

Journal of Advanced Zoology

ISSN: 0253-7214 Volume 44 Issue S-5 Year 2023 Page 1439:1448

Exploring Community Participation in Prevention and Care of Tuberculosis from Patients', Healthcare Providers' and Community Member's Perspective, InWolayta Zone, SNNPR, Ethiopia. A Qualitative Study

Abraham Wada^{1*}, Rejendera Baxi²

 ^{1*}Parul Institute of Public Health, Faculty of Medicine, Parul University, Vadodara.
²Parul Institute of Public Health, Faculty of Medicine, Parul University, Vadodara. Email: wankoreabraham@gmail.com¹

*Corresponding Author: wankoreabraham@gmail.com

Article History	Abstract
Article History Received: 15 June 2023 Revised: 20 Sept 2023 Accepted: 27 Oct 2023	Background: In developing countries, tuberculosis (TB) continues to be the major cause of morbidity and mortality. To reduce the lossof lives and economical burden that TB poses up on citizens, early case detection and successful treatment of infected cases are very essential mainly with active community participation in prevention and care of TB. This study was aimed to explore community participation in prevention and care of TB in Wolayta Zone of SNNPR, Ethiopia. Method: Descriptive phenomenological research methodology was employed in the study. A total 24 participants were chosen using purposive sampling technique. Participants in the study were from various sections of society. Of these, 14 were TB patients on TB treatment and former TB patients who were recovered, 8 were health professionals and 2 were Key Informants which were selected from the community to provide key information. Data weregathered through focus groups and in-depth interviews. Using the Open Code and Colaizi 7 steps of descriptive phenomenological method data analysis was used. Interviews were audio recorded, verbatim transcribed, translated, and exhaustive description was written. Results: Community participation in prevention and care of TB in study area was high. Preventive participation and supportive participations were identified and these participation has focused early case finding strategies like referring the suspect cases for TB diagnosis and contact tracing. Supportive participation has focused on treatment success such physical, economical, psychological and social supports which increase the patients adherence to treatment and as result increases treatment success rate.Conclusion. Our study revealed h i g h to moderate community
	participation in tuberculosis prevention and care in the the study area. The finding is that the TB prevention and care strategy for eliminating TB will be operationally effective. In cumulative effect, the region might be able to meet the
	WHO's recommendations for the community TB prevention and care plan, which call for case notification of more than 70% and an 85% successrate for treatment and all
	seek to eliminating TB by 2030. Therefore, the study emphasizes the necessity for effective communication to be established between community and the health institutions. To further raise TB notification and treatment success rates, all feasible methods of utilizing community participation in TB care are advised.
CC License	
CC-BY-NC-SA 4.0	Keywords: TB, Community Participation, TB patients, Support

Introduction

Community participation in health care services has been a crucial element for obtaining basic healthcare eversince the Alma Ata Declaration era [1]. Governments in low- and middle-income countries both emphasize and streamline community participation in their social responsibility programs [2, 3]. This evolution is affected not just by the growing disparity between the number of medical professionals and patients, but also by the geographic differences between urban and rural residents' access to healthcare. When residents are at the center of affairs, they are seen as having a better understanding of their surroundings, being able to handle matters, and better utilizing healthcare services. [3]. Although there is still some disagreement, community involvement in health care services has inherent value [3-5]. A community is said to be perceived as an agent for diagnosing and prioritizing solutions to health problems

facing their localities when it participates in various health care services which fosters ownership, lowers the cost-of-service delivery and results in acceptance of the community-based health service [6]. It is thought to encourage widespread support in the utilization of local services and for creating cohesion towards accomplishing a common objective [7]. There is a justifiable request for the integration of therapeutic services, particularly with HIV, given the recentshift in the epidemiological prevalence of TB [8]. Given that both illnesses have lengthy treatment plans, community participation with its full support may be essential to the prevention and management of both diseases of poverty. Additionally, the integration of services in low-income nations may be advantageous in terms of cost-effectiveness and reduced strain on the infrastructure supporting health services.

According to studies, community participation in TB care and prevention has the potential to increase access to diagnostic and treatment services for vulnerable populations, such as women and children and poor rural areas. Community based TB treatment delivery through community members not only improved access and service utilization but also contributed to capacity building and improving routine TB recording and reporting systems through regular supportive supervision [9]. When TB prevention and care was carried out with responsibility and accountability by community members, better results were noted because it allowed for treatment continuance and increased treatment success rates [10]. Studies suggest the viability of integrating communityvolunteers by creating supervisory and supportive mechanisms. A significant contribution to the diagnosis and control of infectious TB was made in addition to therapy by community-based untargeted periodic active case detection for symptomatic smear-positive TB [11-13]. Community participation in prevention and care of TB may be more feasible and effective for early case detection and treatment as community members are familiar with the layout of community and have communitymember's trust which more neighborhood actors and this would have to develop. Additionally, a community-based approach gives each community the tools it needs to solve its own issues and also gives patients more autonomy and satisfaction with their treatment plan [14]. The engagement of respected, competent, and resourceful community and family members builds the confidence that is needed to start treatment and providestight supervision, so maximizing adherence—which is essential in such a lengthy treatment regime.

Limited public health service coverage has continued to impede accelerated access to TB control services because of inadequate health care infrastructure, insufficient services, and a lack of human, material, and financial resources. Because of the high incidence of TB and the enormous financial burden associated with treating it, community delivery platforms provide improved access and equitable treatment distribution. The fact that it affects lower socio-economic groups further compounds the problem. Gender inequality, social stigma, and poverty are also recognized as important barriers for successful TB prevention and care [15-18]. In light of theabove situation, community participation provides a successful and cost-effective strategy to deal with the burden of TB [19-21]. Community participation in prevention and care of TB seems to be an effective approach as they have the potential to maximize the outreach and minimize the cost. Community based TB prevention and care also offer many lessons for the control of other epidemic such as HIV. With the emergence of HIV and consequent TB resurgence, a comprehensive and equitable strategy is needed to stem the worsening doubleburden of these two infections in poor countries [22]. The WHO currently advocates home-based care and integrated management of dually infected TB/AIDS patients [23].

Based on establishing a structure for collaboration between TB and HIV programs, lowering the burdens of TB among HIV-positive individuals and TB patients, it suggests a 12-point package of joint TB/HIV activities. Studies are required to determine whether community participation to deliver therapeutic and preventive services can be further taught to complete this extra duty and to assess the viability, relative effectiveness, and economic viability of this strategy[24,]. However, such integration would necessitate active community involvement time and training, more community and facility engagement, and strengthened referral services [25,26].Community participation is believed to be effective in TB prevention and care however there are many barriers that can stop community from participating , therefore in this study we assess the community participation in prevention and care of TB.

1. Material and methods

This section describes the methods and materials, such as type of research and the approach used in this study. The study setting and population and the design of the study. Then we described data collection instruments and collection techniques, data management, and data analysis and data storage and ethical considerations. In this pure qualitative research, we used different approaches for collecting and analyzing data.

Research design

We used a descriptive phenomenology study design for objectives of the study. This design helped us to - 1440 - Available online at: https://jazindia.com explore the lived experience of the study participants and assisted in interpreting their experience [27]. Indepth interviews and focus group discussions (FGDs) were held with the different participants of the study until data saturation was achieved. This assisted our understanding of the individuals' collective experiences. These interactions focused on what members of the study populations have in common regarding their community participation experience in prevention and care of TB. Reflexivity is very important in this study. Therefore, Iidentified with the participants who were researched and must, therefore, constantly aware of my own experience that can potentially affect the result. Thus, the current study was not influenced by my own experience. I followed the three phases of bracketing. These are bracketing pre-action, bracketing in-action, and bracketing on-action. The first type of reflexivity was aimed at sustaining objectivity. It also reflects a strong positivist influence. The benefit of bracketing is the suspension of all kinds of biases and beliefs related to the phenomenon being researched before collecting data. The second was conducting a specific interview, and methodological development was undertaken. Third, I have implemented the new community participationexperience from patients', health workers', and community can be utilized during subsequent interviews [28].

Study area and setting

I conducted the current study in Wolaita Zone, one of 11 zones (states) in southern Ethiopia. In this part of Ethiopia, Wolaita inhabitants are categorized as one of the Omotic language-speaking population groups, the native language of this zone being Wolaitigna, while the Amharic language is an official language in this zone. Wolaita Sodo, the capital town of the zone is 330 km southwest of Addis Ababa, the capital city of the country. It is also 160 km from the southern regional capital, Hawasa. In the northeast, Wolaita is bounded by KambataHadiya and Tambaro zones and the Oromiya state. In the year 2016, according to the world population data sheet, the population of Ethiopia was 101.6 million. Wolaita, with a total area of 438 370 hectares or 4 471.3 square kilometres, has the highest population density of 385 persons per square kilometre (PPKM2).

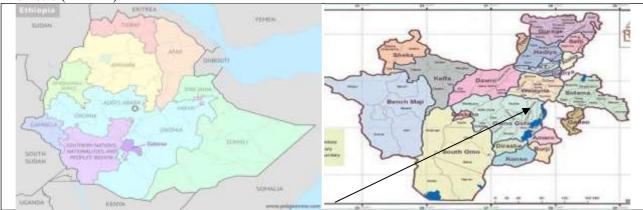


Figure 1: Map of Wolayta Zone, SNNPR Ethiopia

Exclusion criteria for the qualitative study and Inclusion criteria for the qualitative study

Purposely selected health professionals who were involved in the provision of care for TB patients. Purposely selected adult TB patients, who were undergoing their TB treatment, cured TB patients whocompleted their course of TB treatment. Purposely selected community elders, religion leaders, school teachers, students and prominent communityresidents. I excluded patients who were severely sick which prevented them from being involved in the interview. However, the individuals who were excluded from this study are entitled to receive the benefits of the researchfindings in the same way as the participants.

The sample size for study

I used purposive sampling type. This method is known to produce a well-matched group for a study. Another benefit of the process is its utilization of the best available knowledge regarding the study participants in orderto obtain a wide range of perspectives relating to the topic that I am interested in studying. A disadvantage is that it will be difficult to generalize the findings from this qualitative study. The participants were selected purposely from the five health facilities from rural districts until information saturation was achieved [29]. Forboth the in-depth interview and FGDs for the study, the participants were TB patients who were undergoing their treatment, cure TB patients, health care providers and residents from the community.

Data collection

The investigator developed the semi-structured questionnaire, the open-ended, in-depth interview questions and the FGD guides. Data collection was done by the principal investigator (PI), who was assisted by experienced research assistants (RAs) who spoke the local languages Wolaitigna and Amharic

fluently. Each RA had a bachelor's degree in health science with a rich experience of qualitative data collection. The participating RA were provided one day of training on the data collecting tool to familiarize themselves with the study. Therefore, they were involved in preparing for the note-taking, indepth interview and the FGDs. I used FGDs, gathering 5 to 6 participants from similar backgrounds or experiences together to discuss their experiences of community participation in prevention and care of TB.

The FGDs were used to ask specific questions to explore their perceptions, beliefs, attitudes, opinions and ideas. In the discussions, participants were free to talk with other group members. The FGD method suited this study because it obtained different perspectives of the community participation in prevention and care of TB. It also provided insights into participant's shared understanding of their day to day lives and how others can influence individuals in a groupsituation [30]. Focus group discussions were conducted at the TB treatment rooms of the health facilities in order to maintain the TB patient's privacy and comfort. For health care providers and community residents FGD was conducted in their respective offices. I also arranged the FGD schedules for TB patients in the morning after they collected their medication and for other participants at their preferred times. In order to minimize the limitations of the FGD, the facilitator provided equal chances for all FGD participants to talk. The number of FGDs was determined by data saturation. I provided refreshments for FGD participants.

I obtained the written informed consent from all the participants. The PI and one research assistant undertook the probes and took notes to ensure the data quality, as indicated in the scientific research guides [31]. In addition to the FGDs, I used in-depth interviews. These helped us to obtain a more detailed, rich understanding of our phenomenon, community participation. The in-depth interview method was used to understand the participant's experience, feelings, behavior, and attitudes and allowed deep probing to identify the underlyingconcepts of community participation [32]. The TB focal person in the health center assisted the recruitment of the study participants. I conducted all the in-depth interviews at the offices or their preferred settings to maintain confidentiality and privacy. Conversations were recorded by digital recorder after obtaining consent from the participants. Finally, notes by the researcher, logbooks, interview notes, recordings of the digital voicerecorder, and transcribing data for computer input were carefully entered and confidentially stored [31]. As perthe developed in-depth interview and FGD guides, further probing questions were used to obtain more information on community participation. The RAs assisted with some of the data transcriptions. The PI did thetranscriptions, translation, and the complete analysis of the qualitative data.

Data Analysis

We used the seven steps set in Colaizzi's descriptive phenomenological method, which is used in health scienceresearch, for the data analysis. The steps are 1) Familiarisation (reading all the participants' data and familiarising oneself with the data); 2) Identifying significant statements (recognising the pertinent statementsrelated to the phenomenon); 3) Formulating meanings (identifying the meanings close to the event with the researchers bracketing their knowledge about the meaning); 4) Clustering themes (clustering the meanings into themes); 5) Developing an exhaustive description (writing complete and inclusive explanations of the phenomena, including all the themes that were developed); 6) Producing the fundamental structure (ensuring that the reports cover the essentials); 7) Seeking verification of the underlying structure (returning the primary structure statements to all the participants for confirmation). We were aided with Open Code software for the data analysis, and we used the consolidated criteria for Reporting Qualitative research (COREQ) Checklist, for maintaining the quality of data.

2. Results and Discussion

According to the data obtained from our study, community participation is divided in to two big themes, namely, community participation to prevent TB disease and community participation to care for TB patients. These two big themes contain eight sub-themes, all of which were being actively entertained by the community and have been identified in the study. These two bigger community engagements gain on two main areas of focus that serve as the cornerstones of TB prevention and care: increasing TB casefinding rates (CFR) and increasing TB treatment success rates (TSR).

Community participation to prevent TB disease

According to our study, the sub-themes identified as community participation in the prevention of TB diseaseare: Increasing community awareness, which includes what the community, knows about TB disease, how TB disease is transmitted from person to person, how to prevent the disease, and whether or not there is a TB test and medicine. If there is a service, whether it is paid or free, in this regard, the society including TB patients has actively participated in increasing the general awareness of the society, study participants responded There has never been a time when I did not convey a message about tuberculosis that I had believed to be beneficial for my family and community. Since I am well aware of the severity of Available online at: https://jazindia.com

the disease, I do not want anyone to be affected by this disease, so I had been presented in the market place or in the church, and in any place where people gather in large numbers, and I used to deliver a message. A TB patient who was undergoingtreatment had this to say during a group discussion. The disease is very dangerous, it makes weak, it does not allow eat, it does not allow you to work. It harms your health, economy and does not make happy to, and puts a lot of pressure on the psyche. There is a cough, there is a decrease in weight or weakness, all of this together makes you ostracized from the society. In the faceof all these pressures, I educate our community to avoid the huge amount of damage caused by TB and to prevent our society from being affected by TB. Community and even my friends run away from me. All my friends, who we used to drink coffee with at our house, started running away from when they realized that I was TB patient. A young man undergoing TB treatment said.

Creating community mobilization and sensitizing the community to participate in various TB preventionactivities.

Community participation includes stimulating the community to conduct a massive sputumtest in which the community participates in large numbers, mobilizing the community to take children to the vaccination centers in the form of a campaign, and introducing the community to take anti-tuberculosis pills (Izonizid) for children who have been in contact with a person infected with TB. According to the study finding mobilizing the community to take children to the vaccination centers in the form of a campaign, stimulating the community foe massive sputum test, and introducing the community to take antituberculosis pills (Izonizid) for children who have been in contact with a person infected with TB was slow, and the reason for this was, that massive sputum test have never been done in the study area, and is only being done when individuals are suspected of having the disease, they go to the health facilities themselves and get tested. However, health care providers who participated in the study said that antituberculosis pills (Izonizid) therapyfor children who have been in contact with a person infected with TB in health institutions mandatory whether community is mobilized or not. The health care providers who participated in the study added that since children are given anti-tuberculosis vaccine together with other vaccination programs without the need for special mobilization, there is a community calls up in the form of a campaign for mothers to attend health institutions and vaccinate their children according to the schedule.

Identifying individuals suspected of the TB disease and send them to health facilities for sputum testing. This includes the community's effort to have a person with a cough of more than two weeks, must go to healthfacilities and give a sputum sample to be tested. This activity is one of the activities that are considered to increase the TB case finding rate. We were able to find out from the information we collected from different sections of the society during the study that the participation of all the member of the community was very high. Especially health care providers who were participated in the study said that we could understand from the patients who come to the health facilities for sputum examination that the participation of the community in identifying suspects and referring cases has greatly increased.

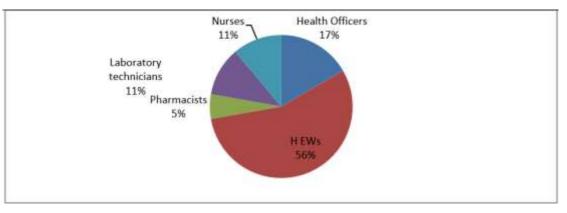


Figure 2: Health care providers participated in the study

Default tracing

Community participation in TB prevention plays a major role and is thought to prevent the greatest risk, and isconsidered to be tracking people who start and stop TB drugs. This community participation will reduce the significant harm these drug withdrawal patients can bring to the community. These people, who start TB medicine and stop it in the middle, pay for the chance of the TB bacteria to change to multi drug-resistant TB (MDR-TB) or extra-multi-resistant TB (XMDR-TB), thus causing serious illness and leave the patient for long-term treatment and follow-up, as result high psychological and economic pressure would occur. It makes themspread TB disease among the society. Study participants said it is difficult to

track down people who have discontinued their medication. The reason given by the study participants is that most of the TB patients do notwant anyone other than their family and health professionals to know that they have TB disease. According to the health care providers who participated in the study, in fact there are some TB patients openly tell other people that they have TB disease at the expense of their families and health professionals. They also teach about TB in public. These people are people who do not stop taking their TB medicine once they start it.

Community participation in providing care/ support to TB patients

The second and bigger theme is community involvement is, providing comprehensive support to TB patients. Under this big theme, there are four sub-themes, which mainly focus on activities that help to increase the TBtreatment success rate, which is known to be the second and most important task in TB prevention. These are physical, economic, social and psychological supports. From the time a TB patient was confirmed to have the disease and the treatment starts, until the finish of the treatment, there are physical, economic, social and psychological pressures up on patient. All these supports provide the capacity and energy to finish the anti-tuberculosis medication that has been started. Therefore, according to the information we obtained from our study, we could see the participation of the society in this regard was very high. From the information during FGD with health professionals and other members of the society who participated in the study, members of the society, including the family, neighbors, friends, religious and community leadersthe support given to TB patients, was many in types and in number.

Physical support: TB patients need physical support because of the damage caused by the disease patients areweak and need immediate support. Due to this physical weakness, they are unable to get up from their sleeping, stand from sitting positions, and walk. Therefore, it is important get supported by anyone who is near them. Accordingly, all of the TB patients who participated in the study said that they receive physical support from family, friends, neighbors, and relatives. Economic support: TB patients are out of work due to the disease, so the economic pressure on them is veryhigh. Therefore, the role of the community participation in helping people affected by TB disease is very important. In this sense, according to our study, the community provides food for TB patients, plows the patient's farm, pays the rent and school fee of children whose parent affected by TB and covers transport costsfor patients to and from health facilities.

I don't want my son to die, so I dedicate most of my time to him. I fulfilled everything he needs, because I don'twant him to lack foods like meat, milk, and eggs. In this way, my son was recovering from his illness and his body was returning to its former position, and could see that he was getting better than before. This was how the father of a TB patient described the care he takes for his son. The role of the economic participation of the community was very important. For example, if my family, relatives and friends did not help me, there would be growing grass on my grave. Half of the community couldcover my food expense and the other gave me money in cash for other different expenses. This was a great support for me because they keep me focused on my treatment and didn't waste my efforts on other basic things. A TB patient described the economic participation of the community by saying that. When the illness from the TB got worse, I was unable to do my farming work and realized that my childrenwere going to starve, this time my anxiety increased, but my good neighbors have done something I can't passup without thanking them. They plowed my field and planted seeds and saved my children and my family fromstarvation. I finished my treatment in a calm spirit and I am now saved. Another middle-aged man said that. In the first two months, I used to pay 20-30 Birr a day to go from my house to the health center and back, whichwas an average of 600 to 900 Birr per month. This would have been unimaginable and impossible without the help of the community, but I was able to get through the first two months with many people in the neighborhood and church covering my transportation costs. This is how a TB patient described the situation of going to healthfacilities

Social support

TB patients, like the rest of the community, have their own social life, but because of TB, they withdraw theirparticipation in the social affairs, and this time community needs to help TB patients. Elders, religious leaders, teachers and women's organizations, fill the social gap of the patients if the TB patients used to participate in social affairs in the past and they have reduced their social participation due to the disease. According to the study some the social gaps filled by the community members includes the exemption of attendance of the patients in various social events like funerals and weddings, to the, exemption or extending of fines, or subsidize TB patients. In this regard, the TB patients who were in the community where we did the study saidthat the community provides great support, for example, they come to our homes and provide spiritual servicesso that we do not need attend church services.

Ever since I found out I had TB, I stopped going to church. The reason was that I was very sick and coughing, so I didn't want to disturb the people and transfer the disease to the people in the church. However, not going to church disturbed me deeply and I did not think that all my prayers were being - 1444 - Available online at: https://jazindia.com

heard by the God. In the meantime, the servants of the church came to my house and prayed for me and read the Bible to me, and I wasvery happy and comforted. A TB patient said that As a young TB patient said, I was disgusted to live after being diagnosed with TB. I started to hate meeting myfriends and playing with them like I used to. Even to take TB medicine, I am not happy, but only for sake my families effort. I preferred only to stay in a room given to me I was not very happy I spent much of my time disgusted and hate when they gave me food and water. However, latter, when the pain went away gradually I realized that I was not right. Now, if there are others who have been doing the same thing as me, I tell them that it is not right to do that.

Psychological support: Although any disease causes psychological pressure on the patient, but our studies indicates that the psychological pressure of TB is higher. The reason for this was the cough, which is one of the characteristics of the disease and which does not allow to sit near the person for a long time, and the type, number and size of pills that is taken for a long time, and as a result, the pressure on the psych is heavy. The stigma of TB patients in the area where we conducted the study was widespread earlier, but it is not a big problem at present. In the area where we conducted the study, other community groups, including health professionals, who participated in the study, say that the stigma of TB patients, which was widespread in the past, has improved.

It seems that the size of tablets given for TB disease is given to animals or cattle, not to humans. This size of medicine is horrifying and scary to swallow on an empty stomach, let alone a full meal. Therefore, it seems good if the government arranges for food to be provided to patients even with aid. Otherwise, it is difficult forpatients to follow the medication and finish it .Such was the case with a female patient. Isolating and discriminating against TB patients was something that no God likes. The second thing was inhuman that not doing, what TB patients deserve from us. They need our love, compassion sympathy and care. They deserve our care. Otherwise, these TB patients may become discouraged and discontinue their medication. During an interview, this is what the elder of the country said Stigma has actually decreased now, not as it was said in the past, but still some people discriminate against usTB patients. It was known that there were health professionals working in other departments than TB department, who didn't want to talk to us, TB patients. This was seen one day when I went to the health centerto collect my TB medication and the medication room was closed. I approached one of the health professionalin the compound to ask where she was, who was giving us TB medicine. He startled me when I went closer to him, he told me not to come closer to him, and he said to me, what do you want? He disgusted me with his offending words and really I was shocked.

This study explored community involvement in TB prevention and care in Ethiopia's Boloso Sore Woreda Wolayta Zone. It was found that there was high to moderate community involvement in TB care in this research location. The majority of TB patients were more actively involved in TB prevention and control than members of the community. Some volunteers received little instruction on how to administer drugs and monitor patients. Some of the patients stopped receiving treatment as a result of this. The main impediments to community involvement in TB care were stigmatization and a lack of understanding about TB among the residents. The WHO states that communities' primary contributions to the battle against TB are to help detect new cases andto increase adherence to treatment, which explains the low degree of community involvement in TB preventionand care that was discovered in the current study[33]. According to the WHO community volunteers and thosewho have ever had TB are expected to refer individuals with a chronic cough for sputum examination, share personal stories and act as advocates during community outreach, promote DOTS services, act as treatment partners for those who have TB, assist staff at health centers, give talks in schools, and disseminate informationabout the disease to help reduce stigma and aid in the identification of TB symptoms[14].

Others include keeping TB patients' medications on hand, reminding them to schedule follow-up appointments, going with them to neighboring medical institutions, and referring them when they have negative drug responses assist people in recognizing TB symptoms [34]. Regarding the findings concerning community involvement in TB care, the findings were consistent with research conducted elsewhere, which explained that community members engaged in TB prevention and care activities mean mainly in activities that are conducted outside offormal health facilities, for instance, activities conducted within community-based structures such as schools, places of worship, churches, mosques, and households[35]. Another study found that any action involving the community that promotes TB prevention and control qualifies as community engagement in TB care. This study also made the case that organizing and promoting community involvement in TB programs [36].

Additionally, they underlined how communities may support patients by collecting drugs from health center, providing food, and/or any medical care. The majority of the community members may not be -1445aware that these events exist, asnoted by a few participants during the FGD and Interview, which could explain why there is little participationfrom the members even while these activities are taking place. The current study has demonstrated that some volunteers were not properly couched, resulting in treatment default, even though the majority of the volunteers were trained on how the patients should take the medicationsas well as their roles as supporters of healthcare providers and TB patients, that is, to ensure that the patient completes the treatment successfully [34]. Regarding stigmatization as a barrier to community participation in prevention and care of TB, it can be asserted that even health professionals stigmatize TB patients as well assome community members. This conclusion is based on opinions from health workers and some TB patients about their experiences providing TB services and their experiences while receiving treatment. This finding inour study is quite consistent with research conducted in Ethiopia and the Philippines [36, 37].

Conclusion

Our study revealed high to moderate community participation in tuberculosis prevention and care in the studyarea. The finding is that the TB prevention and care strategy for eliminating TB will be operationally effective. In cumulative effect, the region might be able to meet the WHO's recommendations for the community TB prevention and care plan, which call for case notification of more than 70% and an 85% success rate for treatment and all seek to eliminating TB by 2030. Therefore, the study emphasizes the necessity for effective communication to be established between community and the health institutions. To further raise TB notification and treatment success rates, all feasible methods of utilizing community participation in TB care are advised.

Data Sharing Statement

All data used and/or analyzed during the current study are available from the corresponding author onreasonable request.

Ethical Considerations

An official letter of no objection (Ref.No-PIPH/FOM/PhD/2021-22/63) was written by Parul University and submitted to Wolayta Sodo University. Ethical clearance and approval was obtained from Ethical Review Committee (ERC), Wolayta Sodo University, College of Health Science and Medicine with (Project. No CHSM/ERC/08/14) which was dully considered during its meeting held on April 13/2022. The zonal offices in turn wrote official letters to woreda (districts) where the health facilities are there and the woreda health offices wrote a letter to respective health facilities. A written consent was obtained from the participants. Moreover, all the study participants were informed about the purpose and confidentiality of the information along with their right to refuse.

Acknowledgments

The authors would like to thank the study subjects, data collectors and supervisors; without their willingness and participation this study could not have been achieved. Our special thanks go to Parul University, Wolayta Sodo University, Dan Biomedical Medical, Medical Laboratory Equipments, Chemicals and Reagents distributor and Wolayta zone and Boloso Sore woreda administration and health departments for their continuous support and encouragement.

Author Contributions

Both authors contributed to data analysis, drafting or revising the article, have agreed on the journal to which the article will be submitted, gave final approval of the version to be published, and agree to be accountable for all aspects of the work.

Dan Biomedical Medical, Medical Laboratory Equipments, Chemicals and Reagents distributor. The funder had no role in the design, data collection, analysis, and interpretation of this study.

Disclosure

The authors report no conflicts of interest in this work

Reference:

- 1. World Health Organization. (1978). Primary Health Care: Report of the International Conference on Primary Health Care, Alma-Ata. International Conference on Primary Health Care. Geneva: World Health Organization.
- Atinga, R. A., Agyepong, I. A., & Esena, R. K. (2019). Willing but unable? Extending theory to investigate community capacity to participate in Ghana's community-based health planning and service implementation. Evaluation and Program Planning, 72, 170. https://doi.org/10.1016/j.evalprogplan.2018.10.001
- Maluka, S. O., & Bukagile, G. (2016). Community participation in the decentralized district health systems in Tanzania: Why do some health committees perform better than others? International Journal of Health Planning and Management, 31(2), E86–E104. https://doi.org/10.1002/hpm.2299
- 4. Takasugi, T., & Lee, A. C. K. (2012). Why do community health workers volunteer? A qualitative study in Kenya.

Available online at: https://jazindia.com

Public Health, 126(10), 839-845. https://doi.org/10.1016/j.puhe.2012.06.005

- 5. Koning, D. K., Kok, M., Ormel, H., Kane, S., Rashid, S., Sarker, M., et al. (2014). A Common Analytical Framework on Factors Influencing Performance of Close-to-Community Providers: Synthesis of the Inter-Country Context Analyses in Bangladesh, Ethiopia, Indonesia, Kenya, Malawi, and Mozambique and the International literature review. REACHOUT Consortium.
- De Vries, D. H., & Pool, R. (2017). The influence of community health resources on the effectiveness and sustainability of the community and lay health worker programs in lower-income countries: a systematic review. PLoS One, 12(1), 1–28. https://doi.org/10.1371/journal.pone.0170217
- United States Agency for International Development (USAID). (2009). Community Health Volunteers: Training Manual, 105. https://doi.org/10.1016/S0026-0576(07)80624-6
- 8. Wood, R. (2007). The case for integrating tuberculosis and HIV treatment services in South Africa. Journal of Infectious Diseases, 196(Suppl 3), S497–S499.
- Yassin, M. A., Datiko, D. G., Tulloch, O., Markos, P., Aschalew, M., Shargie, E. B., ... Theobald, S. (2013). Innovative community-based approaches doubled tuberculosis case notification and improved treatment outcome in Southern Ethiopia. PLoS One, 8(5), e63174.
- 10. Ferreira, V., Brito, C., Portela, M., Escosteguy, C., & Lima, S. (2011). DOTS in primary care units in the city of Rio de Janeiro, Southeastern Brazil. Revista de Saúde Pública, 45(1), 40–48.
- 11. Corbett, E. L., Bandason, T., Duong, T., Dauya, E., Makamure, B., Churchyard, G. J., ... Hayes, R. J. (2010). Comparison of two active case-finding strategies for community-based diagnosis of symptomatic smearpositive tuberculosis and control of infectious tuberculosis in Harare, Zimbabwe (DETECTB): A clusterrandomized trial. The Lancet, 376(9748), 1244–1253.
- Uwimana, J., Zarowsky, C., Hausler, H., & Jackson, D. (2012). Training community care workers to provide comprehensive TB/HIV/PMTCT integrated care in KwaZulu-Natal: lessons learned. Tropical Medicine & International Health, 17(4), 488–496.
- Uwimana, J., Zarowsky, C., Hausler, H., Swanevelder, S., Tabana, H., & Jackson, D. (2013). Community-based intervention to enhance provision of integrated TB-HIV and PMTCT services in South Africa. International Journal of Tuberculosis and Lung Disease, 17(10 Suppl 1), 48–55.
- 14. World Health Organization. (2008). Community Involvement in Tuberculosis Care and Prevention: Towards Partnerships for Health. Retrieved from http://whqlibdoc.who.int/publications/2008/9789241596404_eng.pdf
- 15. Atre, S. R., Kudale, A. M., Morankar, S. N., Rangan, S. G., & Weiss, M. G. (2004). Cultural concepts of tuberculosis and gender among the general population without tuberculosis in rural Maharashtra, India. Tropical Medicine & International Health, 9(11), 1228–1238.
- 16. Long, N. H., Johansson, E., Diwan, V. K., & Winkvist, A. (2001). Fear and social isolation as consequences of tuberculosis in VietNam: a gender analysis. Health Policy, 58(1), 69–81.
- 17. Weiss, M. G., Somma, D., Karim, F., Abouihia, A., Auer, C., Kemp, J., & Jawahar, M. S. (2008). Cultural epidemiology of TB with reference to gender in Bangladesh, India, and Malawi. International Journal of Tuberculosis and Lung Disease, 12(7), 837–847.
- 18. Aryal, S., Badhu, A., Pandey, S., Bhandari, A., Khatiwoda, P., Khatiwada, P., & Giri, A. (2012). Stigma related to tuberculosis among patients attending DOTS clinics of Dharan municipality. Kathmandu University Medical Journal (KUMJ), 10(37), 48–52.
- Prado, T. N., Wada, N., Guidoni, L. M., Golub, J. E., Dietze, R., & Maciel, E. L. (2011). Cost-effectiveness of community health worker versus home-based guardians for directly observed treatment of tuberculosis in Vitoria, Espirito Santo State, Brazil. Cadernos de Saúde Pública, 27(5), 944–952.
- Vassall, A., Bagdadi, S., Bashour, H., Zaher, H., & Maaren, P. V. (2012). Cost-effectiveness of different treatment strategies for tuberculosis in Egypt and Syria. International Journal of Tuberculosis and Lung Disease, 6(12), 1083–1090.
- 21. Khan, M. A., Walley, J. D., Witter, S. N., Imran, A., & Safdar, N. (2012). Costs and cost-effectiveness of different DOT strategies for the treatment of tuberculosis in Pakistan. Health Policy and Planning, 17(2), 178–186.
- 22. Farmer, P., Landre, F., Mukherjee, J., Gupta, R., Tarter, L., & Kim, J. Y. (2010). Community-based treatment of advanced HIV disease: introducing DOT-HAART (directly observed therapy with highly active antiretroviral therapy). Bulletin of the World Health Organization, 79(12), 1145–1151.
- 23. World Health Organization. (2012). WHO Policy on Collaborative TB/HIV Activities: Guidelines for National Programmes and Other Stakeholders. Geneva: World Health Organization.
- 24. Kironde, S., & Kahirimbanyi, M. (2002). Community participation in primary health care (PHC) programmes: lessons from tuberculosis treatment delivery in South Africa. African Health Sciences, 2(1), 16–23.
- 25. Legido-Quigley, H., Montgomery, C. M., Khan, P., Atun, R., Fakoya, A., Getahun, H., & Grant, A. D. (2013). Integrating tuberculosis and HIV services in low and middle-income countries: a systematic review. Tropical Medicine & International Health, 18(2), 199–211.
- 26. Howard, A. A., & El-Sadr, W. M. (2010). Integration of tuberculosis and HIV services in sub-Saharan Africa: lessons learned. Clinical Infectious Diseases, 50(Supplement 3), S238–S244.
- 27. Creswell, J. W. (2014). Research Design: Qualitative, Quantitative and Mixed Methods Approach (4th edition). India: SAGE Publications, Inc.
- 28. Dowling, M. (2006). Approaches to reflexivity in qualitative research. Nurse Researcher, 13(3).
- 29. Alvi, M. (2016). A Manual for Selecting Sampling Techniques in Research. Retrieved from https://mpra.ub.unimuenchen.de/70218/1/.

- 30. Baral, S., Uprety, S., & Lamichhane, B. (2016). Focus Group Discussion. Retrieved from https://www.herd.org.np/uploads/frontend/Publications/PublicationsAttachments1/1485497050-Focus%20Group%20Discussion_0.pdf.
- 31. Pandey, P., & Pandey, M. M. (2015). Research Methodology: Tools and Techniques. Romania: Bridge Center.
- 32. Morgan, G., Crinson, I., & Leontowitsch, M. (2016). Semi-structured, narrative, and in-depth interviewing, focus groups, action research, participant observation. In The Principles of Qualitative Methods. Retrieved from https://www.healthknowledge.org.uk/public-health-textbook/research-methods/1dqualitativemethods/section2-theoretical-methodological-issues-research.
- 33. World Health Organization (WHO). (2010). Management of Tuberculosis Training for Health Facility Staff (2nd edition). Geneva, Switzerland: World Health Organization.
- 34. Amenuvegbe, G. K., Francis, A., & Fred, B. (2016). Low tuberculosis case detection: a community and health facility-based study of contributory factors in the Nkwanta South district of Ghana. BMC Research Notes, 9(1), 1–9.
- 35. Hadley, M., & Maher, D. (2000). Community involvement in tuberculosis control: lessons from other health care programs. The International Journal of Tuberculosis and Lung Disease, 4(5), 401–408.
- 36. Gebremariam, M. K., Bjune, G. A., & Frich, J. C. (2010). Barriers and facilitators of adherence to TB treatment in patients on concomitant TB and HIV treatment: a qualitative study. BMC Public Health, 10(651), 1–13.
- 37. Reyes, K., & Amores, J. C. (2014). Barriers of Early TB Diagnosis among the Poor in Highly Urbanized Areas in the Philippines (No. 2014-18). PIDS Discussion Paper Series.