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Acceptability of integrating traditional tuberculosis care with modern healthcare services in the Amhara Regional State of Northwest Ethiopia: A qualitative study

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ABSTRACT

Many people with tuberculosis (TB) rely solely on traditional healthcare services. Integrating traditional healthcare with modern healthcare services can increase access, quality, continuity, consumer satisfaction, and efficiency. However, successful integration of traditional healthcare with modern healthcare services requires stakeholder acceptance. Therefore, this study aimed to explore the acceptability of integrating traditional care with modern TB care in the South Gondar zone, the Amhara Regional State, northwest Ethiopia.

Data were collected from patients with TB, traditional healers, religious leaders, healthcare providers, and TB program personnel. Data were collected using in-depth interviews and focus group discussions from January to May 2022.

A total of 44 participants were included in the study. The context and perspectives of integration were thematized into the following five major themes: 1) referral linkage, 2) collaboration in awareness creation in the community, 3) collaboration in monitoring and evaluation of integration, 4) maintaining continuity of care and support, and 5) knowledge and skill transfer. Integrating traditional and modern TB care was acceptable to both modern and traditional healthcare providers as well as TB service users. This may be an effective strategy for improving the TB case detection rate by decreasing diagnosis delay, treatment initiation, and catastrophic costs.

1. Background

TB remains one of the world's deadliest infectious diseases (WHO, 2021). The World Health Organization (WHO) estimates that more than 4 million people with active TB were either not diagnosed or not reported to national TB reporting systems in 2021 (WHO, 2022). Under-detection of active TB patients and delays in TB diagnosis were major problems in national TB control programs, particularly in low- and middle-income countries (Getnet et al. 2017). TB is a major public health issue in Ethiopia, with a low case detection rate and long diagnosis delays (Shiferaw & Zegeye 2019; WHO, 2020). According to the 2021 national TB report, more than 29% of TB cases remain undiagnosed and untreated in the country (MoHE 2021). The burden of under-detection or the under-reporting rate in the Amhara Regional State (39%) was higher than the national average (29%) (Amhara health bureau, 2021). The main reason for this under-detection or under-diagnosis of TB may be due to a large proportion of TB patients seeking care from traditional healers(Sima et al. 2019) and holy water (Baheretibeb et al., 2021; Reniers & Tesfai 2009; Stekelenburg et al. 2005).

Traditional healthcare has strong historical and cultural roots and is practiced in many countries worldwide (WHO, 2018). More than 80% of African people rely on traditional medicine for their primary healthcare needs (Barimah, 2013). In Ethiopia, approximately 90% of sick people visit traditional healers for their illnesses (CIDA/WHO-AFRO project 2012). However, unlike modern medicine, traditional medicine is not adequately governed by legislation in Ethiopia, making it difficult to ensure that practitioners have proper qualifications and adhere to

Abbreviations: EPTB, Extra-Pulmonary Tuberculosis; FGD, Focus Group Discussion; HCP, Healthcare Providers; IDI, In-Depth Interview; TB, Tuberculosis; WHO, World Health Organization.

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minimum clinical standards. Patients are the only ones who can check the quality, specialty, and suitability of services (Lee 2016).

Traditional care providers are essential in TB control programs to improve case detection, early diagnosis and treatment, and community awareness (Thapa et al. 2021). Integrating modern and traditional healthcare delivery is recommended by the WHO to improve access, quality, efficiency, and continuity of TB care (Axelsson & Axelsson 2006; Dudley & Garner, 2011), particularly in low- and middle-income countries that have limited resources and poor access to healthcare services (Tulloch et al. 2015). Ethiopia's health policy also recommended (FDRE 1993) the integration and providing comprehensive patient care (Kassaye et al. 2006). However, the acceptability of integrating traditional care with modern TB care has not been thoroughly investigated in Ethiopia. Therefore, this study aimed to explore the acceptability of integrating traditional care with modern TB care among practitioners, TB program planners, and TB patients in Amhara Regional State, Ethiopia.

2. Methods

2.1. Study setting and period

The research was conducted in South Gondar Amhara Regional State, northwest Ethiopia, from January to May 2022. According to the 2007 Ethiopia Census, this zone has a total population of 2,051,738, of whom 1,010,677 are women (CSA 2007). According to the 2020 zonal population projection estimate, the total population was about 2.6 million. There are 8 fully functional hospitals, 96 health centers, and 397 health posts. This zone is one of the most TB affected areas and traditional medicine has been widely practiced for many years.

2.2. Study design

An exploratory qualitative study was applied in the South Gondar zone, Amhara region, Northwest Ethiopia. This exploratory study design was used because the acceptability of integrating traditional TB care with modern healthcare has not been previously explored and is a novel insight that has not yet been clearly understood.

2.3. Study participants

The study participants were TB program planners, traditional healers, religious leaders, healthcare providers (HCPs), and TB patients taking TB medications.

2.4. Sample size determination

The sample size was determined based on data saturation. The saturation was determined when the incoming data were adequate, completed, and there was no new information that came out from the participants. Data collection was stopped as we thought enough data had been collected to draw our research conclusion, and any further data collection did not produce value-added insights.

2.5. Sampling techniques

Purposive sampling was used to select study participants. This sampling technique was used to get comprehensive, complete, and detailed information about the acceptability of integration between traditional and modern TB care. The traditional healers were accessed from Amhara region traditional healers' Association registration office, and religious leaders were also accessed through zonal and woreda church administrations. TB patients were also approached when they came to a health facility to collect their medications.

2.6. Data collection methods and tools

The data were collected using an in-depth interview (IDI) and focus group discussion (FGD). The IDI and FGD guides were developed by the research team and included in the supplementary information file (Sup-File). The data were collected by the principal investigator and a trained data collector using the local language (Amharic).

2.7. Trustworthiness and data analysis

Nvivo software version 12 was used to analyze the data. The data were analyzed together with data collection time since it was important to amend IDI/FGD guides and to elicit new insights. First, the authors familiarize themselves with the field notes and audio records of the IDI and FGD. The first author transcribed the field notes and audio recordings word for word, and then read the transcripts repeatedly to familiarize himself with the content of each interview. Then, the data was translated into English. The research team checked the transcribed and translated data for consistency.

Second, the coding index was constructed by the first author. Third, the transcripts were read repeatedly and labeled line by line to enable us to interpret its meaning (Ritchie et al. 2013), then, thematic charts were developed. Fourth, the essential information was recorded for each participant, and numbers were used to anonymize the study participants. Then, the authors conducted an initial interpretation of relevant information. Finally, the main themes and sub-themes were identified.

The honesty, dependability, credibility, transferability, and conformability of the study were maintained through the triangulation of data collection methods, involving different groups of interviewees, conducting peer debriefing, researcher triangulation, and doing an audit trail check. The authors described the phenomenon in detail so that people who want to apply the findings can use it elsewhere. The interpretation of these findings was based on the data.

2.8. Ethical approval and consent to participate

Ethical clearance was obtained from the ethical review board of Bahir Dar University (Ref. No. 353/2021). The purpose of the study was communicated to respected officials, and permission was obtained there. Consent was obtained from each study participant before the interview, and participation was voluntary based.

3. Results

3.1. Characteristics of participants

A total of 44 study participants were involved in the study, which included 15 HCP (10 IDI and one FGD), 7 traditional healers (one FGD and three IDI), 13 clerics (2 IDI and two FGD), 6 TB patients (IDI), and three TB program planners (IDI). The mean age of the study participants was 39 (standard deviation (SD) $\pm$ 12.95 years). Twenty-nine participants were male. Thirty-seven participants were married, and 39 lived in urban areas. The characteristics of the participants are listed in Table 1. Five of the six patients visited traditional healers and holy water when they fell sick for the first time.

3.2. Themes

Themes were identified by merging several sub-themes. Five themes emerged from the analysis of the interview and discussion. These themes were referral linkage, collaboration in awareness creation in the community, collaboration in monitoring and evaluation, continuity of care and support, and knowledge and skill transfer. The conceptual framework of acceptability of integrating traditional care with modern TB care is appended in the annex (Appndix_1).

Table 1
Sociodemographic characteristics of study participants in the Amhara region, northwest Ethiopia, 2022.

Participants	Categories	Frequency
Program planner (n = 3) Traditional healers(n = 7) Religious leader(n = 13) Healthcare providers(n = 15) Service users(n = 6)		
Participants socio-demographic characteristics		
Age	Mean (SD)	39 ± 12.95
	Interquartile range (IQR)	19
Sex	Male	29
	Female	15
Marital status	Married	37
	Single	4
	Divorced	2
	Widowed	1
Category of participants	Health workers	15
	Traditional healers	7
	Program planners	3
	Priests	13
	Patients	6
Address	Urban	39
	Rural	5
Educational status	Unable to read and write	2
	Able to read and write	7
	Primary education	5
	High school	10
	College and above	20
Occupational status	Governmental	17
	Private	9
	Priesthood	12
	Housewife	1
	Farmer	5

3.3. Theme I: Referral linkage

All participants accepted the referral linkage between traditional and modern TB care providers. This means that many sick people used traditional healers and holy water as alternative treatments in our community. Screening and referring presumptive TB cases from traditional care to modern healthcare can be an effective strategy to detect TB cases as early as possible.

> A 39-year old participant said, "Surprisingly, this is one of our plans." This will be effective because religious leaders and healers are popular and acceptable in the community." [PP Code1].
> A 26 year old participant said, "This is acceptable because the community trusts the religious leader and traditional healers, it can be very effective if they are trained and able to refer TB-suspected cases to a health facility." [Physician Code1]

Religious leaders are effective in spiritual healing. Anti-TB drugs alone may not be effective in solving social, psychological, and spiritual problems unless it is supported by informal healers. A 50-year old participant said, "*This is acceptable. The unstable patient may need spiritual healing and social support. People are cured when they are immersed in holy water*." [TH Code1].

Referring patients from religious leaders to modern healthcare and vice versa was acceptable.

> One participant said, "I feel that patients with TB may require spiritual help, as medicine alone may not be sufficient to improve their immunity." [Physician, Code 1]

In contrast, others are against bidirectional referral systems. Referring patients from healthcare facilities to traditional healers or holy water can increase the risk of TB transmission because many individuals gather there.

> A 39-year-old participant said, "This is unusual practice… I do not encourage TB patients to go to traditional healers and holy water because they can spread the disease to someone else. In addition, if we encourage patients to go to herbal medicine, people lack trust in modern medicine." [PP Code1]

In addition, HCP expressed that the dose and frequency of medicines are not properly calculated based on age, weight, and types of illness. Usually, herbalists call extra-pulmonary tuberculosis (EPTB) 'Nekeresa' and they provide herbal medicine.

> A participant said, "People who come to us with swelling of body parts can be treated with herbal medicine, but if the swelling is complicated and they develop large wounds after medication, we encourage them to go to the hospital." [TH FGD1, Codes 2 and 4].

Furthermore, HCPs do not recommend referring patients from modern medicine to traditional medicine because traditional healers often work to earn money. Traditional healers are the major cause of diagnosis and treatment delays in TB patients.

> A 29-year old participant said, "Often patients with EPTB visited traditional healers. Healers called it 'Nekeresa' and treated it with topical herbal medicine for months or even for a year. Finally, the patient was diagnosed with EPTB." [HCP FGD1, Code5].

Financial insecurity is one of the main hindrances to traditional healers' referring patients. HCP strongly argued that traditional healers worried more about their businesses than patient care.

> A 28-year-old participant said, "Traditional healers work for profit rather than patients' benefit. They are simply concerned with making money, and they are not concerned about the patient." [HCP FGD1, Code 2].
> A 38-years participant said, "Integration may be resisted by traditional healers since it may affect their monthly income." [Nurse Code LAHC3]

3.4. Theme II: Collaborating in awareness creation in the community

Because religious leaders and healers are popular and trusted in the community and are effective at counseling and educating people, including them in community health education programs is crucial for identifying TB cases there.

> A 44-year-old participant said, "I think God is blessing the outcomes of the patient when priests are involved in the system." [RL FGD, Code 1]
> Another 38-year-old participant said, "Most of the time, religious leaders have the best approach or method to teach the community as compared to health experts." [RL FGD1, Code 3]
> Another 48-year-old participant said, "…St. Lukas was both a doctor and a well-known priest, so when priests teach the souls of their children, they can be more effective than the HCP in educating the community." [RL FGD1, Code 1]

3.5. Theme III: Collaborating in the monitoring and evaluation of integration

Regular monitoring and evaluation of the integration are important to encourage the continuity of community TB case detection. All participants agreed that both types of practitioners should be involved in monitoring and evaluating the integration process and regular monitoring and evaluation are important to reinforce best practices and avoid flaws.

A 45-year-old participant said, "I believe it is critical to monitor and evaluate the collaboration to reinforce the good and improve the bad." [TH FGD1 Code1]
Another 39-year-old participant said, "I am happy with myself. I'd be delighted if health professionals can train, evaluate, and monitor our activities." [TH FGD1 Code 3]

3.6. Theme IV: Continuity of care and support

The sustainability of integration is an important issue that can be maintained through continuous training, consultation, and effective collaboration among practitioners. The best strategy for maintaining sustainable integration is to create a better health system that allows for integration.

A 26-year-old participant said, "Changing people's minds or attitudes can take a lot of time. It is critical to include traditional practitioners in various meetings to inform updated health information." [Physician Code 2]

There was a misunderstanding between traditional healers and modern HCPs. This could affect the continuity of integration. Establishing a strong relationship between traditional and modern HCPs is important to sustain integration.

A 26-year-old physician said, "The most significant stumbling block will be a lack of acceptance. The question was, can we be accepted by traditional practitioners? "The biggest obstacle is rejection by them." [Physician Code1]

Traditional healers had a positive attitude toward integration and the sustainability of integration. However, traditional healers believed that HCPs misunderstood them. HCP defames traditional healers as 'Witchdoctor' or 'Magician or 'Debetra'. These words were the most sensitive and discriminatory in the community and originated from neocolonialist philosophy.

Participants said, "Our fathers were all clever and knowledgeable about medicine. However, colonial thought and modernization despise and stifle traditional medicine development." [TH Code 3 (IDI), and TH, FGD Codes 1 and 2].

3.7. Theme V: Knowledge and skill transfer

All participants were willing to share their knowledge and skills with others. This is essential for facilitating collaboration and communication.

Participants said, "Knowledge and skill-sharing to identify TB patients are very important. We desperately need them because they can help us with advice, and some of the things that are not clear to us can enlighten us."[TH FGD 1 Code 2]
"It would be great if this could be accomplished." [RL, FGD Code 4]
"E… This is useful to solve the knowledge and skill gaps." [RL, FGD Code 1]

Participants explained that traditional practitioners may not have sufficient knowledge of TB. Thus, providing training to traditional practitioners improves their knowledge and skills.

A 27-year-old participant said, "I'm sure our community, including traditional healers and religious leaders, are not knowledgeable about TB. Therefore, I have suggested they should train about TB and I am happy to train them, and even to receive training from them." [Physician, Code 3]

4. Discussion

This study aimed to explore the acceptance of integrating traditional care into modern TB care among practitioners and patients. This study found that integrating traditional and modern TB care was acceptable and could play an important role in improving the case detection rate, decreasing diagnosis delays, and reducing the catastrophic costs of TB. Traditional care has been implemented in the community for thousands of years, and it brings a wealth of clinical expertise to modern medical practice (Liu et al. 2018). Traditional care has strong historical and cultural roots that are widely accepted by the community and practiced in many countries worldwide (Traditional and Complementary Medicine (WHO) 2018). In Ethiopia, traditional medicine is considered not only a means of disease treatment, but also the prevention of disease and enhancement of physical, spiritual, social, mental, and material well-being (Kassaye et al. 2006).

Our study found that traditional practitioners are eager to work together with modern care practitioners in providing community health education, monitoring and evaluation, knowledge and skill transfers, and continuous support and care. This is in line with a previous study-showed that traditional healers and biomedical HCPs were willing to collaborate, and in improving their knowledge and skills, communication, and interaction (Krah et al. 2018).

Bidirectional referral linkage between modern medicine and religious authorities was acceptable because religious leaders are respected in the community and are vital for resolving patients' psychological, spiritual, and social problems. Studies showed that religious and spiritual practices and community involvement have positive effects on patient's health and well-being (Anshel & Smith 2014; de Diego-Cordero et al. 2022).

Many people preferred visiting traditional care during the time of sickness as compared to modern care for different reasons including facility inaccessibility, a lack of adequate services, and a shortage of resources in health facilities. Previous studies showed that local healers remain the primary source of healthcare for millions of people in the rural areas of middle and low-income countries, which contributed to the widespread use of traditional medicine, particularly among the poor (Abdullahi 2011; Cameron et al. 2009).

Distrust, lack of support, financial hardship, and practitioners' experiences have an impact on knowledge and skill-sharing practices, knowledge and skill transfer are essential for ensuring the sustainability of integration. Similarly, a prior survey revealed that external constraints hampered knowledge and skill-sharing practices (Huang et al. 2016). Neocolonialist thought and the emergence of modernization was the other challenge, which hampered the integration between traditional and modern medicine. Similarly, colonialism, western religion, and globalization had a detrimental impact on Africans' perceptions of traditional medicine, particularly among educated elites (Cameron et al. 2009). To avoid existing obstacles, consistent training is required for both traditional practitioners and modern HCPs. This is important to work in collaboration (Abdullahi 2011).

Our study provides insights into the importance of integrating traditional care with modern TB care. Similarly, Ethiopia's health policy supports the integration of traditional medicine into the healthcare system (Kassaye et al. 2006). Also, this is supported by different national health policies and by the WHO recommendations (Council, 2020, Traditional medicine strategy 2014-2023, 2013). Despite the use of an active community case detection approach in Ethiopia, the number of unreported TB cases remained high (Arega et al. 2019; Assefa et al. 2019). Therefore, in countries like Ethiopia, integrating traditional care with modern medicine is vital for enhancing the national TB program (Chi 1994).

Integrating traditional TB care with modern healthcare could be critical for building a new primary care delivery paradigm. This integration of TB care may increase treatment adherence and health benefits for the sick (Bulstra et al. 2021; Vasan et al. 2014).

This study suggested that a legally enforceable agreement should be created and smooth integration is implemented between the modern and traditional healthcare systems to combat the transmission of TB infections. This is because many people in the community believed that herbal medicine and holy water are more effective in curing illnesses than modern medicine. Therefore, comprehensive community education, social support, and counseling should be provided to traditional practitioners to enhance people's health-seeking behavior, particularly TB patients.

Local and national governments should create a conducive environment that can foster a positive attitude toward working together between traditional and modern practitioners. Short-term training should be designed and provided to the community and healthcare practitioners to sustain continuity of care and support. Also, traditional practitioners should obtain TB training and screen and refer presumptive TB cases to health facilities. Despite the accreditation and registration of traditional healers that began in Ethiopia, robust legal institutions should be established to monitor traditional medical practice. Policymakers should prepare details of a national policy document on the integration, and program planners should implement this integration. Since many people gathered with traditional care providers and trust them, the safety and efficacy of traditional medicine should be explored through national-level research. Further interventional trial studies should be conducted to test the effectiveness and cost-effectiveness of integration.

The study did not include the opinion of health professionals from private clinics who could be participated in the diagnosis of patients with TB. It is also limited to include experts from non-governmental organizations who closely work with TB programs.

5. Conclusion

Referral linkage, sustainability of integration, knowledge and skill transfer, willingness to create community awareness, and collaboration in monitoring and evaluation were the identified themes.

Our study found that integrating traditional and modern TB care was acceptable and essential to enhance TB case detection and decrease diagnosis delays and costs. Screening and referring presumptive TB cases from traditional practitioners to modern care is acceptable. However, HCP and religious leaders refused to refer patients from the modern healthcare system to traditional healers due to the fear of over or under-dose, and adverse effects of herbal medicine. Religious leaders and traditional healers are known and trusted by the community, therefore involving them in TB care can facilitate community TB care.

Availability of data and materials

The study datasets are available from the corresponding author and will be shared upon reasonable request.

CRediT authorship contribution statement

Desalegne Amare: Conceptualization, Methodology, Software, Validation, Formal analysis, Investigation, Data curation, Visualization, Project administration. **Kefyalew Addis Alene:** Methodology, Software, Validation, Formal analysis, Investigation, Data curation, Visualization. **Fentie Ambaw:** Validation, Formal analysis, Data curation.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Data availability

Data will be made available on request.

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Appendix A

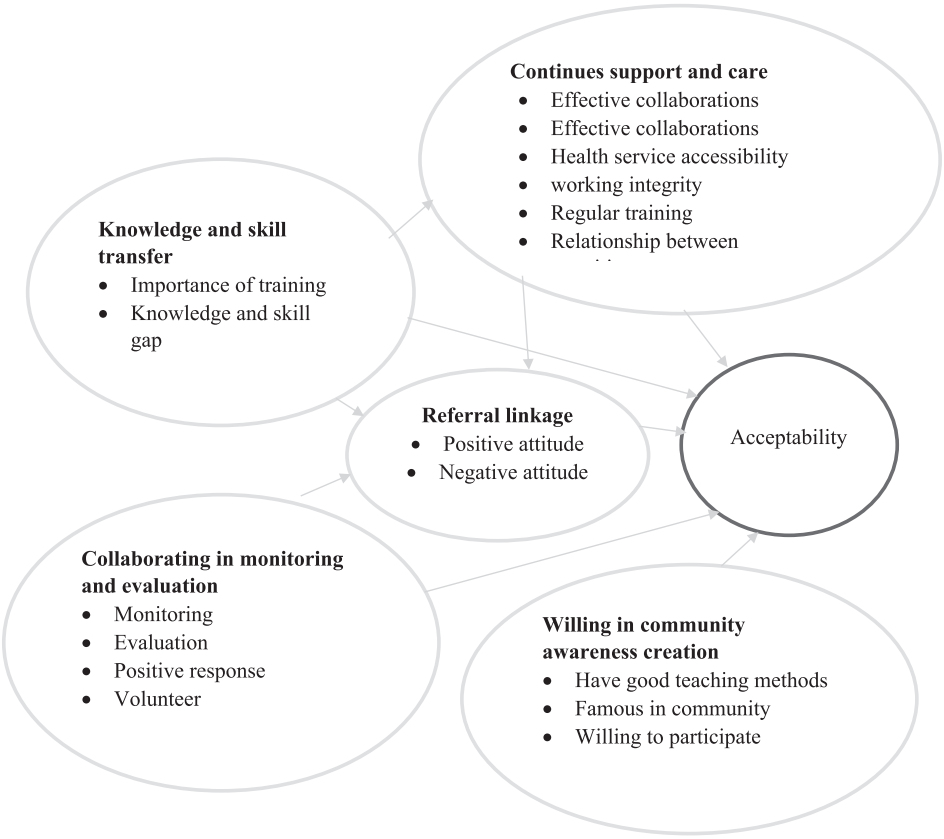

Fig. 1. Conceptual framework of acceptability of integrating traditional tuberculosis care with modern care in south Gondor Zone, Amhara regional state, northwest Ethiopia.

Appendix B. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.pmedr.2023.102231.

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