



Involvement of Community Organisations in Providing Information, Motivation to TB Patients to Adhere to Regular Treatment

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ABSTRACT

Background: Tuberculosis (TB) requires long-term treatment, and non-adherence remains a major challenge that increases the risk of treatment failure and disease transmission. The Information–Motivation–Behavioral (IMB) model highlights the importance of social support in improving adherence. Community-based organizations, particularly youth and religious organizations, are deeply embedded in society and have the potential to support TB patients through information dissemination and motivational assistance. This study aimed to explore the role of community organizations in providing information and motivation to enhance treatment adherence among TB patients.

Methods: A qualitative study with a phenomenological approach was conducted in the Serdang Bedagai health service area, North Sumatera, Indonesia. A total of 24 informants, including health workers, members of youth and religious organizations, and TB patients, were recruited using purposive sampling. Data were collected through in-depth interviews and analyzed using qualitative content analysis supported by Atlas.ti software.

Results: Three main themes emerged: adherence to treatment, establishment of cooperation, and motivation. Community organizations supported adherence by facilitating regular meetings, assisting medication intake, establishing communication groups, and providing emotional, informational, and family support.

Conclusion: The involvement of youth and religious organizations plays a critical role in strengthening TB treatment adherence. Integrating community-based support with health services may enhance motivation, supervision, and long-term treatment compliance among TB patients.



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INTRODUCTION

Tuberculosis is a frightening disease that makes patients helpless. Tuberculosis can reduce the patient's ability to perform activities, resulting in decreased creativity and, eventually, the inability to fulfill their own needs (Feng et al., 2023; Wagnew et al., 2023; Yang et al., 2024).

The length of treatment and side effects are often the causes of non-adherence in patients with tuberculosis to take medication regularly (Bruzadelli Paulino da Costa et al., 2023; Feng et al., 2023). Various models and methods have been developed to prevent transmission and reduce the number of patients with TB in the community. However, the number of TB patients is increasing, and Indonesia is the second largest country in the world with the highest number of TB patients. Physical weakness, poverty, and a lack of information are serious threats for every patient to adhere to treatment (Fu et al., 2023; Getahun et al., 2023).

Information about TB that does not reach the lower levels of society often triggers the spread of TB germs in the community. People with low economic status still like to gather in groups to hold activities such as social gatherings and family parties, so that the transmission of *M. tuberculosis* germs can spread quickly within that scope. Ignoring the signs and symptoms and ways of transmission of *M. tuberculosis* germs results in a rapid increase in the number of tuberculosis patients (Balay et al., 2024; Izudi et al., 2023; Lee et al., 2024; Nabisere-Arinaitwe et al., 2023).

Arisan and perwiratan activities create organizations in the community. Youth organizations and religious organizations are the most embedded in the community. These organizations can be used to disseminate information about TB (Friedena & Sbarbarob, 2007; Putra & Toonsiri, 2019). Puskesmas as village community health centers can use these two organizations to provide information and motivation to TB patients to adhere to treatment so that the spread of TB can be reduced or even eliminated (Igwaran & Edoamodu, 2021). This study aimed to explore the role of community organizations in providing information and motivation to enhance treatment adherence among TB patients.

METHODS

This research was conducted in the Serdang Bedagai Health Working Area, North Sumatra, in 2022. This study used a qualitative approach using data analysis techniques and qualitative content analysis. Information collection using in-depth interviews. Purposive sampling was used for sampling. There were 24 informants, including 4 health workers, 6 youth organizations, 6 religious organizations, and 8 people with TB.

The researcher first produced an outline of the subject matter that will be conveyed to the informant in the form of an interview guideline. The interview questions addressed to the subjects were open-ended and did not personally lead to the research questions. Data were collected through interviews using a voice recorder. Recording was performed after obtaining the subjects' consent. The results of the interviews in the form of voice recordings were then converted into written forms (transcripts).

The transcripts were analyzed using qualitative content analysis. Qualitative content analysis was carried out by describing or filtering text or word terms into a number of categories that represent certain kinds of content using the Atlas.ti program. The results of content analysis are a flexible method for analyzing text content. The qualitative results of content analysis can be used to evaluate the findings of the analysis. Ethical approval was obtained from the LPPM Imelda University Medan.

RESULT

This study included 24 participants consisting of four people from health workers, six people from youth organizations, six people from religious organizations, and eight people with TB. The details are presented in Tables 1 and 2.

Table 1 Demographic Data of Participants

Participants	Gender	Age	Education	Employment
VO ₁	Male	42	Bachelor of Medicine	Doctor
VO ₂	Female	40	Senior High School	Youth organizations
HW ₃	Female	45	Bachelor of Medicine	Doctor
HW ₄	Female	35	Bachelor of health	Health workers
VW ₅	Male	28	Bachelor	Youth organizations
VW ₆	Female	30	Bachelor	Youth organizations
TP ₇	Female	31	Senior High School	Tuberculosis patients
TP ₈	Male	28	Junior High School	Tuberculosis patients
VO ₉	Male	28	Senior High School	Youth organizations
VO ₁₀	Female	40	Senior High School	Youth organizations
VW ₁₁	Female	24	Bachelor	Youth organizations
VW ₁₂	Female	26	Bachelor	Youth organizations
HW ₁₃	Female	30	Bachelor of public health	Health workers
HW ₁₄	Male	33	Senior High School	Youth organizations
HW ₁₅	Female	28	Bachelor of public health	Youth organizations
VW ₁₆	Female	23	Bachelor	Youth organizations
VW ₁₇	Female	24	Bachelor	Youth organizations
HW ₁₈	Male	36	Bachelor	Youth organizations
TP ₁₉	Male	25	Junior High School	Tuberculosis patients
TP ₂₀	Female	28	Elementary school	Tuberculosis patients
TP ₂₁	Female	33	Junior High School	Tuberculosis patients
TP ₂₂	Male	38	Junior High School	Tuberculosis patients
TP ₂₃	Female	22	Junior High School	Tuberculosis patients
TP ₂₄	Female	20	Elementary school	Tuberculosis patients

The results of the textual analysis and transcription revealed three themes and ten sub-themes. The details are presented in Table 2.

Table 2 Theme and Categories

Theme	Sub themes
Adherence to treatment	<ol style="list-style-type: none"> 1. Be diligent in attending meetings 2. Regularity in taking medication according to schedule 3. Taking medication as instructed by health workers.
Establish cooperation	<ol style="list-style-type: none"> 1. Form a What's Up group 2. Helps control medication taking 3. Integrated monitoring
Motivation	<ol style="list-style-type: none"> 1. Information support 2. Appreciation support 3. Family support 4. Rewards and punishments

Theme 1. Adherence to treatment

Sub themes 1. Be Diligent in attending meetings.

Scheduled meetings that discuss all tuberculosis problems are regularly conducted. Successful tuberculosis patients who have recovered are also presented in meetings to increase the motivation of tuberculosis patients to recover.

"...Meetings like this are very important to us because we know what TB is. All this time we did not know, we thought it was wet lungs or bengeknya, like that sir. So apparently, it's the same, then what are the signs so we can know sir..." (TP7-8, TP19-24)

"...All these meeting activities started because in our village there were a lot of people coughing sir, and then friends were increasingly absent from community activities, so we found out apparently because of lung disease. So, when they found out about the lungs, they immediately locked themselves up, so our activities in the community became less and less. Then we find out how or how we can help, it turns out that through meetings like this, we can also help, such as spreading information about TB. We were also guided by people from the puskesmas before giving TB information..." (VO2, VW5-6, VO9-12, HW14-15)

"...The meeting initiated by the youth organization and combining it with the religious organization is a good step in our opinion, sir, because after all these two organizations are still heard very highly by the community, so why don't we take advantage of it, right sir..." (VO1, HW3, HW4, HW13)

Sub themes 2. Regularly in taking medication on a scheduled basis.

Patients with tuberculosis need to emphasize the importance of regular daily medication. The success of tuberculosis treatment followed the scheduled treatment instructions.

"...As it has been globally agreed that only by taking regular medication, eating nutritious food, and adequate rest can tuberculosis be cured, sir. So, the regularity of tuberculosis patients in taking medicine is very much needed. Moreover, this tuberculosis medicine is free sir..." (VO1, HW3, HW4, HW13)

"...When I was told by the puskesmas sir, he said that this medicine should not be broken sir, so it must be taken regularly and should not be broken because he said it could recur again and the pain would get worse, and it could spread to the family too sir, so it must be taken regularly, sir..." (TP7-8, TP19-24)

Sub themes 3. Taking medicine according to health worker instructions.

Taking medication is the ease with which patients with TB take their medication according to a predetermined schedule. Utilizing the presence of youth and religious organizations, TB drugs from puskesmas can be distributed to remote areas for distribution to patients with TB.

"...So, through these two organizations, people with tuberculosis can be reminded to take their medication regularly, the meetings of these two organizations can be used to remind people to take their medication regularly..." (VO1, HW3, HW4, HW13)

"...Sometimes when there is a meeting, we remind each other so that TB patients remain compliant in taking medicine and can convey problems or weaknesses in fulfilling the need for TB drugs..."

Theme 2. Establishing cooperation

Sub themes 1. Make what's up group.

Utilizing the digital era can improve TB patients' adherence to treatment. Communication groups formed by puskesmas, youth organizations, religious organizations, and TB patients can improve adherence because the communication groups remind each other.

"... Because now everyone has a mobile phone, sir, it's good to create communication groups like WA group, so everyone can discuss with each other, remind each other, continue to be able to give input for example what kind of good food is, drink kekmana, continue so as not to spread disease..." (TP7-TP8; TP19-TP24; VO1, HW3, HW4, HW13)

"... It's good to make Wa group, sir, so in that group, there are public health center people, village heads, religious leaders, and then the head of the environment, so everyone can work together, so if someone has trouble taking the medicine, for example, they can be taken with other people in the group, sir..." (TP7-TP8; TP19-TP24; VO1, HW3, HW4, HW13)

Sub themes 2. Helps control medication taking.

Support from accompanying patients with tuberculosis to control and take medicine to the health center can improve patient compliance in their treatment.

"...The problem is that sir, when we first got TB, our body was weak, it seemed easy to be short of breath, weak, and staggered, not to mention the distance to the puskesmas. But if someone wants to take me, I think if I only take medicine, everyone will want to be regular..." (VO2, VW5-6, VO9-12, HW14-15)

"...these friends who have TB sir, we always ask what we can help sir, so like accompanying them to the health center, or borrowing a motorbike from the village head and taking the patient to the health center sir, so that these TB friends can continue to take their medicine, sir..." (VO2, VW5-6, VO9-12, HW14-15)

Sub themes 3. Integrated monitoring.

Close supervision can be conducted by youth organizations, religious organizations, and health centers, both online and offline. Online inherent supervision can be conducted through communication group media, while offline inherent supervision can be conducted by visiting the homes of patients with TB through the home visit system.

"... It's good that all TB patients who take this medicine are equally supervised by the pack, so it's not enough just to be told or reminded to take medicine, even when taking medicine there must be people who see directly or accompany when the patient takes the medicine, so if you have been glared at, you must take the medicine..." (VO2, VW5-6, VO9-12, HW14-15, VO1, HW3, HW4, HW13).

"Supervision of taking this medicine should not only be handed over to the family, sir, because sometimes the family also works, so where can he see it, do you want it to be seen by the head of the neighborhood, village head, or cadres, village midwives or community leaders, sir..." (VO2, VW5-6, VO9-12, HW14-15, VO1, HW3, HW4, HW13).

Theme 3. Motivation.

Sub themes 1. Information support.

In general, tuberculosis sufferers do not understand the signs and symptoms of tuberculosis and how to treat and prevent its spread. Providing information through health counseling can be accomplished quickly through the provision of videos and disseminated through online media.

"... If I can be honest, sir, not all of us understand this TB disease. Sometimes we think it's just coughing, just keep taking medicine to heal, drink ginger water, and keep coughing again... already have TB, where do we want to know quickly that we are a TB-affected community, want is the information, sir we can get and understand..." ((TP7-8, TP19-24)

"... Now almost everyone sees YouTube, sir, videos on cellphones, so I want these public health center people to make videos about TB and continue to send them to us citizens, right, so we can watch together at home..." (TP7-TP8; TP19-TP24; VO1, VO2, VO9, VO10)

Sub themes 2. Appreciation support.

The success of tuberculosis patients in completing their treatment every month should be appreciated. Each village adjusts its form of appreciation accordingly. This form of appreciation will be seen, followed by other tuberculosis sufferers to increase compliance.

"... So right, sir, anyone with tuberculosis who is ready for treatment is given a gift as encouragement, continue to be included as a cadre so that it can motivate other tuberculosis sufferers, sir, so in the what's up groups, sir, the recovered patient is told to tell me, how to get better quickly, what to eat, what to drink, continue to like rest, That's it, sir..." (VO1, VO2, VO9, VO10; HW3-HW4; HW13-HW15; HW18; VW5-VW6-VW11-VW12)

"... For every tuberculosis patient who, for example, is ready to take medicine one month, right, sir, it will be given, for example, to eggs and milk, anyway, from the village we assist, sir, so what I see if it is made like this will motivate patients to recover, sir, then the funds can be allocated from the village fund, sir..." (VO1, VO2, VO9, VO10).

Sub themes 3. Family support.

The family must always be present while patients is undergoing treatment. The existence of a family increases the confidence of patients in complying with treatment.

"... Every morning, brother, when you arrive at the workshop, you are immediately asked, have you taken the medicine? Every day brothers. If that is the case, then make food, then I have breakfast, bang..." (TP7-TP8; TP19-TP24)

"... Then sometimes mothers are also the ones who most often want to take the medicine. Tiap that day was asked directly with the mother. Sometimes it is taken too, sometimes it is also seen with the mother. If you have money, sometimes I buy it too, I also buy eggs, bang..." (TP7-TP8; TP19-TP24)

"... Since being given the TB health center, my wife was immediately alert, sir. Every day it was never too late to give medicine to me. I would take the medicine every morning sir, so early that morning, the children were still sleeping... My wife is ready to eat for breakfast, continue to boil eggs, ready to just wake me up..." (TP7-TP8; TP19-TP24)

Sub themes 4. Reward and Punishment.

Providing rewards and punishments needs to be carried out and disseminated in communication groups to motivate tuberculosis sufferers and even the patient's family for the recovery of sufferers.

"It's good, sir, TB patients should be given stimulation too, sir, for example, every time you take medicine or every control to the health center, you are rewarded with eggs and milk, so the patient is also motivated. Then patients who do not lose or drop out of good drugs are also punished, so the patient must obey..." (VO1, VO2, VO9, VO10; HW3-HW4; HW13-HW15; HW18)

"... TB patients who do not control or drop out of drugs should be visited by the village head, the head of the neighborhood, and the public health center people, warned to take medicine regularly, then if they don't want to make a statement stamped, so if the patient does not care then they are removed from the environment..." (VO1, VO2, VO9, VO10; HW3-HW4; HW13-HW15; HW18; VW5-VW6-VW11-VW12)

DISCUSSION

The success of tuberculosis treatment is not only based on the drugs administered but also on the compliance of patients with tuberculosis to take medicine regularly (Nguyen et al., 2023; Rahmati et al., 2023; Zeding et al., 2023). Regularity in medication will improve the patient's recovery and reduce the spread of M. tuberculosis germs to others (Bonsa et al., 2024; Lee et al., 2024; Zenatti et al., 2023).

Tuberculosis treatment, which requires a long period of time, needs support from everyone, including family, friends, parents, health workers, and the community (Bonsa et al., 2024; Nguyen et al., 2023). The involvement of various parties will motivate people with tuberculosis to undergo lengthy treatment. Youth and religious organizations are two of the most embedded in the community (Kavanagh et al., 2020; Kilale et al., 2022). So far, these two organizations have never been involved in the dissemination of information related to tuberculosis, even though the community is involved in these two organizations daily (Kilale et al., 2022; McCormick, 2017)

The involvement of youth organizations such as Karang Taruna, youth associations, and religious organizations such as Wiritan events and weekly activities will have an impact on TB patients' compliance with their treatment. Youth organizations as a forum for young people can be used to help disseminate information about tuberculosis, work together to support tuberculosis patients who cannot afford to take medicine to the Puskesmas, or even participate in motivating patients to be compliant in taking their medicine. Likewise, religious organizations can also be used to disseminate information about tuberculosis through lectures during wiritan or weekly events. Patients can also be motivated to take medication regularly so that others can avoid the transmission of M. tuberculosis germs (Rudgard et al., 2017; Yulianti Sutrisno et al., 2022).

Both youth and religious organizations should be involved by health workers in supporting the success of TB treatment, especially in preventing transmission by disseminating information about TB within the community. Mutual support and reminders will have a motivational impact on patients with TB and their families to comply with TB treatment properly and routinely (Nguyen et al., 2023; Rahmati et al., 2023; Zeding et al., 2023).

CONCLUSIONS

The involvement of organizations in society, such as youth and religious organizations, produces three main themes: adherence to treatment, establishment of cooperation, and motivation. Tuberculosis treatment, which takes a long time and is boring, requires the involvement of people around them. The involvement of community organizations can increase the compliance of tuberculosis sufferers in undergoing proper treatment. Compliance with tuberculosis sufferers occurs because of the support provided by the people around them and helping them during treatment.

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