouse made of wood and was dirty. One house's terrace had birds whose droppings resulted in dirty dwellings under the terrace. Several people occupied one dwelling, with an imbalance in the ratio of dwelling area to the number of residents. The results from the FGD, in-depth interviews, and document review were used to confirm the results from the quantitative data and observations.

Infrastructure readiness is defined as the availability of inspection facilities. Depok City has only two places for conducting rapid molecular tests (TCM): Pancoran Puskesmas and Sentra Medika Hospital:

"Incidentally, Pancoranmas is the only Puskesmas used as a PCR examination site. Next year, there will be two Puskesmas getting TCM machines" (G4).

Health facilities must be competent in handling TB cases, but of the 222 private clinics in Depok City, only 28% received TB training, while 24 had been trained in TB reporting. Even so, as of November 2020, only two clinics and 19 hospitals reported suspected TB cases.

Since 2019, TB reporting has used a web-based Integrated TB Information System (SITT), integrated with the national health information system, which records and reports TB cases. However, TB reporting has not been conducted comprehensively and consistently. SITT training has been given to every Puskesmas and hospital, but TB reports have not been recorded properly:

"I have trained the Beji area health clinic on reporting TB cases through SITT, but the output is not there because it is not reported" (G4).

"Through an integrated TB information system, data on TB patients in Depok will be seen. Accurate data is needed to make policies to overcome village-based problems and synergize with existing communities" (G1).

Readiness of resources

Table 2 shows that 100% of the TB patients had sufficient knowledge of the disease, 50% had a positive attitude, and 50% of TB patients had a bad health behavior as example did not wear a mask. Skilled and competent human resources personnel determined the quality of TB service delivery, so the Health Office must be a facilitator and provide training. Each Puskesmas has one person in charge of the TB program, but not all health workers have received TB training:

"The number of health workers who have received training at the Puskesmas, out of five doctors and three nurses, only one nurse and two doctors" (G12).

"Now, the officers follow the SOP (standard operating procedures). Previously, they did not participate in the SOP, so there are still many injection patients left" (G5).

One crucial element of TB elimination is community empowerment to reduce dependence on health workers. Thus, TB cadres, the PPTI organizations' cadres, are empowered:

"There are PPTI cadres formed in the subdistricts who provide guidance and assistance to TB patients" (C1).

"I have 40 cadres. In subdistricts, there are 10 people, and in every subdistrict, there are five cadres. They are responsive in handling problems" (G6).

However, stakeholder empowerment is lacking because no forum for direct involvement exists:

"The role of entrepreneurs? I see that there is none. There are entrepreneurs who are interested, who at least sit down with us and talk about their concern for alleviating and suppressing TB cases" (G2).

"As an academic, I try to contribute by making a TB prevention module" (A).

Organizational readiness

Organizational readiness is defined as the ability to coordinate with various parties and stakeholders to conduct information, education, and communication (IEC) activities in a community. Sub-optimal IEC creates stigma in a community, and the fear of stigma encourages poor attitudes and behaviors in TB patients regarding their disease, leading to treatment avoidance. TB-friendly villages need to be established so that TB patients' openness does not lead to discrimination:

"The stigma is still high, so if you can get your dream from the start of entering health school, you can start educating families" (A).

"Yes, don't let there be discrimination; they will shut themselves off" (C3).

Therefore, TB-friendly villages as environments that motivate and encourage TB patients to undergo treatment must be established together with stakeholders and community involvement. At present, coordination and communication are lacking:

"For us in the council, if there is a proposal, I can encourage the Health Office to say, 'Please, sir, this is the problem with this contagious disease.' Communication alone is less effective" (G2).

"Sometimes in the subdistrict, there are pamphlets about TB, but the private sector or NGOs are yet to be seen" (B).

However, the emergence of COVID-19 has inspired stakeholders to work together to eliminate TB and COVID-19. This has encouraged several regions to establish TB-friendly villages:

"If there is a TB-friendly village in the future, the residents will understand more about the risks and ways of transmission, and how people can treat TB patients properly" (B).

Role of ABCGM in the governance of TB-friendly village development

TB-friendly village development is a community empowerment concept that uses the penta-helix model, which involves a variety of policy stakeholders, such as academics, businesses, communities, government, and the media. Without involvement from all stakeholders, development of TB-friendly villages will not be realized in Depok City, so ABCGM's role is vital. However, opportunities to get involved are lacking, which causes obstacles to establishing TB-friendly villages. For example, academics feel that not enough opportunities or programs exist that invite them to contribute. This was revealed in the following interview:

"When I was doing my dissertation, I was making empowerment models for clients, families, cadres, and nurses" (A).

Involvement among academic stakeholders is needed because they can contribute their expertise:

"The contribution of lecturers to the TB program can be extensive. For example, they can make an empowerment model to support government programs" (A).

"If TB is not controlled, there will be no change. So, as much as I can, I provide community service grants annually" (A).

No forum exists that can optimize academics' role, so their activity was sporadic. However, according to the three primary roles in higher education – community service, education, and research (called *tridharma*) – which must be carried out, it is possible to implement the tridharma along with TB-friendly villages:

"The TB-friendly village program must be carried out immediately, starting with research and then community service. Once it is up and running, it must be evaluated, and the results of the investigation should become a model for active learning" (A).

Entrepreneurs' role in the penta-helix model involves sourcing, funding, and disseminating information about TB through printed media in the form of leaflets and posters. Entrepreneurs' responses to TB-friendly villages and the opportunities to develop them during the COVID-19 pandemic were as follows:

"The focus of society during the pandemic is on COVID-19. It seems rather difficult to socialize TB at this time, but it is possible with 3M's socialization of COVID-19" (B).

"I inform my staff at the office about TB as my participation in the socialization of TB. Hopefully, later they can be involved in the wider environment" (B).

As a community itself, a group of cadres plays a role in educating and advocating for TB patients who have problems obtaining access to health facilities. Furthermore, they satisfy patients' needs and monitor them for medication adherence:

"Patients who are not taking medication are visited repeatedly. The officers from the Puskesmas also come, but they don't want to" (C2).

"For those who are sick in the middle to lower class, if I find a recalcitrant patient who has difficulty taking medication, I first look for donors. I first give services to the patient so that he feels indebted; my

goal is to let him take medicine diligently and appreciate those of us who always come" (C1).

"Maybe in the future, there will be funds allocated to less fortunate patients because if we visit TB patients, they are less able to buy nutritious food" (C7).

Although cadres experience obstacles in advocating for TB patients, they want to continue to be involved in eliminating TB as a community:

"Hopefully, the PAC funds will come because then we will be more flexible; we can move if there are activities, for example, we can use for improving patients' nutritional status" (C7).

"If the funds are available, we want to give them directly to the cadres because if they go to the subdistrict, they won't arrive" (C1).

"The TB cadres' performance is already good. If there are TB-friendly communities, don't throw us out as cadres; we want to keep having activities" (C4).

As the primary stakeholders advocating for TB patients, cadres must communicate well. Likewise, as stakeholders running the TB program, they must be able to collaborate with external parties as compilers and implementers of policies, with input from various stakeholders:

"We must continue to echo it, as well as invite Bappeda as a planner to lead subdistricts and subdistricts to budget for the health sector and support the achievement of the health sector" (G1).

The media's role in eliminating TB through information and education in print, electronic, and online forms is vital. This helps the government provide information to the public, as the following interview illustrates:

"The media has a role in the dissemination of information. There are many events about tuberculosis from the Ministry of Health, CSOs, Health NGOs, and professional organizations. If there is a TB event, it must involve the media" (M1).

However, a lack of interest in the topic of health means that media engagement is not comprehensive, as revealed in the following interviews:

"It should be noted that every (medium) has a different taste for news. It must be understood that task rotation in the media is fast, especially online. So, usually, no one is in charge of health issues; there are only a few people generally" (M1).

"Not all media have health journalists, so there may be no health news, let alone TB news" (M1).

"As a concrete example, at the end of last year until the beginning of 2021, there was a fellowship between AJI Jakarta and STPI [Stop TB Partnership Indonesia]" (M1).

The following quotes reveal the media's views regarding TB-friendly villages:

"TB-friendly villages are fascinating. If they can be realized, people will be curious that an area can be free from TB" (M2).

"When people are exposed to TB, they will hide and not tell people for fear of being ostracized. Through TB-friendly villages, people will understand TB. It is terrific" (M2).

An overview of TB-friendly village development governance readiness and stakeholders' role is summarized in Table 4's matrix.

Discussion

TB is a global and complex problem that organizations cannot solve independently [24]. Therefore, organizations' readiness is essential [25]. One factor that influences organizations' willingness to act is a government's commitment. This study found that Depok City's stakeholders have not created synergies to alleviate TB through policies or regulations. Therefore, it is necessary to develop collaborative governance, particularly during the COVID-19 pandemic. Collaborative governance can be facilitated through development and decision-making with academics, entrepreneurs, media, and communities [26]. This model is expected to increase the sense of togetherness and become an intelligent

Table 4: The readiness of governance component of tuberculosis-friendly village

Serial number	Component	Existing situation	The readiness of governance of TB-friendly village development
1	Government Commitment	Puskesmas find it challenging to get TB data from other health facilities	−/−
		The flow of communication is not well structured	−/−
		Budget support	+
2	Infrastructure readiness	Availability of inspection facilities	++
		TB reporting has not been done consistently	−/−
3	Readiness of resources	Difficulty in running the TB program due to the COVID-19 pandemic	−/−
		Community empowerment	++
		Empowerment of stakeholders other than health workers	−/+
4	Organizational readiness	Patient openness should not be an opportunity for discrimination	−/−
		Community involvement as a whole, but coordination among stakeholders is not in line	−/−
5	The role of ABCGM	The function of the tridharma of college can be carried out in the presence of TB-friendly villages	++
		Hope to be able to participate in the eradication of tuberculosis	++
		Advocating for the socioeconomic problems experienced by patients so that they can comply with treatment	++
		As a compiler and implementer of policies with input from various stakeholders	++

TB: Tuberculosis, ABCGM: Academic, business, community, government, and media.

use of strength as the local culture can be implemented through skills, systems, and structures to achieve targets, namely, community welfare.

The development of TB-friendly villages requires readiness in infrastructure and facilities [27]. In this study, informants stated that the TB program's infrastructure in health facilities remains hampered. TB patients' crowded environments that lack lighting delay their recovery. Infrastructure is not fixed or closed but is rather a dynamic system that develops according to an organization's policies or needs [24]. A low level of education and awareness of treatment options, and a lack of family care during the TB treatment process cause problems in treating TB patients [28]. The government has thought of alternatives to reach out, for example, Friendly Motorbike for People with Tuberculosis (MoRoTI), which aims to mobilize preventive and promotional activities across sectors [29]. The importance of this commitment related to infrastructure is confirmed [30]. Because TCM remains limited in Depok City, overcoming drug-resistant TB with TCM tools requires improving the specimen delivery system, implementing appropriate reporting policies, and forming a referral network for their utilization [30].

Depok City's commitment to synergizing programs will lead to both the community and organizations' success. However, commitment remains lacking in terms of implementing the TB program, as well as community involvement. This research on the general public and TB patients found that respondents have firm knowledge about TB, but that their negative attitudes and behavior are obstacles to eliminating TB cases. This is in line with results from statistical tests in a study conducted in the working area of Puskesmas Ngemplak, Boyolali district, which found no relationship between a firm level of knowledge and TB transmission prevention behavior [31]. The informants expressed the hope that when Depok City is ready to become a TB-friendly village, there will be PMO (Pengawas Menelan Obat/the supervisors who are in charge of ensuring that patients take medications appropriately) officers for each RT (neighborhood) to improve attitudes and behavior regarding TB prevention and treatment. They also hope to have TB troops at the RT level, similar to the COVID-19 task force. The informants also imagined that TB-friendly villages could be strengthened within the patient community, as with AIDS and the community of former TB patients. The informants hope that the COVID-19 task force can maximize socialization of TB-friendly villages during the pandemic, although this will require coordination and communication between all stakeholders.

TB-friendly villages' readiness is enhanced by funding support and human resources. The results indicated that the human resources in Depok City remain ill-prepared for it to become a TB-friendly village. Cadres' involvement remains insufficient, and competent health workers need to perform their services according to the SOP. Planning for human resource needs is a systematic process to determine the number, levels, and qualifications of resources needed according to a region's conditions to achieve health development goals [31]. Health workers' performance quality also should be ensured, and workloads should be appropriate. This begins with Depok City's government making a commitment to TB control to support implementation of TB programs.

Organizations' cultural readiness is also a determinant of integrated success in developing TB-friendly villages. Organizational culture supports success, but can be an obstacle when it is not viable (Asniati *et al*., 2018). Stigmatization can be a significant obstacle to treating TB patients, while psychological support encourages treatment. TB patients' families are at the forefront of isolating TB patients from environments that practice exclusion and discrimination (Lau *et al*., 2020). Therefore, in line with research, families can reduce negative social consequences for TB patients [32], [33], [34]. This study found that stigmatization often occurs in the community. Ignorance, poor attitudes, and negative behavior cause stigma. This is in line with research in Ethiopia, which demonstrated that a stigma emerges from a community's lack of awareness and cultural knowledge. Education and understanding will produce a consistently positive attitude compared with attitudes that have no foundation in knowledge.

Communication between communities and stakeholders is needed to allow all parties to help eliminate TB. Furthermore, stakeholder communication and coordination reduce stigma and help eliminate TB. However, this study demonstrates that communication and coordination remain lacking between subdistricts, the Health Service, and DPRD, with Depok City remaining ill-prepared to become a TB-friendly village.

Depok City also needs to formulate a strategy to deal with the increase in population every year due to the influx of migrants. In 2018, 29,551 newcomers moved to Depok City. High housing population density, poor health conditions within residences, and a lack of air circulation increase the risk of TB transmission (Pratiwi, 2012). TB patients' migration also leads to incomplete treatment due to their reluctance to embrace new environments and obtain treatment. Thus, TB in large migratory populations is a health threat to Depok City [34].

The penta-helix model approach demonstrates various community components' readiness to form TB-friendly villages. The synergy between stakeholders has not been maximized, and building and ensuring collaborative, productive, and harmonious relationships are essential elements of effective governance to elicit valuable, quality work. Effective governance involves a value system, policies, and institutions to manage economic, political, and social issues through the government, private, and civil sectors [35], [36]. Health

governance and community welfare are essential components of effective governance [37]. Health governance requires an interactive and synergistic set of policies implemented in the health sector and outside of government, and it needs to be supported by structures and mechanisms that facilitate collaboration [38]. Community participation is one of the most critical factors in policymaking. Key community stakeholders — including businesses, employees, universities, media, civil society, and health system governance — must be committed to protecting and enhancing human health. In this sense, governance includes: (1) Determining strategic direction and objectives; (2) creating policies, rules, regulations, or decisions and providing and assigning resources for strategic objectives; and (3) monitoring and ensuring the realization of strategic objectives [39].

This study demonstrates that the community, government, and academics play significant roles in implementing the TB-friendly village concept. Academics play a role in facilitating the TB-friendly village concept and sharpening it, along with their role in the tridharma of higher education, which comprises community service, research, and education, among other aspects. TB-friendly villages can be a forum for these three functions while monitoring and evaluations are conducted.

Government's role in spearheading policies comprises two administrative elements: City government and DPRD. In general, these two elements' role is to strengthen communication between policymakers at the city level and below, from the subdistrict level to the RT/RW. Government's role also needs to be strengthened through collaborations with partners such as civil society organizations, the media, and entrepreneurs. The government implements policy by setting minimum service standards (SPM) and other targets directly related to eradicating TB [40]. In terms of effective governance, the government plays a strategic role as a facilitator and enabler, including protecting every actor's human rights, maintaining security and order, and controlling behavior through policies, regulation, and enforcement. The DPRD, in particular, as a bridge between constituents (society) and the city government, plays a role in advocating for various community and individual interests. For this advocacy to be realized, effective communication and coordination between the community and city government, Bappeda (National Planning Board in the Ministry of National Development Planning), and other parties are required. Cross-sector collaboration and government commitment to TB control are essential to making TB a priority that is not only the burden of Puskesmas, but also is tackled within all sectors.

TB cadres' role is vital and is at the forefront of solving health problems. Their role as activators or managers of primary health efforts in society can function optimally if cadres have credibility in terms of competence and safety. TB cadres are expected to conduct promotional and preventive efforts to help healthcare workers in the community. Furthermore, cadres can conduct intensive education and advocacy, which can be seen from their readiness and enthusiasm regarding the opportunity to establish TB-friendly villages. The media play a key role in conducting various strategic tasks, such as disseminating information, policy advocacy, sourcing funding for educational TB programs, rectifying misinformation, and connecting the community with ABCGM stakeholders. Regarding the media's coverage of health problems, some obstacles often encountered include a lack of media involvement in various matters, particularly programs; a low supply of accurate and up-to-date data; and poor access to aid sources. Furthermore, it is crucial to embrace journalists' professional organizations.

Limitation

This study was conducted during the COVID-19 pandemic, so it was limited in terms of visits and observations of all patients, with only few respondents represented. Patient home visits were conducted under strict health protocols. Interviews and FGDs were conducted online to minimize COVID-19 transmission risks.

Conclusion

The preparation of TB-friendly village development governance in Depok City remains ongoing and demonstrates readiness in human resources. However, readiness remains lacking in terms of coordination and communication between institutions in program implementation to eliminate TB. Therefore, the TB eradication program will progress more effectively by establishing regional leadership policies as a legal basis and optimizing academic contributions and the role of cadres and the media. Thus, involving the public in conveying information related to TB problems and collaborating with the private sector in providing TB service ads will elicit effective governance in implementing TB-friendly villages in Depok City.

Acknowledgments

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