Pregnant Women's Unacceptability of Tuberculosis Health Information in Vhembe and Mopani Districts in Limpopo, South Africa: Perspectives of Midwives

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Abstract

Background: Pregnant women are expected to accept and implement health-related information during antenatal care. Financial constraints and personal practices, however, are some of the reasons hindering pregnant women from accepting health information, for instance, tuberculosis information. Financial constraints usually relate to transport costs, while cultural practices surrounding pregnancy hinder them from attending antenatal services.

Aim: This study explores midwives' perspectives on the unacceptability of tuberculosis health information by pregnant women in ten selected primary healthcare facilities in the Vhembe and Mopani districts of Limpopo, South Africa.

Methods: Data were collected using unstructured interviews guided by one central and subsequent questions, making observations, and taking field notes. Thirty participants (three per facility) working in primary healthcare facilities were purposefully sampled as determined by data saturation. Tesch's eight steps were used to thematically analyse the collected data.

Results: The findings revealed that several concerns associated with organisational, personnel, and patient-orientated factors have negatively influenced pregnant women's acceptance of tuberculosis health information. COVID-19 has resulted in the neglect of other health concerns like tuberculosis, as the healthcare delivery system has focused on combating the aftermath of the pandemic. This has disrupted emphasis on the acceptance of, adherence to, and hence effectiveness of, tuberculosis health information.

Conclusion: The study recommended that midwives also focus on sharing tuberculosis information when providing services to pregnant women, and that

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all healthcare providers and stakeholders work out a way to enhance the acceptability of tuberculosis health information.

Keywords: health information; midwives; perspectives; pregnant women; tuberculosis; unacceptability

Introduction

Antenatal care (ANC) is a unique service delivered throughout pregnancy to improve pregnancy outcomes. Midwives are the core providers of maternal care services and are well-positioned to convey antenatal health education during pregnancy, childbirth, and post-natal periods (Hong et al. 2021). Antenatal health education guides women throughout their pregnancy to promote self-management and confidence (Luta et al. 2024). Globally, delivering health education during pregnancy is a core factor in empowering pregnant women, both diagnosed and non-diagnosed with TB, with the knowledge to improve the health status of both mother and foetus (Mollard and Cottrell 2023). In Europe, the ANC programme designed to improve maternal and child well-being through health education has developed dramatically positive attitudes toward health education (Onchonga et al. 2021). Pregnant women diagnosed with tuberculosis (TB) who apply and adhere to appropriate health information achieve the best pregnancy outcomes and prevent TB complications (Maugans et al. 2023).

Pregnant women, however, could be exposed to various challenges that impede the acceptance of health information, leading to negligence and poor utilisation of ANC (Ahmad et al. 2019). Luta et al. (2024), from their study conducted in Brunei, report that many pregnant women expressed insecurity and disinclination in using TB health-related information. In Zambia and Zimbabwe, poor delivery of health information to pregnant women and the improper implementation of such information increase the risk of TB complications during pregnancy and breastfeeding if not diagnosed and treated early (Perumal, Naidoo, and Padayatchi 2018). Perumal et al. (2020) and Adjobimey et al. (2022) also report that women of childbearing age, 15 to 45 years, are at high risk of TB complications due to any delay in diagnosis and treatment, which is usually associated with the inaccessibility of primary healthcare services to women, as this reduces the chances of receiving health information. Ghia and Rambhad (2021) contend that women are reluctant to access TB health information due to personal factors, such as feelings of embarrassment due to the stigma attached to TB, and the long waiting lines at healthcare facilities. These factors discourage women from accessing and accepting midwives' instructions (Ghia and Rambhad 2021). It has been noted that financial constraints in relation to transport fees, purchasing nutritious foods, and cultural personal practices also hinder pregnant women from accepting TB health information in countries such as South Africa and Iran (Mulondo 2020; Sabaghinejad, Baji, and Vejdani 2021). Jinga et al. (2019), in their study conducted in South Africa, reported that the lack of knowledge among pregnant women diagnosed with maternal TB and their poor relationships with midwives were associated with the unacceptability of TB health information. Various other factors, such as HIV co-infection, forgetfulness,

ignorance, and non-adherence to disease treatments, were also reported as some of the causes of unacceptability of TB health information during pregnancy (Ahmed et al. 2022).

Maternal TB has become a significant cause of death among women of childbearing age worldwide (Ryckman et al. 2023). Maternal TB has resulted in an increase in maternal mortality rate in Limpopo, which could be associated with the reduction in TB screenings, from 95.3% in 2019 to 89.8% in 2020 (DoH 2021); this could indicate limited access to primary healthcare (PHC) facilities, as well as unacceptability of TB health information by pregnant women. Globally, 3.3 million new cases of maternal TB, and 533 333 maternal mortalities due to TB, were reported in 2021 (Alrobiaee and Jahan 2022; Ryckman et al. 2023; WHO 2023). The outbreak of the COVID-19 pandemic disrupted the functioning of many healthcare facilities and created a significant challenge in diagnosing TB and notifying patients.

In South Africa, despite the adoption of focused antenatal care (FANC), basic antenatal care (BANC), and the updated World Health Organisation (WHO) recommendation of at least eight contact sessions with a midwife during pregnancy, the unacceptability of TB health information is still a challenge (Luta et al. 2024). Maternal TB was reported as the second most prevalent cause of maternal death, and in Limpopo, 62 cases of maternal death were reported in 2021, whilst the number of new cases of maternal TB increased from 297 to 531 in the same year due to the effects of COVID-19 (DoH 2023). The intervention programme developed in 2016 to increase access to ANC and acceptability of TB health information to improve maternal and child health has failed to achieve Sustainable Development Goal (SDG) 3 in South Africa (Mulondo 2020).

Pregnant women in the Vhembe and Mopani districts diagnosed with TB are at high risk from its complications due to their poor adherence to treatment and unacceptability of TB health education. Pregnant women should make ANC follow-ups to identify and manage any complications that might arise during pregnancy (Al Dughaishi, Seshan, and Matua 2023). In Limpopo, however, most women from very rural, remote areas live in extreme poverty, hindering access to ANC (Musakwa et al. 2020). In addition, the outbreak of the COVID-19 pandemic has aggravated the challenges associated with the accessibility, acceptability, and utilisation of ANC by pregnant women. Pregnant women with maternal TB require adequate and appropriate antenatal education regarding pregnancy and childbirth for the best pregnancy outcomes. This study, therefore, aimed to explore the reasons why pregnant women diagnosed with TB do not accept and adhere to the TB health information they receive at ANC facilities, from the perspective of the midwives who treat them. This information will help to develop strategies that can be used to increase acceptability of TB health information by pregnant women.

Materials and Methods

Research Design and Method

The researchers used a qualitative, explorative, and contextual design for this study. This design enabled the researchers to explore how midwives in the PHC setting perceive challenges associated with the acceptability of TB health information by pregnant women diagnosed with maternal TB. Midwives were chosen as the core participants for this study, as they interact with pregnant women. The setting for the study was the PHC facilities where the midwives interact with pregnant women diagnosed with TB (as per Creswell 2021).

Research Instrument

The researchers used an unstructured interview with the following central question: can you explain to me what could be contributing to the unacceptability of TB health information by pregnant women diagnosed with TB? The question was first tested on three participants from a selected PHC facility to ensure that it would yield the desired results and was unambiguous to participants. These three participants and the selected PHC facility for the pre-test were not included in the main study. The interview sessions were productive, as participants quickly understood the central and subsequent probing questions.

Research Setting

The study took place in ten selected PHC facilities in the Vhembe and Mopani districts of Limpopo, South Africa. These PHC facilities render maternal and child-health services, as well as the management of minor ailments and chronic conditions. These selected PHC facilities had an average of five midwives providing ANC and a high incidence of pregnant women diagnosed with TB.

Population and Sample

The population comprised midwives working in all PHC facilities the Vhembe and Mopani districts. The target group was midwives working in the ten selected PHC facilities in these two districts. The inclusion criteria were midwives with more than two years of working experience in the selected PHC facilities who provide ANC to pregnant women diagnosed and non-diagnosed with TB. Thirty participants were subsequently purposefully sampled for this study.

Data Collection Procedures

Data were collected by the three researchers/authors using unstructured interviews. The time and place of these interviews were negotiated with the participants, and a private room at the PHC facility was used for this purpose. First, the researchers explained to the participants the purpose, benefits, and risks of the study, any discomfort they might incur, the absence of remuneration, as well as the procedures to be followed in

conducting the study. Participants voluntarily signed an informed consent before their interviews commenced. Interviews were conducted in English between January 10 and April 30, 2022, and each session lasted 45 to 60 minutes. Field and observation notes were taken, and discussions were audio-recorded during the sessions, with the participants' permission. Data were collected until saturation was achieved at 26 participants, although interviews continued up to the 30th participant to confirm that there was no more new information to be obtained.

Data Analysis

Data collection and analysis occurred simultaneously as the researchers reflected on the raw data with the participants during the interview sessions. Recorded data were transcribed, and Tesch's (2013) eight steps were used for analysis, namely: become familiar with the data, generate initial codes, search for themes, review themes, define and name themes, produce a comprehensive report, and write final report. A general sense of the information was obtained by reading each transcript independently; then, the transcripts were reread, underlining significant points using different colours. The underlined statements were grouped, based on their colour coding, and given a theme. The process was revised, and related themes were merged. An independent coder reviewed the transcripts, who also developed themes and sub-themes. Themes between the independent coder and researchers were compared, similarities and differences were discussed, and a consensus was reached.

Ethical Consideration

The study obtained ethical approval from the University of Venda Research Ethics Committee, project number SHS/20/PDC/34/0511. Further study permission was obtained from the Limpopo Department of Health, Vhembe and Mopani districts, and the selected PHC facilities. Informed consent was obtained from participants before the commencement of the interviews. Involvement in the study was voluntary, as participants were allowed to withdraw from the study at any point. In the research report, code names were used to ensure anonymity and confidentiality of participants. Data were only accessible to the researchers and the independent coder.

Trustworthiness

Polit and Beck's (2019) criteria to ensure trustworthiness were followed: credibility, transferability, dependability, and confirmability. The researchers spent two weeks at each PHC facility conducting the following activities: seeking permission, identifying participants, establishing rapport, securing informed consent, collecting data, and data verification. Data saturation and dense description of design and methods would ensure transferability. Member checking/data verification was done with participants, and a literature review of previous studies ensured dependability, while triangulation of the data-collecting processes ensured confirmability.

Results

Of the midwives interviewed, twenty-five were female, and five were male. They ranged in experience from two to 40 years. Three themes, each with their own sub-themes, were generated from the raw data, namely organisational-related factors, patient-related factors, and personnel-related factors (table 1).

Table 1: Themes and sub-themes categorising the causes of unacceptability of TB health information.

Themes	Sub-themes
1. Organisational-related factors	1.1. Health services' focus on COVID-19 1.2. Long waiting times 1.3. Lack of resources 1.4. Lack of support received by pregnant women with TB and adverse cultural practices
2. Patient-related factors	2.1. Knowledge deficiency and reluctance of pregnant women with TB 2.2. Poor attitude of pregnant women with TB towards midwives 2.3. Financial constraints
3. Personnel-related factors	3.1. Negative attitude of midwives towards pregnant women with TB 3.2. Insufficient home-based workers as community caregivers

Theme 1: Organisational-Related Factors

The 30 participants identified various sub-themes associated with delivering healthcare services in PHC facilities that hinder pregnant women from following nurses' instructions. These sub-themes were: the national health services' focus on COVID-19, long waiting times, a lack of resources, poor support received by pregnant women with TB, and cultural practices.

Sub-Theme 1.1: The National Health Services' Focus on COVID-19

Most participants were concerned about the delivery of various healthcare services, which have drastically changed in the aftermath of the COVID-19 pandemic. The changes mentioned included the wearing of masks, social distancing, and frequent washing of hands, which are all foreign to pregnant women. Participants also expressed the point that pregnant women feared attending the PHC facilities as they thought they could contract COVID-19. One participant said:

> I believe healthcare services focused on the COVID-19 pandemic and neglected other services such as PMTCT [prevention of mother to child transmissions], TB, and other conditions. This was evidenced by all training and financial resources being channelled to COVID-19 services …. attendance for ANCs by pregnant women, both diagnosed

> and non-diagnosed, was poor, which could also be due to fear of contracting COVID-19 and poor TB service.

Another participant said: "We were also scared, and we were not free to interact with our patients. During consultation, everything was hurried. … Hey, it was hectic."

Sub-Theme 1.2: Long Waiting Times

Most participants indicated that the long waiting period resulted in pregnant women missing their transport back home, as buses move at specific times. This made the pregnant women reluctant to visit ANCs; hence, they could not receive or adhere to TB health information.

One participant said: "I see pregnant women delayed during ANC visits because of the 'supermarket approach' … [they] remain in queues for a long time. I think it is better to separate pregnant women and have them attended to by specific midwives." Another midwife similarly commented: "We, as midwives, should refrain from combining all clients at the clinic. … Hence, the long waiting time contributes to their discouragement in making follow-ups for treatment refills, [and] non-adherence, as they might not adhere to nurses' instructions."

Sub-Theme 1.3: Lack of Resources

Most midwives identified the unavailability of resources, such as pregnancy test kits and Baumanometer® machines for monitoring blood pressure, as some of the factors discouraging pregnant women from visiting ANC and accepting antenatal health education. This frustration was expressed by one midwife: "It is so frustrating! You find that there is no Baumanometer machine to check even the women's blood pressure, which is very important in monitoring the health status of pregnant women, so they often decide to stay home. Some visit private doctors, which affects the regular taking of TB treatment." Another participant said: "We are experiencing challenges regarding the availability of resources. It is difficult to deliver better services to pregnant women diagnosed with TB if you are running short of glucometers, pregnancy test kits, and others."

Sub-Theme 1.4: Support Received by the Pregnant Women with TB and Cultural Practices

Participants expressed various issues associated with support received by pregnant women with TB and cultural practices that discourage them from taking TB treatments regularly, thereby ignoring health information. Participants expressed their concerns as follows: "Pregnant women need support from family members in taking the treatment and attending ANC," and "You know, some pregnant women get support because relatives understand the disease; others do not, because they believe that TB is associated with 'tshiliso' [one is bewitched]."

Theme 2: Patient-Related Factors

The participants expressed various patient-related factors associated with an ineffective delivery of health services and the unacceptance of TB health information. Three sub-themes emerged: knowledge deficiency and reluctance, negative attitudes of pregnant women towards midwives, and financial constraints.

Sub-Theme 2.1: Knowledge Deficiency, Reluctance, and Ignorance of Pregnant Women

Participants expressed knowledge deficiency as a significant challenge that hinders pregnant women's acceptance of TB health education information, leading to poor maternal and neonatal outcomes. One participant said: "I see a lack of knowledge on the issue of TB screening and testing during pregnancy as a major contributor to the non-acceptability of TB information. The majority do not come in time to ANC because they are afraid to be tested for HIV. Most people associate TB with HIV!" Another participant stated similarly: "Sometimes, women do not want to present early at ANC services because they do not want TB screening; they are reluctant ... especially testing for HIV."

Sub-Theme 2.2: Negative Attitude of Pregnant Women Diagnosed with TB Towards Midwives

Most participants indicated that some pregnant women diagnosed with TB have negative perceptions of nurses; hence, their reluctance to accept TB health information from the nurses. As expressed by one midwife, "[S]ometimes women are not free to utilise our services. We, nurses, are different. Some of the people, I mean midwives, are harsh, and I think these women often feel disrespected, as some are older than these midwives. All these factors may discourage pregnant women from coming to clinics for TB health information." One participant expressed the behaviour of pregnant women as follows: "Some of the issues hindering pregnant women from following nurses' instructions are because of their emotional stress, especially if the pregnant woman is not ready for the pregnancy. ... This usually makes women not to visit the ANC immediately." Another midwife said: "You know what? Women diagnosed with TB develop a certain attitude; you will find that she is no longer coming to collect her treatment."

Sub-Theme 2.3: Financial Constraints

Most of the pregnant women in the selected PHCs are reported to be from remote villages and lack the money for transport to go to the clinic for treatment refills; this was noted as a major challenge. These women cannot walk more than five kilometres to the nearest PHC for ANC. The following quotes supported this point: "We serve clients from low socio-economic status, so you may find that they cannot go to the clinic for education, ANC, and treatment refills because they lack money for a taxi. … Although mobile services are available to resolve some financial issues in villages

without clinics, these services go once in a long time! And since the COVID-19 pandemic … they no longer go regularly," and "Almost all of the pregnant women are from deep rural areas; hence, they have to travel far for ANC and to get treatment. Failure to access clinics leads to poor adherence to TB treatment."

Theme 3: Personnel-Related Factors

Healthcare providers, especially midwives, are essential in rendering maternal and child healthcare services. Despite this, some pregnant women do not access the PHCs. From the data, the following two sub-themes emerged as reasons for pregnant women's non-attendance: poor attitude of midwives towards women, and lack of home-based workers as community caregivers.

Sub-Theme 3.1: Attitudes of Midwives towards Pregnant Women with TB

Many participants indicated that COVID-19 has affected midwives' attitudes regarding the delivery of maternal-care services. "[W]hen it comes to information regarding screening and testing, nurses ask pregnant women and say: 'Are you having TB, or anyone in the family?' One makes a tick or a cross and passes! No TB screening is done during ANC. This is a very critical issue! The algorithm for screening is there. I think this also contributes to the underutilisation … of ANC health education by pregnant women." Another participant supported this view: "During the peak periods of COVID-19, we were no longer giving antenatal health education; we gave those coming for treatment refills their packages, and [they] left. Even we nurses were afraid of COVID-19!" Another participant said: "I think pregnant women, diagnosed and non-diagnosed with TB, regard health education as a waste of time!"

Sub-Theme 3.2: Lack of Home-Based Workers as Community Caregivers

Participants expressed issues regarding the interruptions of door-to-door services for home-based workers in the community during the COVID-19 pandemic: "COVID-19 interrupted door-to-door services for home-based care as visitation was discouraged and there was a strict lockdown. Remember, these home-based workers did not have protective clothing." Another participant said: "Home-based workers are there, but they just walk in the villages, concentrating on the sick and those who cannot help themselves. They no longer give TB health education!" One of the participants noted: "The government may assist with campaigns, but due to COVID-19, we are no longer provided with home-based workers as they are key in disseminating information to the community members. They encourage pregnant women to attend ANC regularly and adhere to the treatments."

Discussion

This study highlighted several concerns that make it difficult for pregnant women diagnosed with TB to accept the health information given by midwives. It was noted that during the pandemic, the delivery of healthcare services focused primarily on

combating the spread of COVID-19. Other health programmes, such as those for TB, were neglected, which also affected the delivery and acceptance of health education by pregnant women diagnosed with TB. These findings are similar to those from a study conducted in Nigeria, which revealed that implementing government policies for the COVID-19 pandemic disrupted the national TB programme (Okaisabor 2021). This, therefore, means that TB programmes were not prioritised, thereby leading to inadequate screening and monitoring, non-adherence to treatment, and minimal TB information sharing (Oga-Omenka et al. 2023). A study conducted in Nepal revealed how COVID-19 disrupted other health programmes, like diabetic clinics, where the delivery of healthcare services did not focus on diabetes mellitus as one of the conditions affecting pregnant women (Singh et al. 2021). The findings of the study could affirm that poor dissemination of TB health information might be associated with inadequate implementation of the TB programme, which could have led to maternal and neonatal complications, such as low birth weight. Similarly, in 2020, reduced adherence to TB treatment and advancement of this disease were associated with poor dissemination of TB health information among pregnant women (Gopalan, Misra, and Misra 2020). Williams et al. (2022) systematically reviewed 81 studies across 20 countries and discovered a significant reduction in the utilisation of healthcare services and acceptability of health education information, leading to unmet needs of those with non-COVID-19 illnesses.

Long waiting times at healthcare facilities, caused by a "supermarket approach," where patients with different ailments and conditions are treated together on a daily basis, were also identified as an impediment to the utilisation of ANC by pregnant women diagnosed with TB. A study by Williams et al. (2022) linked long waiting hours to reduced quality of care. In addition, the results showed that in these situations, healthcare workers tend to rush through consultations and education programmes, and may as a consequence provide poorer quality care to women. It was noted with concern that rushed counselling in relation to the condition and its management led to poor adherence and follow-up.

The long waiting hours are also aggravated by the lack of resources, as perceived by the participants. Midwives mentioned a lack of working tools, like pregnancy test kits and Baumanometer machines, as hindering the successful implementation of the ANC protocol among pregnant women. In a study conducted in Pakistan, it was identified that limited resources, which included a lack of monetary investments in capacity building of healthcare professionals, had a massive impact on the quality of healthcare provision, which was exacerbated by the poor quality of the physical environment (Hameed et al. 2022). Conditions such as these also affect the accessibility and acceptability of ANC and TB health education by most pregnant women diagnosed with TB.

Participants were concerned about pregnant women's low levels of knowledge related to their conditions, notably ANC and related TB services. Pregnant women diagnosed with TB who lack health literacy and are ignorant of TB knowledge may not understand

the need to complete the full course of medication to avoid treatment failure. This could further worsen maternal and neonatal outcomes. Similar studies conducted on the effectiveness of health education for pregnant women with TB showed that treatment adherence was the highest among those who were literate about the disease (Charalambous et al. 2024; Sabaghinejad, Baji, and Vejdani 2021). In these studies, pregnant women lacking knowledge regarding TB health information defaulted on their TB treatment, which led to 68% reported neonatal complications, such as low birth weights, small size for their gestational age, and persistent respiratory infections (Sabaghinejad, Baji, and Vejdani 2021).

Poor attitudes of healthcare professionals and their breach of patient confidentiality negatively affected how PHC settings are utilised (Chewe and Khunou 2023). In the present study, participants perceived that some pregnant women felt embarrassed about their status, and negative interpersonal relations with the midwives hindered their acceptance of TB health education. These could also affect the provision of adequate, quality health care, and aggravate their reluctance to access PHC facilities for ANC. Similarly, a study on obesity among pregnant women diagnosed with TB demonstrated that this group of individuals felt stigmatised and not welcomed in the community, which eventually lowered the level and quality of their interactions with the health professionals, ultimately affecting their utilisation of the ANC (Husein, Kumara, and Kriswoyo 2021; Niyas, Karimi, and Kavosi 2018).

Participants furthermore expressed that most pregnant women diagnosed with TB are from a low socio-economic status and, hence, living in a state of poverty and lacking access to TB health information. The low socio-economic status of some pregnant women also resulted in inadequate utilisation of PHC facilities due to a lack of funds for transport; this worsened during COVID-19 when many people lost their jobs. Similarly, in Uganda, most pregnant women diagnosed with TB failed to access healthcare facilities for treatment refills and missed their ANC appointments due to the lack of money for transport (Nidoi et al. 2021). Some pregnant women diagnosed with TB abandoned treatment, leading to drug-resistant strains and increasing transmission. A study conducted in China revealed that pregnant women diagnosed with TB experienced financial constraints, which resulted in failure to access healthcare facilities for TB health information (Zhang et al. 2020). These authors also noted a high rate of multiple drug resistance tuberculosis (MDR-TB) among pregnant women diagnosed with TB, with increased transmission of TB among members of households. A study in Tehran, Iran, identified that the utilisation of healthcare services was influenced by whether the patient had medical insurance or not (Singh et al. 2021). Access to public health insurance in Tehran has led to more hospital usage by pregnant women diagnosed with TB, while pregnant women diagnosed with TB from low-income and poor states could not access PHC facilities and health education (Singh et al. 2021). Their study concluded that the socio-economic status of pregnant women diagnosed with TB affected the accessibility and acceptability of TB health information.

Home-based workers play a vital role in the healthcare sector, as they act as a bridge between the community and PHC services by educating pregnant women diagnosed with TB. These pregnant women are provided with support and TB information within their communities, so that they understand and adhere to TB treatment for good pregnancy outcomes. These workers, hence, assist in improving access and acceptability of TB health information to ensure treatment adherence and prevent TB complications that might arise. COVID-19 lockdowns, however, had a negative impact on their participation in TB control programmes, as the dissemination of TB health information during door-to-door visits was unavailable. This significantly affected the accessibility of TB health education information for some of the vulnerable in the communities, including pregnant women. Kasjono et al. (2024) report that home-based workers, who are also known as directly observed treatment supporters (DOTS), experience serious TB threats when expected to conduct health education door-to-door to families with women diagnosed with TB. The facilitation, development, and improvement of this service, however, could help in the identification of TB contacts, potential TB symptoms, and referral for screening in the PHC facility.

Conclusions and Recommendations

This study deliberated on the organisational, personnel, and patient-orientated factors as perceived by midwives regarding the unacceptability of TB health education by pregnant women diagnosed with TB. The delivery of health information has been affected by the outbreak of COVID-19, as the pandemic disrupted the functioning of many healthcare facilities, including the TB health programme. Health services were seriously affected by the extra work needed to cope with the new disease. This is due to the fact that sharing TB health education information between midwives and pregnant women is imperative to enhance acceptance, treatment adherence, and early health-seeking behaviour. This study recommends that midwives intensify health education to curb TB-related diseases. Doctors, nurses, and community stakeholders, such as religious and traditional leaders, could champion health initiatives to address challenges such as a lack of knowledge about TB and non-adherence to TB treatment, so as to improve the quality of life among pregnant women.

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