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Subjective experiences of stigma related to tuberculosis: A qualitative exploration at peri-urban, Bangladesh

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ABSTRACT

Background: Stigma related to tuberculosis (TB) is still a global public health challenge. However, only a few attempts were found till date that explored the stigmatization experiences of pulmonary TB patients at the peri-urban context. This study provides a grounded description on the stigmatization experiences of TB from the perspective of TB patients and community people at resource-poor peri-urban settings in Bangladesh.
Methods: The study was conducted in two districts of Bangladesh under Bangladesh Rural Advancement Committee, a non-governmental development organization (BRAC) TB Control Programme. Study participants were chosen conveniently. In total, 17 in-depth interviews with pulmonary TB patients (Nine female and eight male) and five focus group discussions with community people (three female and two male) were conducted. Data were audiotaped, transcribed into English, and coded accordingly. Finally, the thematic analysis was used to analyze the data.
Results: The findings highlight that TB stigma is still prevailing in the community. Many of the TB patients and discussants revealed about the isolation of eating utensils, drinking glasses, and sometimes bed by family members due to fear of TB transmission, especially during the first 2 months of diagnosis. For men, concealment of disease was explained as fear of being shunned. For young women, TB preventing one's eligibility for marriage was the main reason for hiding their TB diagnosis. Anticipated avoidance from family members, especially children due to fear of transmitting TB was commonly found in both male and female TB patients. Change in behavioral and psychological aspects, the problem in the family and conjugal life, avoid sexual intercourse, inability to work, lower self-esteem, and discrimination in workplaces, as well as public Directly Observed Therapy, Short course facilities due to TB, were also documented in this study. Frontline health workers were found to be suggesting incorrectly about the route of TB transmission to some of the TB patients.
Conclusion: Stigma exists in the personal life and social context of the TB patients which also adversely affects their psychosocial aspects of life. The information gleaned from this study will be useful for effective TB control strategies in Bangladesh.

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Introduction

Tuberculosis (TB) is a deadly communicable disease worldwide [1]. It has been found to be one of the most stigmatizing conditions across South Asia and within Bangladesh [2]. Despite having successful Directly Observed Therapy, Short course (DOTS) strategy, it is estimated that around 5% of the global undetected cases are within Bangladesh annually [1]), perhaps due to lack of knowledge, negative attitudes, and an unwillingness to seek care particularly from DOTS centers [3]. Several studies conducted with TB patients, community people, and healthcare providers have reported

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TB stigma to be a major contributor to the delay in TB case detection and treatment [4,5]. Hence, it is necessary to elucidate stigma as a complex process [6] and to focus on the biosocial perspectives of TB, not only on the biomedical determinants [7].

Studies in Bangladesh showed that TB patients conceal their diagnosis status from community people mostly because of shame and fear of being avoided [8]. Alongside, studies have also reported that TB patients often face ostracism, rebuke, and denial both by the family members and community people because of TB [9–13]. However, the effect of TB related stigma is more in women in terms of marital prospects [13,14]. Studies in India [9] and Ghana [15] also supported these findings.

Discrimination in the workplace such as ceasing from work, requested to stay away from work was also not unlikely in the context of Bangladesh as a result of TB [16]. Moreover, TB also adversely affects interpersonal and social relationships and has an adverse impact on the quality of life (QoL) of the patients [13,17,18]. Problem in marital life, risk of divorce, and avoiding sexual intercourse during treatment period are also not uncommon in different patient and community-centered studies in Bangladesh [2,14,16,19] which can fuel TB stigma [17,20]. Likewise, studies in Bangladesh also shows loss of status, interrupted behavioral and psychological wellbeing among TB patients as a consequence of TB [12,13,21].

Research, though in other settings, revealed TB related stigma as a key barrier to adequate TB screening rates [22–24].

Therefore, qualitative research was undertaken to answer the question, “what are the subjective experiences of stigma and its role in care-seeking for TB among TB patients at peri-urban Bangladesh?” This paper only focuses on describing the experiences of TB related stigma. This study was conducted while in candidature for a Master of Public Health degree at the James P Grant School of Public Health, Bangladesh Rural Advancement Committee, a non-governmental development organization (BRAC) University.

Materials and Methods

Study approach

Qualitative approach was thought to be appropriate depending on the exploratory nature of the study.

Study setting and duration

The study was conducted in four peri-urban areas (Rasulpur, Kamrangirchar, Vagalpur, and Tongi) of two districts (Dhaka and Gazipur) in Bangladesh where BRAC operates its community-based TB control programme. Peri-urban areas were chosen because, to our knowledge, this is probably the first study being conducted here to answer the above research question. Nevertheless, the peri-urban area is imaginary in nature, which also contains a huge number of populations suffering from TB. The overall duration of the study was from September 2015 to January 2016.

Study population

The study population were pulmonary TB (PTB) patients, PTB patients who completed treatment within the last quarter (August 2015–October 2015), and community people of above four peri-urban areas of Dhaka. PTB patients were selected because irrespective of context, other studies made evident that PTB patients face higher stigma than other type of TB patients [16,25,26]. Recently treatment completed PTB patients were also included to understand the broad picture of stigma in the whole treatment period. In addition, community people were chosen to achieve community views and have a triangulation with patient perspectives.

Inclusion and exclusion criteria

For selecting TB patients, typical inclusion criteria were (a) new smear-positive PTB patients (b) age ≥18 years, and (c) patient who recently cured within the last quarter. Community people were chosen based on two criteria, such as (a) age ≥18 years and (b) no previous history of TB. This study excluded relapse and multidrug-resistant TB patients.

Sampling technique

Study participants such as PTB patients were selected from the TB register of respective peripheral DOTS centers. Due to the short time period, a convenient sampling procedure was used for selecting the study participants to address the research question. Transect walk, informal discussions in tea stalls and local markets, and collaboration with BRAC community health worker were also sought in order to include community people. After conducting 17 in-depth interviews (IDIs) (nine female and eight male) with PTB patients and five (three female and two male) focus group discussions (FGDs) with community people, it was felt that an adequate data saturation level had been reached.

Study tools and data collection procedure

Data were collected from 18 November 2015 to 3 December 2015 via single, audio-recorded, face-to-face, IDIs, and FGDs using semi-structured guidelines. Both IDI and FGD techniques were simultaneously used in this study. On the one hand, IDI helped to get detailed information about the stigmatization experiences of TB from the perspective of TB patients. On the other hand, FGD allowed to understand community perspective about TB related stigma in the peri-urban slum context. Prior to data collection, tools were pre-tested and guidelines were revised again. Responses to the IDIs and FGDs were made through audio recordings. All the interview and discussion sessions were conducted solely by the lead researcher, either in participants' home or in the BRAC local offices of respective areas without the presence of anyone, except the participants and the researcher. The overall duration of the IDIs and FGDs was between 45 and 50 minutes.

Data management & analysis

Data were transcribed verbatim into English by the researcher, directly from the audio recordings. Moreover, to ensure data quality, field notes were checked and merged with the transcriptions when the researcher experienced interruptions or unclear conversation while listening to the audio recordings during transcription. After that, data were familiarized, managed, organized, and manually coded by the lead researcher with the help of three co-author analysts trained in qualitative research methodology. To avoid confusions while assigning a chunk of texts under codes and sub-codes, all the analysts met and after reading, re-reading and reviewing codes and sub-codes were assigned. Deductive approach was applied and quotations were retrieved accordingly from the appropriate text segments. Side by side, the inductive approach was also used for emerging codes. After that, a data display table was developed based on different themes and sub-themes. Then coded segments were segregated under related themes and sub-themes with the help of the co-authors. Overall, three co-authors and lead researcher analyzed and interpreted the results. Finally, thematic analysis was performed using the "contrast and compare" method rooted in grounded theory [27]. Various strategies were adopted to ensure trustworthiness and rigor of the data. Interviews and group discussions were closely supervised and randomly observed by two of the co-authors during fieldwork. Moreover, peer debriefing sessions were held every day among team members which helped to induce further ideas, probes, and to modify the guidelines.

Ethical Consideration

Ethical approval was obtained from JPGSPH, BRAC University. Written informed consent was taken from each respondent after clarifying them about the study objective, risk, benefit, and voluntary nature of their participation in the study. Thumbprint was taken from those who cannot sign. In addition, permission was taken before audio recording prior to the interviews. Right to withdraw at any time and the authority of not answering any question at any point were also conveyed to the respondents. Confidentiality was ensured by not disclosing the identity of respondents to any third party. In addition, the study guidelines were anonymous and the interviews were conducted in a private setting to provide respondents with their rights to necessary privacy and breathing space in cases of sensitive questions.

Findings and Discussion

The findings presented below are organized into three broad themes. The first theme explains the stigmatization experiences of TB patients. The second theme briefly presents the nature and reasons of TB related stigma. The last theme under different sub-themes illuminates how TB stigma contributes to behavioral change, inability to work, family, conjugal and sexual life, structural discrimination, and lower self-esteem. This section also summarizes and discusses the main findings presented below with evidence from similar context and necessary implications.

1. Stigmatization experiences of TB

Almost all of the participants shared their diagnosis with family members, choosing not to share with friends and neighbors mainly because of shame and fear of being avoided. As mentioned by one of the male TB patients:

> *It's a bad and also a shameful disease. You can't share this to anyone. I have tried my best to hide it, I didn't share this to anyone because if I told them then I could have faced problem in talking to them. All the members of my family and some close relatives knew that I had TB* (IDI 15: LN 23, 31–35).

However, two of the respondents revealed that they were badly treated by their family members when they came across their disease status. One of the female TB patients commented:

> *My younger sister often slanders me saying that, this disease was previously present in your husband's (previous TB patient) blood, it is not present in no one of our family member's blood. Even my mother also believes that* (IDI 6: LN 39–42).

Similarly, only very few [2] of the respondent's friends and neighbors reacted well when they heard about a TB diagnosis.

Studies conducted in Bangladesh, Uganda, and Haiti confirmed similar findings around the sharing of a TB diagnosis due to self-reported stigma such as anticipated problems and discriminations [19,28,29]. Moreover, such stigmatization experiences exclude TB patients from the society and create mental distress among patients as well as family members [30].

2. Nature and reasons of TB stigma

Different forms of the stigma associated with TB emerged from the interviews with the ongoing and recently cured PTB patients as well as a group discussion with the community people.

A large majority [9] of the respondents revealed that they use separate eating utensils and drinking glasses, either willingly or unwillingly, because of fear of TB transmission. Such kind of attitudes was noted mostly in the first 2 months of the disease. However, in almost all of the cases, such precautions were reported to be harnessed by frontline health workers. One of the male TB patients spoke:

> *My wife said if they stay near me, they could have the disease. She also separated my eating plate and drinking glass. Now I sleep alone. The apa from BRAC also said similar things to us when I went there (BRAC)... They said disease is not self-confined, it can spread. However, they think that it is necessary at the same time* (IDI 1: LN 38–39).

Similarly, in all FGDs, it was noted that family members of a TB patient would separate their utensils and sometimes bed and some participants justified such practices by saying that, the cough or blood can enter into others body through this. FGD participants also agreed that sometimes TB patients face ostracism, rebuke, and denial both by family members and community people because of TB. One female community member said:

> *Some people tell TB patients to talk from distance and stop them to come closer. If a TB patient coughing up in front of anyone then they are scolded badly. Some of them become harsh and say, why you don't wear mask, if you want to sit with us then you have to use mask or use handkerchiefs* (FGD 4: LN 2–12).

This finding is consistent with similar studies conducted among TB patients in Bangladesh, India, Pakistan, and Tanzania where such misperceptions were also observed [9–13], which ultimately indicates the poor level of knowledge that persists in the society followed by reduced mental wellbeing of the TB patients. Notwithstanding, frontline health workers still lack correct information on TB transmission and their approach of using people's fear to increase treatment compliance and reduce TB transmission also requires intervention, otherwise this can reinforce TB stigma [2]. However, it was not possible to validate this finding with the health workers, as it goes beyond the study objective.

Seven out of seventeen TB patients intentionally tried to conceal their disease status from neighbors and friends due to fear of being shunned, where the majority of these participants were male. Such concealment among men was also identified by one of the community-centered studies in Bangladesh [8]. For young women, TB preventing one's eligibility for marriage was the main reason for hiding their TB diagnosis. One female participant said:

> *If any unmarried girl had TB then her family try to hide this news (from others) and help her having the medicine without informing (others). They become worried thinking that if this news is flashed within the community then it could be difficult for them to get the girl married* (FGD 4: LN 24–29).

Since, in our study, all female TB patients were married though it was not possible to triangulate this finding with unmarried female TB patient's experience. Another female TB patient reported that she did not want to disclose her disease status to her neighbors because of the fear of being avoided; however, it was difficult for her to maintain concealment. However, of all the female TB patients interviewed, one revealed that if anyone from the neighborhood discovered that she has TB, it would have had a negative impact on marriage prospects of her adult children's, including daughters. According to the interviewee:

> *My son and daughter are quite adult. A lot of proposal is coming for them. I thought if I disclose this matter to my neighbors, it could be harmful for me as well as for my children. Their marriage can be broken. Since some of my neighbors asked me couple of times, though I told them I have fever and pneumonia* (IDI 9: LN 25–29).

However, reduced marriage prospects were reported to be higher among female TB patients in comparison to male, as mentioned by two female community members in two FGDs. Those two participants stated:

> *If any women got TB then all the family members try to hide the thing. They become afraid thinking that if anyone from outside came across that news then the girl wouldn't be able get married. Such things are not much seen among men* (FGD 4: LN 55–57).

> *I heard of a girl in our community who have TB. She was about to get married... Everything was fixed, even the date. Someone from outside disclosed to the groom's family that the girl is suffering from TB. After hearing that the groom's family have denied* (FGD 1: LN 3-4, 105–108).

The social vulnerability of women in terms of marital prospects due to TB was also discovered by another community-based study from low-income settings in Bangladesh [13,14], as well as patient-centered studies among Indian [9] and Ghanaian TB patients [15]. Research in Kenya has found it as a factor that can delay care-seeking of women [31] and stimulate them to seek care from unqualified healthcare providers instead of going to DOTS services [32,33].

A good number of the respondents [7] interviewed intentionally maintained some distance from the family members, especially children, and friends due to fear of transmitting TB. This is shown here:

> *One day my son told me, abba (father) I shall not eat foods from your mouth. I felt very sad after hearing that... I thought that in myself. But when I thought of it alone, I understood, what my child is saying is right. Since then I tried to keep some distance from my son* (IDI 3: LN 59–67).

This finding was made evident by other studies in Nepal and Ghana among TB patients and community people where perceived communicability of TB was found to be a significant form of TB stigma that posed considerable barriers to TB control efforts in these countries [15,34,35].

3. Consequences of TB stigma

3.1. Behavioral and psychological change

A good number [6] of TB patients reported having some sort of behavioral and mental change such as: feel irritated, have become reluctant to talk to others, talk harshly with family members, and feel mentally depressed as a result of their disease. While explaining the suffering of TB, some of them compared their behavioral and psychological states with the previous disease (TB) free life. One female TB patient described:

> *I feel so irritated that I couldn't tolerate others talking. I remain silent all the time...This disease changed my behavior. I became arrogant as a result. I used to quarrel more with my husband. But he understands me. I am more confined to home now. I don't talk much. Sometimes it seems like time isn't moving* (IDI 2: LN 8–73).

Such incidences were also supported by one male participant in one FGD where he raised the issue of restriction in movement as a consequence of TB. He mentioned:

> *TB patients become very calm and non-inquisitive which isn't similar with normal people. They also feel that people might harass them and stop communicating with them. These kinds of thinking create restriction in movement of a TB patient* (FGD 2: LN 116–118).

Change in behavioral and psychological aspects stemming from TB was also documented by other studies in Bangladesh, India, and Pakistan among men and women [12,13,21,36,37] which in turn decreases the QoL of the TB patients [17] and eventually can result into poor treatment adherence.

3.2. Inability to work

Very few [2] male TB patients said they have a financial crisis in their families as a consequence of TB. However, one of the male TB patients spoke about receiving financial support from relatives and neighbors. Another TB patient was relatively emotional during the interview and said his inability to provide support to his family members is due to unemployment caused by TB. The respondent said:

> *I used to work as a painter at different houses. My problem was so severe that I couldn't tolerate the smell of the paint. That's why I quitted work. Now you see, I am unemployed for the last 8 months... Besides, if people in my workplace see me coughing then what will they think? Now my wife has to work outside. She didn't have to work when I was fine. But now she had to, we have no other options left* (IDI 3: LN 27–36).

On the other hand, one female TB patient said her inability to work is due to TB as well as her lack of contribution or inability to perform her responsibilities to her family premises.

The financial impairment of TB in lower-income families of Bangladesh, especially on male members, is significantly distressing [13,14] which nonetheless adversely affects the wellbeing of women and other family members.

3.3. Disruption in family, conjugal, and sexual life

Several [7] TB patients, especially females [4] reported problems in their family and conjugal life such as: quarreling with sister, father-in-law who abstained himself initially from going to her house, and left alone by husband partly because of fear of having TB. As mentioned by one female TB patient:

> *My husband doesn't stay here with me. He went to his village home with my daughter when my symptoms started...Now I have no one to take care of me except my parents. When I was diagnosed with TB, he wasn't here with me. I called him, told him to come and see me with my daughter but he refused* (IDI 8: LN 38–41).

One divorced female TB patient revealed that, her husband ridiculed her, and that he tried to connect her disease with her sin and also as a result of giving him divorce. For male, such tensions arouse because of protecting their family members from TB transmission. One male TB patients revealed:

> *I am suffering from a problem that's why I sent my wife in my village home. I thought she could get affected by the disease from me. On the other hand, she also didn't want to stay here with me. So, I sent her home after two days of being diagnosed* (IDI 16: LN 37–39).

Moreover, the threat of separation was reported by one of the male respondents. Similar findings were also evident in three of the FGDs where, in one case, the female participant herself explained her real-time experience of her brother who was a TB patient, saying:

> *The day my brother was diagnosed with TB, next day his wife left him. She said, it's not possible for me to live with you, I am going to my father's house. My brother has cried a lot grasping his hands even legs but she didn't listen to him and left with their teenage daughter. But now my brother is fine. He became cured after taking treatment. Now her wife wants to come back to his family but he doesn't want his wife in his life again because she left him in his bad days* (FGD 4: LN 32–40).

However, two types of explanation were identified by the discussants about whether the adverse consequences are higher among men and women. In all FGDs, a good number of the participants reported, women face more difficulties with TB because they are dependent on other family members, have no income, and had to stay at home. For instance, one female participant said:

> *Females are more vulnerable because of TB. They are less powerful, they have no voice. If any women have TB, everybody, inside house or outside house teases her. Even the husband. It's because they are dependent to males* (FGD 1: LN 6–9).

On the contrary, those who revealed opposite stigmatization experiences justified this finding depending on the increasing movement of males in the outside environment. One of the male participants commented:

> *Males mostly face this kind of attitudes because most of the time they stay outside. Females mostly stay at home with family members, that's why this kind of attitudes is less with them* (FGD 2: LN 47–49).

This result mirrors in other recent studies in Bangladesh and Ghana where spousal problems even risk of divorce due to TB was documented [15,16,19]. This can result in demotivation in treatment adherence.

However, the FGD participants might have correctly identified the difference in gender roles, socio-cultural constructions, and inequity issues responsible for such stigmatization. Notwithstanding, female TB patients were found to suffer mostly in this regard. On the contrary, we cannot oversee the impact of TB stigma on male TB patients as well.

Three married respondents maintained distance in sexual intercourse with their partner as precautions during the treatment period. However, in two of the cases, a frontline health worker was the person who suggested to maintain such distance. Among these three, two female respondents abstained themselves from sexual contact for 6 months and 3 months, respectively. One of female TB patient who was recently cured depicted:

> *Apa (female health worker) told me not to have sex with my husband for three months. I did what they have said and didn't let my husband come near to me. We did sex after three months* (IDI 7: LN 78–81).

Surprisingly, one male TB patient reported, he used a condom for the first month of taking DOTS he thought it would prevent transmission to his wife. He said:

> *Since I have the disease, though my wife can also be affected by the disease as I enjoy sex with her. I thought of it quite a lot…And after getting this disease I used condom while having sex. I thought my wife could have the disease because of that. Nothing is impossible. Because of this fear I have used condom for first one month* (IDI 3: LN 127–135).

Avoiding sexual intercourse during the disease period was observed in other studies in Bangladesh [2,14], which indicates poor knowledge about the TB transmission mechanism among TB patients and CHWs [17,20]. It is ironic that these messages are going against National Tuberculosis Control Programme (NTP) messages.

3.4. Structural discrimination

In total, seven interviews and three FGDs documented structural discrimination either in work station or in health facility as a result of TB. The majority [4] of them, who worked in the garment factories hid their diagnosis because they feared that if the supervisor knew that they had TB, they would not keep them at work. For a similar reason, some of the TB patients did not disclose their true diagnosis to their workstation, instead they told they have some other health problems. A female TB patient quoted:

> *…I have started to work in a garment after two months of my disease but I didn't inform them. I was afraid thinking that if they knew I have TB then they won't give me this job. They don't keep TB patients at work because of fear of transmission. They also say that it's a loss for them because TB patient can't work like others…I am worried, how my life will pass! I have family, I have children, and I have to pay the rent, that's why I lied* (IDI 4: LN 91–97).

However, only a few reported that they did not face any discrimination when their disease was disclosed. Likewise, FGD participants revealed, TB patients are often terminated from their job and suffer shunning in their workplace. One of the male community people said:

> *Some owners terminate workers when they knew that someone have TB. That's why people used to hide their disease status and tell only to family members and close friends* (FGD 2: LN 130–132).

Similar troubles in workplaces were identified in studies conducted in Bangladesh and Nepal where TB patients were neglected [16] and in some cases terminated [38] from work due to TB that may result into financial catastrophe.

Two female TB patients underwent discrimination in a tertiary health facility by nurses because of not using masks. As stated by two of them:

> *…I was admitted in Dhaka Medical College Hospital. One nurse always told me harshly, why you don't wear mask!...Then the next day when I went to bring medicine she told, why did you come here to take medicine, go send someone else, aren't there anyone else with you? Then I have taken the medicine from a distance and left the place. I couldn't explain how I felt, I felt like a dirt* (IDI 13: LN 53–57).

> *One apa (female nurse) from Dhaka Medical tested my cough…When I went there to bring my report she said, go, bring a photocopy of that report. She said nothing about whether the report is okay or*

> *not. I then brought back the photocopy but the copy was a bit over inked. Soon after that she said, look, your luck is like this copy of this report, you have TB…* (IDI 6: LN 61–80).

Others reported negative experiences caused by health workers towards TB patients [34] which might be fear of becoming infected. Evidence from urban Ghana identified similar findings where health workers felt uneasy, avoided, or badly treated patients, and had fear of infection while interacting with TB patients [39].

3.5. Lower self-esteem

Self-esteem of the TB patient was found to be lowered by experiencing teasing at home and unable to contribute to family, according to some [4] of the TB patients. One female respondent said:

> *One of cousin frightened me quite often (because of TB) … She said, I shall die soon. I become afraid. What can I say? I thought if death is written in my fate then its' okay* (IDI 4: LN 46–48).

Alongside, one female FGD participant also uncovered reduced self-esteem, exacerbated by out of home teasing due to one's emaciated physical appearance while going to a CHW for taking DOTS. She said:

> *TB patients lose their weight rapidly. Due to this, some people tease them by calling Heroinchee (heroin user) and sometimes thief. I have heard people from my house saying this to one TB patient when he has come to take TB medicine early in the morning from Shebika apa (female health worker)* (FGD 4: LN 62–64).

Two multicounty studies in other settings including Bangladesh have also found the loss of status of the TB patients as a consequence of TB stigma [13,21]. This surely have implication on the reduced mental and social wellbeing of the TB patients followed by poor adherence of treatment.

This study is also subject to limitations. Reporting bias is a concern, as stigma is hidden as well as a complex issue to explore, and the TB patients might feel uncomfortable while eliciting information regarding their experiences. However, proper rapport, prompt, and parallel use of interviews and group discussions lead us to believe that it was limited. Finally, given the lower-income setting and context of this study, findings may not be generalizable to all peri-urban areas of Bangladesh.

Based on the findings and implications of this study, some recommendations can be made. The TB control program should give more emphasize primarily on educating the peri-urban poor through building community support groups to dispel stigma and misconceptions related to TB. As TB was predominantly considered as a disease that must be hidden, so NTP should look for necessary ways to ensure confidentiality of the TB patients irrespective of gender, which may lead to an increase in the social standing of TB patients and their families as well as reduce anxiety and fears. In our study, frontline health workers were found to be incorrectly suggesting the TB patients about TB transmission mechanism. Necessary training and rewarding mechanism could be introduced to foster the motivation of health workers and thereby changing their attitude. In this regard, under the stewardship of NTP, BRAC can convey the basic information about TB transmission routes to frontline health workers through refreshers training to fill this knowledge gap. Popular theatre could be one potential option to broaden the reach of TB transmission-related information [40] in these circumstances. Alongside, since engaging unregulated garment companies is an arduous task but NTP, with other TB control partners can introduce orientation programs in such factories to eliminate the misunderstandings related to TB. Finally, evidence of TB stigma is sporadic in peri-urban contexts; therefore, further research should be conducted in a larger scale underscoring the role of TB stigma in care-seeking of TB patients.

Conclusion

Stigma related to TB is evident within the population studied. It also points out that stigma adversely affects the overall psychosocial aspects of TB patients. The messages of the frontline health workers are going against NTP messages which can fuel TB stigma and negatively influence care-seeking of TB patients. The information from this study will be useful for effective TB control strategies in Bangladesh.

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Author contributions

SP, SH, and MR conceived and designed the research, SP, AA, SN, and RA conducted and coordinated the research. SP, AA, SN, and RA analyzed and interpreted the data. SP, AA, MR, SN, RA, and SH wrote and critically reviewed the paper.

Availability of data and material

The data generated and analyzed during the current study are archived in the James P. Grant School of Public Health' data repository and are available on a reasonable request to James P. Grant School of Public Health' authority (Director of Research, Dr. Malabika Sarker, at malabika@bracu.ac.bd).

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