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RESEARCH ARTICLE

Tuberculosis Family Support Training's (TB FaST) Influence on Encouraging TB Treatment Compliance

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Abstract:

Background:

Family support is necessary for tuberculosis (TB) treatment compliance. Family intentions and practices in providing support to TB patients require considerable improvement, which is possible *via* training.

Objective:

This study aimed to analyze the influence of tuberculosis family support training (TB FaST) on the family members' intentions and practices in encouraging TB treatment compliance in the continuation phase.

Methods:

This quasi-experimental study with a pretest-posttest control group design involved 56 TB patients and 56 family members of patients who had undergone the continuation phase of category 1 TB treatment in the third and fourth months. All patients treated with tuberculosis were directly observed with treatment short-course (TB DOTS) at primary health care. All the subjects were divided into intervention and control groups. TB FaST was given only to the intervention group and delivered using a combination of lectures, case-based focused group discussions, and role-playing in problem-solving over two consecutive days.

Results:

The result showed a significant improvement in the family support practices five weeks after training in the intervention group compared to the control group (p<0.05). However, only a slight improvement was observed in the family intentions (p>0.05).

Conclusion:

TB FaST mainly affects the practices of family members in providing family support to encourage TB treatment compliance in the continuation phase. We recommend that TB FaST or other educational tools be used again after TB FaST to improve intention.

Keywords: Compliance, Family support, Intention, Practice, TB FaST, Health problem.

1. INTRODUCTION

Tuberculosis (TB) remains a major public health problem in the world [1]. Detection and treatment completion of TB-infected cases are crucial for preventing and controlling this disease [1 - 4]. TB monitoring and controlling programs in Indonesia have been performed for a long time and refer to the WHO recommendations in the form of directly observed treatment short-course (DOTS) strategies [3, 4]. Compliance with TB treatment is the key factor that influences TB control in various countries [5, 6]. In 2008, Mateus-Solarte and Carvajal-Barona showed high non-compliance of TB medication in Colombia (65.6%) [6]. Similar results have been reported in other studies, according to which 50% of new TB patients did not complete their treatment in India [7]. Zhou reported a lower percentage of 16% for TB patients who did not complete TB treatment in China [8]. The Indonesian

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Tuberculosis Prevalence Survey 2013-2014 showed that 40.2% of TB patients discontinued treatment before being cured [9]. In most cases, treatment is discontinued during the continuation phase [4, 7]. In the continuation phase, most patients tend to feel healthier and some are asymptomatic. Such conditions increase the risk of non-compliance with treatment for TB [4, 7]. The incomplete TB treatment can lead to antimicrobial resistance of *M. tuberculosis*. This condition might contribute to the increased cost of TB elimination [5 - 8, 10].

Family support can influence TB treatment compliance. This is in line with the reports by Mateus-Solarteu (2008), who stated that the factors that influence treatment non-compliance include less family support and living away from the family [6]. The WHO endorsed a specific strategy named DOTS to improve compliance by requiring health workers, community volunteers, or family members to observe and record patients swallowing each dose. Several studies have shown the effectiveness of family roles in supporting successful TB treatment [11 - 13]. Wright *et al*. in 2004 proved that family members could play as good DOTS officers. In addition to reducing government costs, this can also reduce the social stigma of TB patients [11]. Similar results were reported by Newell *et al*. in 2006, stating that DOTS by the family and DOTS by the community had the same effectiveness in meeting TB treatment targets. DOTS by family members can enable treatment in remote places, such as the mountains, where it is otherwise difficult to perform community DOTS [12]. Research conducted by Dave *et al*. in 2015 also proved that DOTS conducted by family members is as effective as that performed by a trained DOTS officer in the community [13].

Family support plays a major role in determining the treatment outcomes, especially in terms of medication compliance [12, 14, 15]. Family support can be developed with intentions and practices [16]. Intention, according to Fishbein and Azjen, is a subjective probability or possibility, that is, a person's estimate of the possibility of performing a particular action [16, 17]. Intentions and practices of family support in encouraging TB treatment compliance in the continuation phase can be built through appropriate training. This is consistent with the report by Dave *et al*. (2015) and Shen (2017) in different settings that prove that after getting training, families can enforce DOTS effectively for TB management [13, 18].

Tuberculosis Family Support Training (TB FaST) is conducted to increase the intentions and practices of family members in encouraging compliance to the treatment of TB patients in the continuation phase. This study aimed to analyze the effect of Tuberculosis Family Support Training (TB FaST) on the intentions and practices to improve compliance in the treatment of tuberculosis patients in the continuation phase.

2. MATERIALS AND METHODS

2.1. Study Design

We conducted a quasi-experimental study with a pretest-posttest control group design. The intervention group was given family support training (TB FaST), while the control group followed the existing program; data were collected from both groups before and after training. The post-training data were collected twice from the intervention group, once right after the training and then five weeks after training. The control group data were collected only once at five weeks after the training.

2.2. Setting

The Primary Health Care Centers (PHCCs) selected as the study site are the PHCCs that joined the Tuberculosis working group network of Universitas Padjadjaran, located in Bandung City, West Java, Indonesia. The intervention group was based on the patients of six PHCCs: Citarip, Sukapakir, Pagarsih, Pelindung Hewan, Astana Anyar, and Lio Genteng. All six of them were located in the same sub-district. Meanwhile, the PHCC of Caringin and Sukahaji were the site for the control group. The study was conducted from February to June 2017. The TB DOTS strategy was already implemented at all the PHCCs in this district.

2.3. Study Population and Sampling Strategy

The subjects in this study were family members of active TB patients who sought treatment at the primary health center. Total sampling was used for subjects of family members of TB patients who met the inclusion and exclusion criteria. TB patients also participated in this study as a confirmation of the practices done by their family members to support treatment compliance.

Subjects were determined based on the data from TB patients undergoing treatment at the health center that was the location of the study. As per the inclusion criteria for active TB patients, TB patients who were undergoing continuation phase category 1 TB treatment in the third and fourth months, were seeking treatment at a health center that was the location of the study, were blood relatives of or were married to a research subject, lived at home with family members who were research subjects, were> 18 years old, and were willing to participate in the study, were included. Family members of active TB patients who were blood relatives or were married to the research subject, stayed at home with the subject, were selected by the patient to assist in the completion of treatment, were aged > 18 years, and were willing to attend the entire research series were included. Active TB patients who dropped out early during the treatment and whose place of residence was unknown during the home visit were excluded. Family members of active TB patients who did not attend the entire training series were excluded.

Based on the sample calculation results, at least 25 subjects were enrolled in the intervention and control groups. The number of active TB patients who underwent continuation phase category I TB treatment was 90. The study subjects who met the inclusion criteria were 81, consisting of 45 people in the intervention group and 36 in the control group. Sixteen subjects from the intervention group were excluded due to not being able to be contacted, the address was not found, and not being willing to be enrolled in this study, thus making the number included in the training (TB FaST) 29 subjects. One subject dropped out of the intervention group since he only

attended 1 day of training, so that made up 28 subjects who finished all the two days of training. Eight subjects of the control group were excluded for the same reason as the intervention group, so the study subjects in the control group were 28.

2.4. Intervention

The TB FaST was held for two days. The training consisted of lectures, case-based focused group discussions, and role-playing for problem-solving. Lectures were given by a TB expert and psychologist. Data were collected before training, immediately after training, and five weeks after training. For the control group, data were collected before training and five weeks after training.

2.5. Data Collection

The data were gathered from a face-to-face meeting between the researcher and the subjects in their living house. Data were collected using a questionnaire and filled by subjects self-administratively. During analysis, the statistician was blinded. The questionnaire contained statements about the intentions and practices of family members in supporting compliance for TB treatment during the continuation phase, as well as family support accepted by TB patients as confirmation of the practices taken by family members. The questionnaire was arranged according to the variable indicators to be measured, which are used as the basis for compiling instrument items in the form of statements. The questionnaire was made in the Indonesian language and contained 16 statements based on forms of family support, including informational support, instrumental support, emotional support, and appreciation support [14, 19 - 21].

Informational support is the support of family members to provide direction, advice, and treatment advice, *i.e*, providing information about how the TB disease is transmitted, the dangers and how to treat the disease, and advising patients to prevent the disease transmission. Instrumental support is the support of family members to be directly involved in helping sufferers overcome problems related to their illness and provide facilities, equipment, and materials needed by patients related to their illness; *i.e*, accompanying the patient during a check-up at the PHCCs, witnessing first-hand the patient to take TB medication according to schedule, ensuring that there are family members who are ready to accompany the patient for a check-up to the PHCCs if needed, providing financial assistance if it is still needed related to the TB treatment process. Emotional support is the support of family members to show empathy, concern, and care for the patient; *i.e*, reminding patients for a routine check-up to the PHCCs regarding TB treatment, reminding and encouraging patients to take TB drugs regularly, asking whether patients during TB treatment have any complaints. Appreciation support is the support of family members to give positive appreciation to sufferers; *i.e*, whether the family will separate eating and drinking utensils that are used daily specifically for TB patients, inviting patients to actively interact with the community so that the patient will feel valued, and praising patients who comply with the TB

drug schedule [14, 19 - 21].

The measurement of the intention variable in this study used a questionnaire with a semantic differential scale. The score of the respondents' approval range for the 16 statements related to the respondent's intention to support treatment compliance of TB patients ranges from 0 to 10. The smaller the score of a statement, the more disapproval of statements related to their intentions and vice versa. Measurement of family member practices variables using a questionnaire with answer choices that include 'yes' and 'no' answers. The answer is 'yes' if the respondent takes action, while the answer is 'no' if the respondent does not take action. Respondents who answered 'yes' would be given a score of 1, while respondents who answered 'no' would be given a score of 0.

The validity test was carried out by comparing the Cronbach alpha coefficient with Cronbach alpha if the item was deleted for each statement. The statement item is said to be valid if the value of Cronbach alpha if the item deleted is less than or equal to the Cronbach alpha value [22]. The questionnaire is valid since all the statements have the value of Cronbach alpha if the item deleted is less than or equal to the Cronbach alpha coefficient. The reliability test was carried out using the Cronbach alpha reliability coefficient and said to be reliable if the reliability coefficient is ≥ 0.7 [23]. The results of the analysis of the reliability test on the family member's intention questionnaire, the practices of family members, and the family support practices accepted by the patient have a reliability value sequentially, namely 0.926, 0.918, and 0.930.

2.6. Data Analyses

Data analyses were performed using the SPSS program, with $p < 0.05$ indicating statistical significance. Differences in the intention of family members of the intervention group and the control group were analyzed using an independent t-test. The differences in the intentions of the family in the intervention group before training and immediately after training, immediately after training and five weeks after training, and before training and five weeks after training, and intentions of the control group before training and five weeks after training were tested using paired t-test. The differences in the practices of the family members of the intervention group and the control group were tested using the Mann-Whitney test. The differences in the practices of family members before training and five weeks after training in each group were tested using the Wilcoxon test [24, 25].

2.7. Ethical Considerations

This study received ethical clearance from the Health Research Ethics Commission of the Faculty of Medicine, Universitas Padjadjaran, Bandung Number 78 / UN6.C10 / PN / 2017. All the participants provided written informed consent for study participation.

3. RESULTS

The characteristics of the subjects from both groups are shown in Tables **1** and **2**.

Table 1. Characteristics of TB patient's family member.

Variable	Group		P-Value
	Intervention (n=28)	Control (n=28)	
Age (years)			0.916
Mean (SD)	40.9(12.1)	41.2 (13.2)	
Range	20-62	22-64	
Age Group (years)			0.904
17-25	3 (10.7%)	5 (17.9%)	
26-35	6 (21.4%)	6 (21.4%)	
36-45	7 (25%)	5 (17.9%)	
46-55	9 (32.1%)	8 (28.6%)	
56-65	3 (10.%)	4 (14.3%)	
Gender			0.567
Male	10 (35.7%)	8 (28.6%)	
Female	18 (64.3%)	20 (71.4%)	
Education Level			0.800
Elementary School (not graduated)	1 (3.6%)	0 (0%)	
Elementary School	8 (28.6%)	10 (35.7%)	
Junior High School	8 (28.6%)	9 (32.1%)	
Senior High School	9 (32.1%)	8 (28.6%)	
Diploma Degree	1 (3.6%)	0 (0%)	
Bachelor Degree	1 (3.6%)	1 (3.6%)	
Employment			0.105
Jobless	19 (67.9%)	13 (46.4%)	
Employed	9 (32.1%)	15 (53.6%)	
Marital Status			0.445
Not married	5 (17.9%)	3 (10.7%)	
Married	23 (82.1%)	25 (89.3%)	
Relationship in Family			0.284
Wife/Husband	10 (35.7%)	16 (57.1%)	
Parents	11 (39.3%)	7 (25%)	
Child	4 (14.3%)	3 (10.7%)	
Elder brother/sister	0 (0%)	2 (7.1%)	
Younger brother/sister	1 (3.6%)	0 (0%)	
Uncle/Aunt	1 (3.6%)	0 (0%)	
Nephew	1 (3.6%)	0 (0%)	

Table 2. Characteristics of TB patients.

Variable	Group		P-Value
	Intervention (n=28)	Control(n=28)	
Age (years)			0.648
Mean (SD)	35.4 (13.09)	37 (13.663)	
Range	19-62	19-62	
Age Group (years)			0.556
17-25	9 (32.1%)	7 (25%)	
26-35	5 (17.9%)	9 (32.1%)	
36-45	8 (28.6%)	4 (14.3%)	
46-55	3 (10.7%)	4 (14.3%)	
56-65	3 (10.7%)	4 (14.3%)	
Gender			0.422
Male	13 (46.4%)	16 (57.1%)	

(Table 2) contd.....

Variable	Group		P-Value
	Intervention (n=28)	**Control(n=28)**	
Female	15 (53.6%)	12 (42.9%)	
Education Level			0.687
Elementary School (not graduated)	0 (0%)	0 (0%)	
Elementary School	8 (28.6%)	5 (17.9%)	
Junior High School	7 (25%)	10 (35.7%)	
Senior High School	12 (42.9%)	11 (39.3%)	
Diploma Degree	1 (3.6%)	1 (3.6%)	
Bachelor Degree	0 (0%)	1 (3.6%)	
Employment			0.577
Jobless	11 (39.3%)	9 (32.1%)	
Employed	17 (60.7%)	19 (67.9%)	
Marital Status			0.567
Not married	10 (35.7%)	8 (28.6%)	
Married	18 (64.3%)	20 (71.4%)	

Table **1** shows no significant differences in the characteristics of the family members (p > 0.05) of the intervention group and control group. The groups were homogeneous.

The results of the statistical analyses presented in Table **2** show that the two groups of TB Patients did not differ significantly in terms of age, sex, education, occupation, and marital status (p > 0.05 for each variable). The groups were also homogeneous.

As seen in Table **3**, for all three parameters collected before training, there are no significant differences between the intervention and the control groups (p>0.05). These results

prove that the two groups are statistically similar in the parameter measurement baseline, either in the intention, the practice done by family members, or the family support accepted by the patients. On the other hand, the results of the three parameters collected five weeks after training are varied. There is a significant difference between the two groups on the practice done by family member parameter at five weeks after training (p<0.05), which is confirmed as family support accepted by the patient with a significant result as well (p<0.05). Unfortunately, the two groups on the intention parameter at five weeks after training did not differ significantly (p>0.05).

Table 3. The mean scores obtained from the family support intention and practice questionnaire by the participants (family members) and the tuberculosis patients in the intervention and control groups before training and five weeks after the training sessions.

Parameters	Data Collection Time	Group	Mean	SD	P
Intention	Before training	Intervention group	41.29	6.905	0.424
		Control group	41.63	6.562	
	5 weeks after training	Intervention group	42.15	8.000	0.431
		Control group	42.52	8.180	
Practice done by family members	Before training	Intervention group	11.54	2.782	0.086
		Control group	12.64	2.022	
	5 weeks after training	Intervention group	15.68	0.548	< 0.001*
		Control group	12.96	2.442	
Family support accepted by patients	Before training	Intervention group	12.07	2.721	0.301
		Control group	12.36	3.021	
	5 weeks after training	Intervention group	15	1.963	< 0.001*
		Control group	13.29	2.070	

Data are expressed as the mean ± standard deviation, and analysis was done using the independent sample t-test and Mann-Whitney test.
*P < 0.05.

Table 4. The mean of changes of each group was obtained from the family support intention and practice questionnaire taken five weeks after the training sessions compared to before training as the baseline.

Parameters	Group	Data Collection Time	Mean	SD	Mean of Changes (%)	P
Intention	Intervention group	Before training	41.29	6.905	3.58	0.440
		5 weeks after training	42.15	8.000		
	Control group	Before training	41.63	6.562	2.76	
		5 weeks after training	42.52	8.180		
Practice done by family members	Intervention group	Before training	11.54	2.782	47.02	< 0.001*
		5 weeks after training	15.68	0.548		
	Control group	Before training	12.64	2.022	3.17	
		5 weeks after training	12.96	2.442		
Family support accepted by patients	Intervention group	Before training	12.07	2.721	31.06	< 0.001*
		5 weeks after training	15	1.963		
	Control group	Before training	12.36	3.021	22.08	
		5 weeks after training	13.29	2.070		

Data are expressed as the mean $\pm$ standard deviation, mean of changes expressed as a percentage, and analysis was done using the independent sample t-test and Mann-Whitney test.
Changes (%) obtained from (5 weeks after training score - before training score) / before training score x 100%
Mean of changes (%) obtained from the sum of changes (%) of each group / n
*P < 0.05.

Table 5. Changes in the intention parameter at a different time of data collection focused on the intervention group.

Comparison	Data Collection Time	Mean	SD	Mean of Changes (%)	P
Before training and immediately after training	Before training	41.29	6.905	9	0.003*
	Immediately after training	44.58	7.599		
Immediately after training and 5 weeks after training	Immediately after training	44.58	7.599	(4.2)	0.034*
	5 weeks after training	42.15	8.000		
Before training and 5 weeks after training	Before training	41.29	6.905	3.58	0.283
	5 weeks after training	42.15	8.000		

Data are expressed as the mean $\pm$ standard deviation, mean of changes expressed as a percentage, and analysis was done using paired t-test. Changes (%) obtained from (5 weeks after training score - before training score) / before training score x 100%
Mean of changes (%) obtained from the sum of changes (%) of each group / n
*P < 0.05.

In the intervention group, the mean of changes in the intention parameter was higher than the control group, but the statistical analysis showed there was no significant difference between the two groups (p>0.05). In contrast, in practice done by the family members parameter, the mean of changes in the intervention group was higher than in the control group significantly (p<0.05). Likewise, the family support accepted by the patient parameter, used as confirmation of the practice done by the family members parameter, also showed a significant difference (p<0.05) between the two groups.

Table **5** reveals the dynamic changes in participants' intentions at different times of data collection. The mean of changes in family members' intention immediately after training was significantly higher statistically (p <0.05). Unfortunately, this high intention is not long-lasting. A lower mean of changes was observed five weeks after training compared to immediately after, with a significant difference (p <0.05). Despite the decrease in intentions five weeks after training, the mean of changes in intentions was still higher compared to before training, but the results of statistical tests showed no significant differences (p> 0.05).

4. DISCUSSION

The success of TB treatment is influenced by treatment compliance [5, 6]. TB treatment requires a long time and involves the initial and continuation phases, and need a commitment from the patient to complete the treatment. This commitment can be well maintained by the presence of family members and their support [14]. The continuation phase of TB treatment is very challenging, where patients tend to feel healthier and may become asymptomatic. Such conditions might risk the occurrence of non-compliance with TB treatment by making the family careless about giving attention and support for treatment completion [4, 7]. This indicates that the continuation phase of TB treatment needs more attention; therefore, greater efforts are needed to prevent treatment non-compliance in this phase. The TB FaST is one of the efforts that we have developed to prevent non-compliance with TB treatment in the continuation phase that aims to increase the intentions and practices among family members to support TB treatment.

This study measures the intentions and practices of family members in giving family support to the patients. This study's results showed changes in both the intentions and practices after being given TB FaST training. The changes obtained in

this study were positively significant; it can be seen from the increase in the practices of family members after being given training and confirmed by the significant increase in family support accepted by TB patients compared to the control group. The family support consisted of four types of support: informational, emotional, instrumental, and appreciation support [20]. The increased practices that occurred after training following the results achieved by Dave (2015) and Shen (2017), as the training carried out for family members can affect the practices of family members, which means the family can function properly as a DOT supervisor in completing TB treatment [13, 18]. The role of the family as a DOT supervisor in completing TB treatment is a form of family support, particularly instrumental support.

The increase in family support practices that occur cannot be separated from the underlying intention. This study revealed that the intention could be built through the training provided, as seen from the increase in the intention measured immediately after the training. It is in line with the increase in practices measured five weeks after training. These results showed us that the intentions could be a potential predictor of the practice to be taken. Azjen and Fishbein have proven that the process of forming behavior begins with a strong intention to perform a certain behavior [16, 26]. Philipa Lally (2013) states that intentions and practices are part of the habit formation process to become a behavior [27].

TB FaST provides knowledge and education about TB disease, the importance of completing TB treatment, the role of families in preventing TB treatment non-compliance, opportunities to share experiences between families of TB patients, opportunities to practice problems identification, and means to provide family support regarding the TB treatment completion. The knowledge and experience gained from the training contributed to escalating the intentions of family members. This is in line with a previous study by Ukoli *et al.* (2013), Odedina *et al.* (2014), and Shaleh AM *et al.* (2015), where educational programs can broaden the knowledge and strengthen the intentions to support healthy lifestyle compliance [28 - 30].

The training was provided in the form of short-term education using systematic and organized methods and procedures [31, 32]. Delivery methods used in this training included lectures with a question-and-answer session, small interactive focus-group discussions (problem-based discussion), and role-play. The method of lectures with question-and-answer sessions can build a knowledge base regarding diseases and family functions in dealing with diseases. Problem-based interactive discussion methods can help in training participants to strengthen their knowledge base, shape critical thinking patterns, build an ability to communicate and express opinions, and provide opportunities for sharing experiences to overcome problems. The role-play method actively engages trainees in activities and provides an opportunity to experience and experiment with overcoming problems so that training participants are expected to have the readiness to take action in supporting treatment compliance. These three methods can synergize to develop an awareness of receiving information, responding actively, and conducting an assessment so that it can form a strong desire for action to be taken [32, 33].

The dynamic changes in the intention are observed in this study. An increase in intention immediately after training was followed by a decrease in intention five weeks after training. The intention is very dynamic and depends on the individual condition, including attitude aspects toward behavior, subjective norm, and perceived control behavior [33, 34]. This allows the intention of each individual to experience an increase or decrease. Ajzen and Fishbein explain that the dynamics that occur in an individual when taking certain actions are related to the three aspects mentioned above [26, 33, 35, 36]. The intention of some behaviors can change simply as a function of time, some depending on the emergence of new information. This raises an important implication in predicting an action by estimating intentions. When the intention predicts that a person will or will not take an action, but it shows a failure to predict the achievement of a certain action, then this is likely due to factors outside the individual's control that prevent him from carrying out his intentions [33]. Regarding our study results, further research may be needed to identify factors that may contribute to the changes in intention based on these three aspects.

In addition, as mentioned above, the dynamics of the intentions of family members show the need to perform assessments more frequently. This aims to determine the right time to re-intervene in strengthening intentions, thus, TB FaST is given at the right time interval, and so family members still manage to have a high intention in providing support for TB patients. TB FaST can affect the intention of family members if it is held at the right time, so it is important to determine the proper intention measurement.

In this study, the family practice measurement after training was performed only once; thus, it may not reflect the response to the intention measured five weeks after the training and cannot be interpreted to indicate improved practices and behaviors. This study did not assess the factors that predisposed the intention; thus, the factors that influenced a worsening of the intention were not identified.

Further studies with a bigger sample size are encouraged to determine the factors that can influence the intention to realize an action and the need to measure the intentions in stages to determine the pattern of change in intention after complete training to enable the identification of the optimal time to intervene again. For better achievement, we need to extend the use of TB FaST not only to family members but also to TB patients. This training can help the patients better understand and preserve the commitment to complete the treatment. TB FaST can be used as a sustainable health promotion program in primary health care to provide internal reinforcement in the family environment and realize family empowerment.

CONCLUSION

The present results showed that the TB FaST strongly influenced the practices of family members in increasing treatment compliance in tuberculosis patients during the continuation phase. We recommend that TB FaST or other educational tools be re-administered following the TB FaST to

improve the intention.

LIST OF ABBREVIATIONS

DOTS	=	Directly Observed Treatment Shortcourse
PHCC	=	Primary Health Care Center
TB	=	Tuberculosis
TB FaST	=	Tuberculosis Family Support Training
WHO	=	World Health Organization

ETHICS APPROVAL AND CONSENT TO PARTICIPATE

HUMAN AND ANIMAL RIGHTS

No animals were used for studies that are the basis of this research. All human procedures followed were under the guidelines of the Helsinki Declaration of 1975.

CONSENT FOR PUBLICATION

Informed consent was obtained from all participants of this study.

STANDARDS OF REPORTING

WIDER guidelines were followed in this study.

AVAILABILITY OF DATA AND MATERIALS

The data supporting the findings of the article are available in this article.

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CONFLICT OF INTERESTS

The authors declare that they have no financial or personal relationship(s) that may have inappropriately influenced them in writing this article.

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