

ORIGINAL ARTICLE

Exploring Strategies to Improve the Performance of Community Health Volunteers for Tuberculosis Care and Prevention: A Qualitative Study

Mamat Lukman¹, MSi; Kusman Ibrahim², PhD; Desy Indra Yani¹, MNS; Sheizi Prista Sari¹, MN; Neti Juniarti¹, PhD

¹Department of Community Health Nursing, Faculty of Nursing, Universitas Padjadjaran, Bandung, Indonesia

²Department of Medical Surgical Nursing, Faculty of Nursing, Universitas Padjadjaran, Bandung, Indonesia

Corresponding Author:

Neti Juniarti, PhD; Jl. Raya Bandung—Sumedang KM. 21 Jatinangor Kab. Sumedang, Jawa Barat, Indonesia

Tel: +6 22 27796647; **Fax:** +6 22 27796647; **Email:** neti.juniarti@unpad.ac.id

Received: 20 April 2019 **Revised:** 24 June 2019 **Accepted:** 26 June 2019

ABSTRACT

Background: Community health volunteers contributed to the total Tuberculosis (TB) case findings; however, the attrition rate of these volunteers was high which reduces their optimal performance. Hence, sustainability of efforts should be explored to retain the community health volunteers in the TB program. Improvement of community health volunteers to perform community-based health education and prevent TB has not been examined consistently around the globe, including Indonesia. This study aimed to explore the strategies to improve performance of community health volunteers for TB care and prevention to reduce the incidence and stop the spread of TB in the community.

Methods: A qualitative design was adopted and we used two focus group discussions in 2017 to collect the data. The participants included village health workers as volunteers in two regencies of Bandung City, West Java Indonesia. A thematic analysis was used to analyze the data.

Results: Four major themes should be considered in developing a community-based TB health education program: (1) informing community health volunteers about the benefits and difficulties of being a TB volunteer; (2) recognizing the activities and feelings of volunteers; (3) emphasizing the Willingness to Help Others; and (4) having access to TB training.

Conclusion: To develop a community-based health education program for TB care and prevention, community nurses need to listen to the opinions of community health volunteers, and TB patients and their family members to ensure that the health education program is tailored to meet community needs.

KEYWORDS: Community health education, Tuberculosis, Village health workers

Please cite this article as: Lukman M, Ibrahim K, Yani DI, Sari SP, Juniarti N. Exploring Strategies to Improve the Performance of Community Health Volunteers for Tuberculosis Care and Prevention: A Qualitative Study. *IJCBNM*. 2019;7(4):270-278. doi: 10.30476/IJCBNM.2019.81353.0.

INTRODUCTION

In 2017, an estimated 10.0 million people were diagnosed with Tuberculosis (TB) globally. Of these, 1.3 million people died. Among these TB cases, the South-East Asian and Western Pacific regions had a high incidence of TB.¹ India, China and Indonesia had the largest number of TB cases in 2014 (i.e. 27%, 9% and 8% of the global total, respectively). As one of the TB high burden countries, Indonesia has implemented the Directly Observed Treatment, Short-course (DOTS) of chemotherapy strategy since 1995; however, the revised estimate for new TB cases is still 842 thousand people per year.¹ The number of new cases is a concern, as it increases the Indonesia's burden. To reduce this burden, detection and treatment gaps must be addressed, funding gaps closed, and new tools developed.¹

DOTS facilitates the success of TB treatment by improving compliance and changing health behaviors. There was no significant difference between the cure rates for TB patients who underwent Directly Observed Treatment (DOT) and those who did not undergo DOT.² However, TB patients who were directly observed by health professionals or family members had a higher treatment success compared to clinic DOT or patients who had no such direct observers.^{3, 4}

Partnership and collaboration with the community is an approach that can be adopted to increase the access to and the standard of care for TB patients. Community partnership is an important way of empowering community members to solve their problems.⁵ In Indonesia, community health volunteers are the front line of community empowerment in health, particularly to spread health information about healthy behavior.⁶ DOT by health professionals and family members has been shown to have consistently positive results. A study showed that the village volunteer health workers contributed to the total TB case findings; however, the attrition rate of these volunteers was only 55% which reduces their optimal performance.⁷ Hence, sustainability

of the efforts should be explored to retain the village health workers as community health volunteers in the TB program.⁷ Improvement of community health volunteers to perform community-based health education and prevention of TB has not been examined consistently around the globe, including Indonesia. Thus, a qualitative paradigm is employed for this research as the study intends to explore strategies to improve community health volunteers particularly in TB care and prevention based on the perceptions and views of the volunteers in naturalistic and interpretive domains. The exploration of perceptions and views is important because there are multiple subjective meanings and understandings about certain objects or things in a certain social context of the world in which humans live.⁸ This study sought to answer the following question: What are the strategies to improve the performance of community health volunteers for TB care and prevention in the community from the viewpoints of the volunteers?

MATERIALS AND METHODS

This study adopted a qualitative approach that "operates within a naturalistic, interpretive domain", using thematic analysis.^{9, 10} The inclusion criteria for the community health volunteer participants were: attendance in TB training; and residence in the same area as the TB patients. The exclusion criteria were the volunteers who were not active in the community TB care and those who did not complete the TB training. In total, eight TB community health volunteers participated in this study. All participants consented to be involved in the study.

Confidentiality of all participants' identity was maintained by giving initials P1 until P8 for participants. Table 1 displays the initials and characteristics of the participants. The participants in this study were community health volunteers who were purposively recruited from two districts of Bandung City, West Java Indonesia. Ethics committee

Table 1: Characteristics of the Community Volunteer Participants

No	Initials	Location	Gender	Age	Educational level	Length of volunteering
1	P1	Cigondewah	Female	69	Junior High School	30 years
2	P2	Cigondewah	Female	52	Senior High School	19 years
3	P3	Cigondewah	Female	46	Senior High School	5 years
4	P4	Cigondewah	Female	52	Senior High School	15 years
5	P5	Cigondewah	Female	33	Senior High School	4 years
6	P6	Babakan Sari	Female	49	Senior High School	17 years
7	P7	Babakan Sari	Female	52	Junior High School	20 years
8	P8	Babakan Sari	Female	38	Junior High School	4 years

Table 2: Themes and Subthemes

No.	Themes	Sub-Themes
1.	Informing community health volunteers of the benefits and difficulties of being a TB volunteer	a. Benefits to the TB patients, themselves, and the community b. Recognizing difficulties of being a TB volunteer
2.	Recognizing the activities and feelings of volunteers	a. Recognizing activities of the TB volunteers b. Recognizing the feelings of TB volunteers
3.	Emphasizing on Willingness to Help Others	a. Willingness to help as a criterion for candidate volunteers b. Emphasize “to help people in the region” in the volunteer training
4.	The accessibility of TB training	a. Less than three hours a week for TB training b. Location of training in each village c. Training topics related to TB care and community movement

approval (number: 129/UN6.C1.3.2/KEPK/PN/2017) was obtained from Health Ethic Committee, Universitas Padjadjaran.

Two focus group discussions (FGDs) were conducted in 2017 to collect the data. The location of FGDs was Cigondewah and Babakan Sari subdistrict. These two locations were chosen because they were the most populous district in West Java with high incidence of TB. The study took place in a community hall in each subdistrict. Each FGD was attended by two research members, the first one acting as the FGD facilitators and the second one as an observer. The observer wrote field notes related to the participants' interaction and expression during the FGD. The discussions were audiotaped and transcribed verbatim.

A thematic analysis^{10, 11} was used to analyze the data to identify and report the patterns within the data. Thematic analysis consisted of the following six phases: becoming familiar with the data, generating the initial codes, searching for themes, reviewing the themes, defining and naming

the themes, and producing the report. The initial analysis yielded seven categories with 53 sub-categories. These categories and sub-categories were further refined and discussed among the authors, resulting in four main themes and 9 sub-theme (Table 2).

To be considered as evidence, a qualitative narrative should consider the rigor or trustworthiness of the interpretive perspective based on its credibility, transferability, confirmability, and dependability.¹² The use of triangulation is one way to maintain the credibility and accuracy of the findings⁸. In this study, triangulation was conducted using multiple perspectives from a wide range of participants that had experience as volunteer from 4 to 30 years (Table 1). Triangulation is based on “the idea that looking at something from multiple points of view improves accuracy”¹³ Using experience of multiple participants' perspectives, the accuracy of evidence can be enhanced.¹³ In terms of transferability, the community volunteers have differing views which need to be explored in order to deeply understand

them. Even though these views could not be generalized, the lessons learned from a deep understanding of the participants' views can be used in other settings.¹⁴ To ensure the dependability of this research, we explained the steps of analysis, starting from methods, data collection procedures, and data analysis procedures. In terms of conformability, the authors were constantly aware of the possibility of bias in the data collection; thus, they worked together in order to consciously separate personal background from the data.

RESULTS

Four major themes were identified from the study that should be considered in improving the performance of community health volunteers for TB care and prevention in the community, namely: (1) informing community health volunteers of the benefits and difficulties of being a TB volunteer; (2) recognizing the activities and feelings of volunteers; (3) emphasizing Willingness to Help Others; and (4) having access to TB training. The themes and subthemes are presented in Table 2. Each theme is described in the subsequent sections.

1. Informing Community Health Volunteers of the Benefits and Difficulties of Being a TB Volunteer

In order to improve the performance of community health volunteers, health professionals need to inform potential health volunteers of the benefits and difficulties of being a TB volunteer. Two major subthemes were identified in relation to being a community volunteer: (a) the benefits to the TB patients, the volunteers themselves, and the community; (b) recognition of the difficulties of being a TB volunteer. The benefits need to be explained to potential volunteers so that they are motivated to undertake supporting activities for TB patients and their families. The difficulties also need to be recognized, so that the volunteers would be prepared before they perform the TB prevention and care in the community.

1.a. Benefits to the TB patients, themselves, and the community

All the volunteers noted that their involvement in a community-based TB program had benefited TB patients. Participant 1 stated: *"There was a patient, Mr. X. After I visited him, thank God, he takes the TB medicine regularly and now he can walk again, and ride a motorcycle again."*

The majority of the volunteers also stated that their involvement benefited people in the community, as the volunteers were able to *"explain to people in the community about TB. Then, people can understand that TB is not caused by a curse or incurable disease, as long as they want to seek TB treatment"* (P3). When realizing that the participants' effort were beneficial for the patients, most of them felt motivated to help others in their community as they thought of other benefits of curing TB patients for themselves and their families.

Most of the TB community health volunteers reported that their involvement in TB care and prevention initiatives benefited themselves and increased their self-esteem and self-actualization as members of society. Participant 2 stated: *"Being a volunteer means that my life is very useful for other people. Even though I do not have lots of knowledge, at least I can give a little knowledge for people in my community who need help."*

1.b. Recognizing difficulties of being a TB volunteer

Various difficulties were reported by the TB volunteers, including those related to TB patients with unsupportive families and a lack of support from community health centers.

Unsupportive families would impede the activities of the volunteers and cause patients to drop out from the treatment. One TB community health volunteers noted: *"The family felt annoyed about the patient's treatment"* (P4). Unsupportive families also caused one *"patient to drop out from TB treatment"* (P2). This becomes a big challenge for the volunteer and might demotivate them to perform their activities.

Another challenge is in relation to the difficulty of performing activities as a volunteer without the support of the staff of the community health center, Participant 1 stated:

“In the community health center, if there is a TB patient, it is difficult to collaborate with the staff. They [the community health center staff] can only blame us just like that. They should not act like that.”

This excerpt showed that not all health personnel in the community health centers support these volunteers; they cause disappointment and reduce their motivation to perform well.

2. Recognizing the Activities and Feelings of the TB Community Health Volunteers

2.a. Recognizing activities of the TB volunteers

TB community health volunteers should be informed of and provided with descriptions of the activities that volunteers are required to undertake at the beginning of the volunteer recruitment process. Additionally, health professionals need to recognize these activities, as currently, *“there is no recognition from our community health center [volunteers]”* (P4). The volunteers’ activities include home visit to TB patients, working with other volunteers, raising funds, recruiting new volunteers, and TB training.

2.b. Recognizing the feelings of TB volunteers

Further, in addition to recognizing the activities of TB volunteers, it is important to identify and understand the feelings of TB community health volunteers, as feelings can affect the optimal functioning of volunteers. Some volunteers reported that they felt low self-esteem as *“lower class people”* (P3). Others stated that they felt like *“I am a scrounger, but it is not for me.”* (P1) Additionally, a few volunteers expressed that they were scared of being infected with TB. Community volunteer 5 stated: *“At the beginning, I was scared of being infected by TB, but after receiving health education, I am not scared any more.”* These responses

showed that the stigma associated with TB is still high. Another participant stated: *“TB is still a disease that the community is afraid of and that is hidden. Thus, any health education program should emphasize that TB patients need affection and attention from people in the community”* (P7)

The volunteers also stated that they needed *“recognition from the community leader”* (P5) and *“certain targets that need to be achieved by the volunteers”* (P6). The issues related to recognition and targets need to be addressed at TB training programs to enable each volunteer to *“be an active volunteer”* (P6).

3. Emphasizing the Willingness to Help Others

3.a. Willingness to help as a criterion for candidate volunteers

The participants suggested some strategies for recruiting new TB community health volunteers. Such strategies are important because *“the work of these volunteers is more difficult than any other volunteer”* (P5). Thus, the first criterion for candidate volunteers is that *“they have [the] willingness to help others”* (P1). In addition, *“the candidates need to be interviewed and explained about the related risks and activities that they will have to conduct as volunteers”* (P2). This should also *“involve the current volunteers”* (P3).

3.b. Emphasis on “helping people in the region” in the volunteer training

The trainers also emphasized that *“this training is not only for individual volunteers, but also to help people in the region”* (P5). In this way, the number of people who are interested to become a TB volunteer may be increased.

4. The Accessibility of TB training

The accessibility of TB training also needs to be considered. Accessibility includes the duration, location, and the topic of the training.

4.a. Less than three hours a week for TB training

The volunteers reported that the duration of their TB training was three hours. Participant

7 stated:

“Our task is to guide the patients, so we must be more knowledgeable than the patients ...; therefore, 3 hours per week for a month is enough for us.”

However, other participants stated: *“The training time was too long; moreover, I was not feeling well, so I could not concentrate.”* (P5). Another volunteer stated: *“I have a small child, so yes the duration of the training is too long”* (P8). Thus, the TB trainers for the community volunteers needs to consider the availability and daily activities of the volunteers so that the duration of the training is appropriate for the volunteers.

4.b. Location of training in each village

In relation to the location of training, the volunteers requested that the training location be closer to their home. Participant 8 stated: *“... if possible, there should be TB training in each village.”*

4.c. Training topics related to TB care and community movement

In relation to the training topics, the volunteers suggested that the topics should include the *“benefits of the training for the volunteer and the community”* (P10), *“first time Multi Drug Resistant-TB”* (P1), *“techniques of community movement”* (P3), *“monitoring ... TB patients who come to the private clinic”* (P5), and the *“development of [a] community care network for TB”* (P7). Another suggested topic for patients includes: *“things that patients need to do after they [are] cured from TB, factors that influence the cure of TB, information that public health services [are] as good as private health services, but cheaper, and that TB training also needs to involve the patients’ family”* (P8).

DISCUSSION

This study aimed to explore the strategies to improve the performance of community health volunteers for TB care and prevention to reduce the incidence and stop the spread of TB in the

community. Overall, four major themes were identified, including: (1) informing community health volunteers of the benefits and difficulties of being a TB volunteer; (2) recognizing the activities and feelings of the volunteers; (3) emphasizing the willingness to help others; and (4) the accessibility of TB training. This study showed that potential volunteers should be informed about the benefits and difficulties of being TB community health volunteers at the beginning of the recruitment of community health volunteers and the development of community-based health education programs for TB care and prevention.

By understanding the benefits, difficulties, and activities of being a community volunteer, individuals can make informed decisions about whether or not to become a volunteer. This is known as intrinsic motivating factors that include feelings of empathy and altruism.¹⁵ Individuals who are of the view that there are more benefits than difficulties involved in being a volunteer may become actively involved TB community volunteers. In this study, all of the volunteers believed that volunteering provided great benefits for themselves, their families, and their communities and they could thus overcome all kinds of difficulties when performing their volunteer activities. These findings reveal that community health workers’ motivations arose mainly from the need for self-development and enhancement of the health of the community.¹⁶ The volunteers informed that their participation in a community-based TB program had helped the patients. This result is in the same line with a previous study in which HIV positive adolescents and the caregivers of younger children expressed their appreciation of the central role of volunteers for developing trusted interactions as well as providing helpful information and good advice for patients and caregivers.¹⁷

The feelings of volunteers also need to be considered. The majority of the volunteers were happy to help others in the community, but they noted that they sometimes felt rejected and scared. Individuals who are

happy and enjoy being a volunteer should have positive emotions that are associated with advantageous physical and psychological health outcomes.¹⁸ These positive emotions should be emphasized when developing a community-based health education program for TB care and prevention. Another study found that the volunteers' feeling needed by the community can become the motivating factors.¹⁶ However, this recent study also found the feeling of fear of infection by TB also needs to be addressed at the TB training for the volunteers.

The strengths of the DOTS are that it provides an opportunity to create bonds and open-up dialogues between patients and health professionals can be used to identify the needs of patients, reduce the probability of TB relapse, facilitate the right treatment, reduce resistance to medications, and can help health professionals provide information to patients.¹⁹ However, the DOTS also has a number of weaknesses, including health-system bottlenecks in the health workforce, financing, drug supply, information systems, and governance.²⁰ Thus, community involvement is needed to strengthen the DOTS strategy,²¹ and increase the cure rate of TB.²²

This study found that volunteers faced some difficulties implementing the TB care and prevention program including patients with non-supportive families and a lack of support from community health centers. These findings were in contrast with those of another study indicating that the barriers at community level to antenatal syphilis screening were cost of testing, distance to laboratory and lack of knowledge about syphilis.²³ These barriers need to be addressed by nurses during recruitment and training of the volunteers to improve their performance in the community.

Two other components which need to be considered to strengthen the DOTS strategy by developing a community-based health education program for TB care and prevention are (i) strategies to recruit the volunteers; and (ii) the accessibility of TB training. This

study found that strategies used to recruit new volunteers include identifying potential volunteers who had the value and willingness to help other people in the community, wished to make a difference in their own community, and were thus internally motivated. Value is preference or desire to achieve certain outcomes or end states.²⁴ Such values and motivation are important, as they reduce the attrition rate of community volunteers following training.

After recruitment, volunteers and TB patients need to receive TB training. Volunteers suggested that the duration should be three hours per week, once a month. These findings differ from the World Health Organization's ENGAGE-TB guide²⁵ that states that the duration of a training program for community health workers and volunteers should be six hours per day over three days. However, in Indonesian setting, three hours a day would be burdensome for the volunteers. Thus, the findings related to the duration of the TB training need to be further examined. In terms of the location of training, the participants requested that the training location be closer to their home. This is in line with a previous study stating that services that are close to home would provide better access and promote equity.¹⁷

The implication of this study was particularly the strategies to recruit and improve performance of the volunteers. When recruiting a community health volunteer for TB care and prevention, nurses or other health professional need to inform the candidate of community health volunteers of the benefits and difficulties of being a TB volunteer. Nurses also need to recognize the activities and feelings of volunteers because their contributions are so valuable. Strategies to recruit new volunteers include selection of the volunteer based on the criteria of willingness to help others in the community and involvement of the current volunteers in recruitment. All volunteers need a TB training that consider the location and content of the training that are suitable to the volunteers. This could increase the volunteers' understanding about

TB care and prevention in the community. The training program for volunteers is very important as studies showed that the training was able to improve the knowledge and skills of the volunteers.^{26, 27}

The main strength of this study is that it provides a comprehensive perspective from community health volunteers who have many years of experience in community-based TB care and prevention. Perspectives from these volunteers provided a comprehensive picture for understanding the strategies to improve the performance and reduce the attrition rate of the volunteers. These strategies also add new knowledge to community empowerment and community-based TB care and prevention fields

This was a qualitative study; thus, the results may differ in different contexts, in other regions of Indonesia, or among the wider global community. The health units being studied were two regions of Bandung City. Thus, the findings are limited to a particular region, and the results may not be generalizable to the entire population.

CONCLUSION

In conclusion, the TB community health volunteers need to be recognized and informed about the scope of their activities in the community. Four major themes were identified from the volunteers' perspectives that should be considered to improve the performance of community health volunteers to provide TB care and prevention in the community. Each of these themes needs to be considered by nurses and any other health professional in the development of any community-based TB care and prevention program and in the recruitment of new TB community health volunteers. Health professionals also need to recognize the work of the volunteers, so that they can feel motivated and the attrition rate of the volunteers could be reduced.

ACKNOWLEDGEMENT

This study was funded through the Leading

Research University Scheme which was provided by the Ministry of Research, Technology and Higher Education of Indonesia.

Conflict of Interest: None declared.

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