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Disciplining sexual and reproductive behaviour of tuberculosis patients in Bangladesh: a mixed method study exploring divergent messages

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ABSTRACT: *There is scant information on the instructions provided by health workers to patients diagnosed with tuberculosis and the implications these instructions have for sexual and reproductive health and rights and tuberculosis control in Bangladesh. This paper aims to draw attention to tuberculosis control guidelines and information dissemination practices that may need to be adapted to the living situations of those with tuberculosis. Data collection took place in the Monohardi and Narsingdi Sadar sub-districts in Narsingdi and the Mirpur slum in Dhaka, Bangladesh, between December 2015 and March 2016. We present findings from an analysis of four significant documents, 45 in-depth interviews (of current and former tuberculosis patients, their family members, and health workers), and two focus group discussions with health workers. The findings show that the official guidelines and policies hardly address sexual health or rights. During the treatment period, patients received mixed and inconsistent instructions from health workers on sexual intercourse, contraception, pregnancy, and living arrangements. The messages were interpreted differently based on who delivered and received them, and different instructions were provided to women and men. The instructions were not specific to the living situations of patients and therefore led to implementation challenges. Future interventions should ensure correct and consistent messaging, and policies should be adapted to the sexual needs of those infected with the disease. DOI: 10.1080/26410397.2021.1959258*

Keywords: tuberculosis, policy, Bangladesh, sexual and reproductive health and rights, health workers, sexuality, governmentality, guideline, mixed method, instructions

Introduction

Tuberculosis is an infectious disease that is widely prevalent in Bangladesh,¹ with pulmonary tuberculosis being more prevalent than extra-pulmonary tuberculosis.² Despite this, there is scant literature on the influence of messages from policy makers and health workers on the sexual and reproductive health (SRH) of tuberculosis patients. Such scarcity is crucial to address when, despite incorporating SRH rights into policies,³ there is meagre implementation and social recognition of these rights in Bangladesh. To ensure the physical, mental, and emotional well-being of patients, we need to understand how information on SRH is integrated and reproduced in the medical discourse on tuberculosis and to what extent the treatment regimen affects SRH.

This paper analyses policy documents, an NGO's guidelines, and the messages delivered by health workers to reveal whether national policies and the instructions delivered to patients address SRH matters, such as intercourse, breastfeeding, pregnancy, and contraception, in relation to tuberculosis treatment.

The approach of the National Tuberculosis Control Programme (NTP) of Bangladesh to tuberculosis treatment and prevention is strictly clinical. However, past studies show that the impact of tuberculosis goes beyond the clinical and has effects on the marital, sexual, and social lives of patients. The disease is stigmatised, and women, more than men, are vulnerable to worse social, marital, sexual, and reproductive outcomes of tuberculosis.^{4,5} Moreover, not only is the disease

infectious and may have symptoms that do not allow sexual availability, but health workers advise patients diagnosed with tuberculosis to prevent transmission by physically distancing from other household members.⁵ These outcomes are particularly relevant for an infectious disease like tuberculosis in Bangladesh, where there are strict gendered norms about sexuality and reproduction. Girls and women, especially those who are poor, have limited access to decision-making concerning marriage, sex, contraception, and pregnancy. The fundamental components of sexual and reproductive rights are the recognition of bodily autonomy and integrity, the ability to make choices, freedom from coercion, violence or fear of violence, and safety, satisfaction and pleasure.⁶ But the extent to which these rights are realised in practice depends on the individuals who make decisions for people and those who abide by those decisions.

BRAC, a non-governmental organisation, in collaboration with the NTP, offers the most widespread tuberculosis care services in the country and has its own guidelines corresponding to the national ones, mainly aimed at health workers. BRAC deploys numerous community health workers – largely female volunteers known as *shasthya shebika* (henceforth referred to as *shebikas*). These community health workers are volunteers trained by their immediate supervisors, called programme organisers, who are in turn trained by their supervisors. The *shebikas* and programme organisers interact with diagnosed individuals and instruct them on treatment and prevention techniques. The relationship within the different levels of health workers and between them and the patients is thus hierarchical in nature.

To understand this specific care relationship, the concept of *governmentality*⁷ is useful. According to this concept, individuals, though their own “authorities and agencies”, use “techniques and forms of knowledge ... [to] shape [our] conduct by working through our desires, aspirations, interests and beliefs”.⁸ The concept further implies that we also shape our own conduct based on our knowledge, beliefs, and opinions.⁸ Thus, health workers who are equipped with the knowledge and means to treat and prevent tuberculosis transmission must shape the behaviours of infected individuals in order to control further transmission. The patients, in turn, must adapt their living conditions to observe the preventive measures prescribed. But they do so not only based on their own knowledge,

beliefs about the disease and opinions about proper sexual behaviour, but also in the context of their economic and spatial abilities – that is, they must also take into account their specific living arrangements. Therefore, it is not enough to study only the messages; we must also investigate the reasons for delivering particular messages on the one hand and for following (or not following) instructions on the other.

In this paper, the analysis of messages is not limited to sexuality and reproduction, as the transmissibility of tuberculosis could also affect interaction and household duties in general. In the region and population under study, certain behaviours are governed by gendered norms: men are expected to go out to work to earn money while women – among their numerous responsibilities – cook, clean, wash, and take care of family members, especially children, whom they must feed, bathe, and put to sleep. These are moments when family members have to be in close contact. Moreover, some individuals adopt different living arrangements after their diagnoses, reducing their opportunities to have intercourse or become pregnant. Therefore, we must consider all kinds of instructions from health workers to draw a complete picture of how a diagnosed individual is expected to live and the challenges and opportunities they have to negotiate to have an overall positive treatment experience.

The paper aims to gain insight into the production and reproduction of ideas and practices related to tuberculosis and sexuality across the continuum of TB care, from identification (active and passive screening by community health workers followed by sputum test) to treatment and prevention of transmission (instructions). Moreover, it calls attention to tuberculosis treatment policies and practices that need to be better adapted to tuberculosis patients’ sexual and reproductive needs.

Method

Research setting

The data presented here are part of larger doctoral research with a mixed method design consisting of quantitative (survey) and qualitative (document review, interviews, focus group discussions, and observations) phases.⁹ The findings given here are from the qualitative phase. The study locations are Monohardi and Narsingdi Sadar sub-districts in Narsingdi district and Mirpur

slum in Dhaka, Bangladesh. The towns and villages in Narsingdi are densely populated. In urban areas, the respondents and their families lived in cramped and poorly ventilated two-room houses with a toilet and kitchen. Rooms were small to begin with, and the presence of furniture left very little space to walk around. However, the villages in Narsingdi Sadar and Monohardi were not densely populated like the slum. Most houses, situated in clusters, had distance between them. Each cluster or compound shared a common courtyard and was mostly occupied by joint or extended families. Occasionally, families who were not related also shared the compound. Except for two, most participating tuberculosis patients in Monohardi lived in single-room houses, where they ate and slept with their families. In most cases, this room had just one bed, some kitchen utensils in one corner, a wooden shelf or a plastic rack for putting plates and utensils, racks and strings for hanging clothes in another corner, and in rare cases, a television. These rooms were small, poorly lit, and cramped. In the courtyard was a common space with at least two stoves and a latrine, shared by households in the same compound, and there was a tube-well nearby, shared by families both inside and outside the compound.

In Mirpur slum, the living conditions were even more cramped. Mirpur is an urban area of approximately 140,000 inhabitants who live in poorly ventilated, overcrowded shacks, mostly made of tin and other temporary materials, surrounded by tiny, congested alleyways and smelly sewers. At least 10 households of at least three members each shared one latrine, along with approximately four or five stoves, which are situated outside the shacks in a common space. Most respondents ate and slept in single rooms shared by at least three people. Similar to the rooms in Monohardi, these rooms were also full of furniture, leaving little space to move around.

With regard to eating practices, people usually take their meals warm; the food is served from cooking pots into small serving bowls, each containing one dish. Everybody uses the same spoon to take food from the common serving bowl onto their plate. People eat by hand, and mothers often share their plates with their very small children, whom they also feed with their hands. Sometimes, each member of the household also has their own plate and/or glass.

Data collection

Data were collected between December 2015 and March 2016, and consisted of document review, in-depth interviews and observations, the information from which was triangulated.

Document review

We selected four policy documents for text analysis: two national guidelines by the NTP and two by BRAC. Apart from the national guidelines, which are in English, the BRAC guidelines are mainly in Bangla, with the exception of certain medical terms and chapters. The four documents we selected are listed below.

1. **National Guidelines and Operational Manual for Tuberculosis Control (NGOMTC)** (fifth edition): This official document is a guide for tuberculosis control; it is intended for use by clinicians and individuals working in tuberculosis programmes.¹⁰ Besides explaining how the NTP works, it provides complete guidelines on how to identify and treat tuberculosis in adults and children; manage tuberculosis/HIV co-infection; treat and control drug-resistant (DR) tuberculosis; and involve other partners for efficient tuberculosis control.
2. **National Guidelines for Tuberculosis Infection Control (NGTIC)** (first edition, 2011): This document provides a guiding framework on how various settings, such as hospitals and households associated with tuberculosis care, can take actions to prevent the transmission of infection.¹¹
3. **Kormoshuchi shonggotokder jonnyo jokkha niyontron kormoshuchi bishoyok shohaika** (Guidelines for Programme Organisers of the Tuberculosis Control Programme) (GPOTCP): This document outlines the diagnosis, treatment protocol, and prevention strategies for tuberculosis; it also details how community health workers, such as shebikas, can be involved.¹²
4. **Jokkha niyontron kormoshuchir orientation shobhar jonnyo guideline** (Guidelines for Orientation Seminars of the Tuberculosis Control Programme) (GOSTCP): This document is meant for participants in the orientation seminars conducted by the BRAC Tuberculosis Control Programme, which informs participants from the community what tuberculosis is and how and where to treat it. The participants are community members such as cured

patients; community leaders; industrial workers and owners; village doctors and drug sellers; NGO workers working on HIV/AIDS and reproductive health; private practitioners; and doctors on internships.¹³

Since we wanted to know whether and how these documents address SRH, we searched for these keywords: sexual, reproduction/reproductive, intercourse, abstinence, infertility, pregnant/pregnancy, breastfeeding, and contraception/contraceptive. In the Bangla texts, we used the equivalent Bangla terms: *jouno* (sexual), *projonon* (reproduction/reproductive), *jouno milon* (intercourse), *jouno biroti* (sexual abstinence), *bondhyatto* (infertility), *gorhabostha/gorbhoboti* (pregnancy/pregnant), *buker dudh khawano/sthonnopaaan/sthonnopaaan korano* (breastfeeding), and *jonmoniyontron* (contraception/contraceptive). We also looked for euphemisms for sexual intercourse, such as “sleeping together”, “staying together”, or “doing it”. We looked for instructions for both health workers and patients at facilities and in household settings. We paid particular attention to the instructions that health workers are expected to give patients once they are diagnosed, and how they should act in relation to the advice.

Interviews

The first author and her research assistants conducted the interviews (IDIs) and focus group discussions (FGDs) in Bangla, the local language. They interviewed 55 participants, including eight health workers, 28 former and current patients, and 19 family members (16 spouses and three mothers-in-law). At first, a list of married former and current patients was made from the TB registers at the BRAC offices in the study locations for the survey that explored health-seeking for tuberculosis and families’ reaction to tuberculosis diagnosis. Then, from the survey, specific patients were selected for interviews based on positive and negative responses to the survey questions, geographical access, and diverse characteristics of the patients (gender and marital status, for example). Finally, the patients and their family members were approached for interviews.

Out of the eight health workers, there were six *shebikas*, one programme official, and one medical officer. The programme official and the *shebikas* were selected conveniently from the group that helped identify patients in the survey. The

medical officer was approached through snowball sampling.

The FGDs took place in Dhaka and consisted of health workers who did not participate in the IDIs: one was with six male programme officials and the other with six *shebikas*. In addition, the first author held one informal interview with an official from the BRAC tuberculosis control programme, who coordinated and oversaw the training of health workers. During the IDIs and the FGDs, the participants were asked what instructions they gave to whom, how, and when. The informal interview mainly explored the contents of training and sources of information.

Observations

During fieldwork, some degree of unstructured participant observation of the settings and the interactions between family members in the households of tuberculosis patients took place. The FGD with the *shebikas* also served as an opportunity to observe a refresher training session. A programme official conducted it and 10 *shebikas* attended it, of whom six took part in the FGD following the training. The researchers in the field took field notes that later contributed to data analysis.

Data analysis

A multi-dimensional approach, namely symbolic, interactional, and subjective, was adopted in the data analysis. The symbolic dimension concerns clinical and social norms, cultural beliefs and stereotypes related to tuberculosis, gender, sexuality, and reproduction that dictate how an individual with this disease ought to behave. The interactional dimension highlights those norms and beliefs in the symbolic dimension that get institutionalised and reproduced through various practices, such as sexual intercourse. Lastly, the subjective dimension focuses on the agency of individuals who negotiate and shape their identities within the boundaries of the symbolic representations and institutionalised practices. For example, this level reflects how individuals respond to tuberculosis care, which may be reflected in their living arrangements and sexual and reproductive practices such as intercourse and contraception use.

The first author conducted the data analysis and discussed the results with the second author. For the policy text analysis, the number of times the selected SRH keywords appeared in the

documents was noted to understand the priority accorded to each. This was complemented with qualitative text analysis to assess how the keywords were framed and whether women and men should receive different instructions. Next, lists of instructions on intercourse, breastfeeding, contraception, and living arrangements were made from documents and interviews, listed instructions aimed at health workers and patients, and grouped accordingly. Finally, instructions that did not fall within these topics were categorised as “other”. The findings from the text analysis were triangulated with the interviews and FGDs with the patients and health workers by looking at the similarities and differences. Findings from interviews on living arrangements also were triangulated with observation of households.

To present the patients’ socio-demographic variables, frequency counts of sex, education level, occupation, marital status, and family income based on data from the survey were made. For the qualitative texts, content analysis was done. A set of broad predefined codes derived from the literature and our lines of enquiry were initially applied to the texts to get relevant data quickly (deductive coding). However, new codes, as they emerged (inductive coding), were added, and changes were made to the predefined codes as needed. Doing so helped capture the data’s nuances and richness and reduce biases (from predefined codes). This was an iterative process. Then, codes that were related to each other were grouped into categories. Finally, patterns and connections between the categories were determined and linked to overarching themes. Overall, the coding and categorisation took place in tandem. The interviews were transcribed verbatim into Bangla and uploaded into the Atlas Ti software for coding and categorisation, along with the field notes which were in English.

Ethical considerations

Ethical approval for the study was given by the Ethical Review Committee (now Institutional Review Board) of BRAC James P. Grant School of Public Health, BRAC University (reference no. 72) on 21 December 2015. During data collection, the researchers took written informed consent from all the respondents before the IDIs and FGDs and verbal consent before observing the refresher training. The participants were made aware of the voluntary nature of their participation. Notes were taken, and interviews were

recorded whenever permission was granted. Pseudonyms have been used in this paper to protect the sensitivity and privacy of the data.

Results

Socio-demographic characteristics of patients with tuberculosis

As [Table 1](#) presents, among the 116 patients, there were 57 current and 59 former patients, and 86 had pulmonary and 26 had extra-pulmonary tuberculosis. Four patients did not have this information present in the treatment card. Most of the patients were female (67%). The lowest age reported was 16 years and the highest was 65 years. Most of the patients were aged between 26 and 35 years (35%). Thirty-eight of the 116 patients had never been to school, while 37 and 27 had primary and secondary education respectively. The rest of the patients, except for three whose information on educational level was not obtained, had education levels of a secondary school certificate and above. Most of the patients were married (92%), while 3% and 5% were separated and widowed, respectively, at the time the interviews took place. Of the 116 patients, 50 women reported that they were housewives. Among the rest, most were employees with a regular income (16%) in occupations such as security guard, domestic servant, barber, and tailor; only two were students (one woman and one man) and six were unemployed (men only). Nine patients had family incomes of 5000 Bangladeshi Taka (BDT) (US\$59) or less. The lowest income was reported to be 4000 BDT. Thirty-one (27%) patients had a family income of more than 5000 BDT but less than or equal to 10,000 BDT. This was followed by 41 individuals who had an income of more than 10,000 BDT but less than or equal to 20,000 BDT. Few individuals had incomes of more than 20,000 BDT. Only one individual, a businessman with a working son, reported a family income of BDT 100,000. For a basic but decent living in Bangladesh, one’s income should be more than BDT 10,000.

Coverage of SRH in official guidelines

The findings of our analyses revealed that the way SRH is addressed in the official guidelines and by health workers is limited. The policy text analysis revealed a stronger focus on reproductive health than on sexuality. As [Table 2](#) shows, among the terms that are more frequently used,

Table 1. Socio-demographic information of patients with tuberculosis	
Characteristic	Frequency (percentage) (n = 116)
Type of patient	
Current	57 (60%)
Cured	59 (40%)
Type of TB	
Pulmonary	86 (74%)
Extra-pulmonary	26 (22%)
Missing	4 (4%)
Sex	
Female	67 (58%)
Male	49 (42%)
Age	
16–25	39 (34%)
26–35	41 (35%)
36–45	26 (22%)
46 and above	10 (9%)
Educational level	
Never went to school	38 (33%)
Primary (until grade 5)	37 (32%)
Secondary (grade 6–10)	27 (23%)
Secondary school certificate and above	11 (9%)
Missing	3 (3%)
Marital status	
Married	107 (92%)
Separated	4 (3%)
Widow/widower	5 (5%)
Occupation	
Day labourer	6 (5%)
Rickshaw/van driver	3 (3%)
Employee (shopkeeper/companies)	18 (16%)
Shop owner	13 (11%)
Driver (car/bus/truck)	2 (2%)
Farmer/fishermen	5 (4%)
Housewife	50 (43%)
Student	2 (2%)
Other	11 (9%)
Unemployed	6 (5%)
Family income (BDT - 1000BDT = US\$11.8)	
≤5000	9 (8%)
>5000–≤10,000	31 (27%)
>10,000–≤20,000	41 (35%)
>20,000–30,000	10 (9%)
Above 30,000	6 (5%)
Missing	19 (16%)

“*gorbhoboti/gorbhabosthai/pregnancy/pregnant*” had the highest number of uses (48%), followed by “*jonmoniyontron/contraception/contraceptive*” (24%) and “*buker dudh khawano/sthonnopaaan/sthonnopaaan korano/breastfeeding*” (20%). The terms “reproductive” and “infertility” have similar coverage (4%). However, the terms “*jouno/sexual*”, “*shohobash/milon/jouno milon/intercourse*” and/or “*jouno biroti/abstinence*” do not appear in any of the documents.

Almost all the documents address reproductive health issues such as pregnancy, contraception, and breastfeeding.* In BRAC’s guidelines for orientation seminars, the term “reproductive health” appears only in the title of the chapter as “Orientation for NGO workers working on HIV/AIDS and reproductive health”¹³; the chapter does not further illustrate which areas fall under “reproductive health”.

The search for the term “infertility” led to “genito-urinary tuberculosis”, one of whose clinical outcomes is infertility. This type of tuberculosis is considered “more common in female[s] than in male[s]”.¹⁰ The NGOMTC states that when this kind of tuberculosis affects the fallopian tubes and endometrium of the female reproductive system, it can cause infertility. It does not mention, however, if and how infertility occurs in men, or whether treatment can prevent infertility in cases of genito-urinary tuberculosis. In this document, along with the remaining guidelines, there is no indication that pulmonary tuberculosis can cause infertility and other sexual problems, such as the loss of sexual libido and reduced sexual performance, as findings from the literature show.¹⁴

The documents hardly cover sexual health. The GOSTCP states that people with tuberculosis with a history of “high-risk behaviour”, such as injecting drug users, sex workers, migrant workers, men who have sex with men (MSM), and transgender/hijra individuals, among others, should be referred to a clinic for treatment.¹³ But while the literature does suggest that this group is vulnerable to HIV, which increases the probability of contracting tuberculosis and vice versa,¹⁵ the GOSTCP does not elaborate upon how this group is at risk of getting infected. As some of these groups – such as sex workers, MSM, and those with sexually

transmitted infections – experience close proximity during sexual acts, the low prevalence of HIV/AIDS in Bangladesh¹⁶ suggests there could be a connection between intercourse and transmission of infection. However, the absence of explicit guidance leaves unanswered the question of whether diagnosed patients undergoing treatment can participate in sexual intercourse.

Overall, our analysis of the document revealed that it addresses SRH from a clinical perspective only. There is no recognition of the effects of tuberculosis on the social aspects of marriage, sexuality, and reproduction, which pose challenges in the lives of individuals with this disease.

Instructions from guidelines and health workers: matches and mismatches

In Table 3, we present under various themes the instructions provided to people diagnosed with tuberculosis, from both guidelines and health workers.

Given that motherhood acts as a significant way for women to secure a respected and positive social position, we looked at whether women, especially those without children, can safely become pregnant during tuberculosis treatment. The findings showed that none of the guidelines discourages pregnancy. Instead, they mention that pregnant women should be treated according to the “re-treatment” category (Category II of treatment, referred to as CAT II in Table 2), and that the drug streptomycin, which is harmful to foetal development,¹⁷ should not be given to them (see Table 3).^{10,12} This implies that women can have intercourse, can become pregnant and can even have safe pregnancies if the correct treatment protocol is followed. However, in contrast to the official guidelines, health workers strongly advised women against pregnancy for the duration of their treatment. The *shebikas* mentioned that they did so to prevent transmission to the foetus, while programme officials justified it on the grounds of the harmful effects of tuberculosis medicines.

Where contraceptive use is concerned, according to the official documents, women who wish to avoid pregnancy should use an alternate contraception method other than the pill, as rifampicin – an anti-tuberculosis drug – may reduce its efficacy.¹⁰ We found that health workers mostly advised condom use to prevent pregnancy.

The documents and the health workers both advised mothers to wear masks when

*In the document on infection control, the term “pregnant” only appears once, and that too when discussing HIV prevalence among pregnant women.

Term	NGOMTC ^a	NGTIC ^b	GPOTCP ^c	GOSTCP ^d	Total n (%)
Pregnancy/ pregnant	2	1	4	5	12 (48%)
Contraception/ contraceptive	1	0	5	0	6 (24%)
Breastfeeding	2	0	3	0	5 (20%)
Reproductive/ reproduction	0	0	0	1	1 (4%)
Infertility	1	0	0	0	1 (4%)
Sexual	0	0	0	0	0 (0%)
Intercourse	0	0	0	0	0 (0%)
Abstinence	0	0	0	0	0 (0%)
Total	6	1	12	6	25 (100%)

^aNational Guidelines and Operational Manual for Tuberculosis Control.
^bNational Guidelines for Tuberculosis Infection Control.
^cGuidelines for Programme Organisers of the Tuberculosis Control Programme.
^dGuidelines for Orientation Seminars of the Tuberculosis Control Programme.

breastfeeding. The guidelines only mention that children of mothers with tuberculosis should be administered isoniazid prophylaxis. This treatment is given to children aged under five to prevent future tuberculosis infection.

While the literature provides no information on the risk of transmission associated with intercourse, and although tuberculosis is not considered a sexually transmissible disease, studies indicate that those who live with people with tuberculosis are at risk of infection due to proximity and exposure.^{18,19} However, the official guidelines make no explicit mention of whether patients can have intercourse, while the recommendation to use an alternative contraceptive method implies that couples can have intercourse. However, we found that in practice, health workers frequently advised sexual abstinence. A previous study also showed that a health provider advised a man to abstain from sex.⁵ We found that both women and men were instructed not to have intercourse during treatment. There was a shared belief among the health workers that proximity during sex can enable transmission:

“It can still spread. Just because they do it (melame-sha) does not mean it will spread. They are

coughing [and] talking to one another. Staying together. It can spread [in these ways].” (Shebika, FGD)

Moreover, while both men and women were instructed to abstain, *shebikas* also recommended strategies by which women could prevent transmission if they had intercourse. As Table 2 indicates, women were advised to turn their heads away or cover their mouths. To indirectly advise abstinence, the programme officials warned female patients about the harmful side effects of tuberculosis medicines on pregnancy and advised them against contraceptive methods. They also strongly advised the female patients to tell their husbands not to use condoms. They hoped such advice would discourage sex. They told male patients directly to “*keep distance from wife*” (programme official, FGD). However, our findings show that the *shebikas* and officials asked only tuberculosis patients, and not their spouses, to abstain from intercourse. In an unequal sexual relationship, this disadvantages the wife, who generally has less control over the couple’s sexual relations.

Health workers also ordered people with tuberculosis to have separate sleeping and eating arrangements; this recommendation is absent

Table 3. Instructions mentioned in the guidelines and given by health workers		
	Guidelines	Health workers
Pregnancy	A woman should be asked if she is pregnant. If she is, she must not take streptomycin injection. She should be treated according to “CAT II” treatment regimen	No pregnancy
Contraceptive use	Women on pills either should take a pill of higher dosage or use a different contraceptive method	[To women] Use condom to prevent pregnancy
Breastfeeding	Mother should wear a mask when breastfeeding. Her child should be administered a prophylaxis	Wear a mask when breastfeeding
Sexual intercourse	Not addressed	Full abstinence
		Partial abstinence
		[To women and men] Have sex with condom
		[To women by <i>shebika</i>] Have sex with head turned away or by covering mouth
		[To women by program officials] Do not use any contraceptive method. Your husband should also not use any method. Conceiving during treatment is dangerous
		[To men by program official] Keep distance from your wife
Sleeping arrangement	Not addressed	[Program officials only to smear-positive] do not share bed
		[<i>Shebikas</i>] If sleeping alone is not possible, sleep with your back to the person next to you
		Sleep together but use mask
		[EPTB] You can share bed
Eating arrangement	Not addressed	[All except EPTB] Do not share plate and/or glass
Interaction with household members	Wear mask	Wear mask
	People with DR-tuberculosis must be isolated in separate room	[All] Keep distance from your household members
	People with DR-tuberculosis must not interact with children aged under 5	[All] Keep children away. Do not kiss them
	Visitors to the household of DR-tuberculosis patients must be restricted	Not mentioned

(Continued)

Table 3. Continued		
	Guidelines	Health workers
Coughing/sneezing	Cough/sneeze etiquette: <ul style="list-style-type: none"> • Cover nose and mouth with hands, arm (sleeve), tissue, cloth, <i>saree</i>, <i>orna</i> or face mask when coughing and sneezing* • When coughing and sneezing, turn head away from others. • Use the nearest bin to dispose of the tissue, cloth after use • Spit in a cloth or a container with lid • Perform hand hygiene (e.g.) wash hands with soap and water, antiseptic hand wash after having contact with respiratory secretions 	Cover mouth when coughing/sneezing. Turn away from others when doing so
Sputum disposal	Dispose of sputum, saliva in a pot and bury underground or burn it*	Dispose of sputum, saliva in a pot and bury underground or burn it
Personal hygiene	Clothes worn and bed sheets and pillows used by patients must be clean at all times and sometimes should be put out in the sun	Keep clothes clean. Wash clothes daily with hot water and soap
		Don't let others wear your clothes
Others	Patient must not smoke	[To men] Quit smoking
	Patient must not take any tobacco*	[All] Do not eat betel leaves
	No restrictions on any food is needed*	Eat nutritious food. Avoid food that can cause allergic reaction in body

*BRAC guideline for program organisers contain this information only.

from the official guidelines (Table 2). One *shebika's* advice on sleeping separately even when the situation becomes difficult was as follows:

"I say to married women, 'You have a husband. Do not sleep with your husband facing each other. If your breath falls on your husband, then your husband will get infected [...]. Be cautious for one or two months. This disease is infectious for two months [...] Sleep with your backs to one another if you are sleeping on the same bed.' The rule is to sleep on a separate bed alone." (Bokul, *shebika*, IDI)

Unlike the *shebikas*, most programme officials stated that only a "smear-positive" should not sleep together with his/her family for "at least fifteen

to twenty days or one month in the same room" (Raju, programme official, FGD).

When it came to eating arrangements, all but six respondents with pulmonary tuberculosis reported having been advised by a health worker not to share utensils. In the case of Bangladesh, this pertains mostly to glasses and plates, as food is eaten with the fingers. Mina, a former patient aged 22, said, *"I was told, 'Do not give the glass you drink from to your husband, to your child, to your mother-in-law. Have a separate plate and glass for your own use'. I was told not to give food from my plate to my child."*

Of those who reported that they had not been advised to use separate utensils, two had extra-pulmonary tuberculosis. The instruction to use

separate utensils was mostly disseminated by the *shebikas*, who believed that utensils when shared can transfer the infection. This is in line with the past studies in Bangladesh that also found this perception to be dominant among the *shebikas*.²⁰ However, unlike the *shebikas*, most programme officials reported that they do not advise using separate utensils. One of them mentioned that patients can share plates and glasses during treatment except when someone is smear-positive, in which case the person should not share (Masud, programme official, FGD). The medical doctor, however, informed that he does not advise patients to make separate eating and drinking arrangements.

The analyses further revealed other dissimilarities between the general guidelines and health workers' instructions on how an individual with tuberculosis should physically interact with others. According to the guidelines, only people with drug-resistant tuberculosis should be isolated in a separate room and prevented from interacting with children aged under five (see Table 3). Such measures, however, are not expected of a smear-positive pulmonary patient who is not drug-resistant. Also, the guidelines for programme organisers (who are referred to as programme officials in the current study) mention that "a patient does not need to remain in isolation during treatment".¹² It does not expand upon what kind of isolation or what kind of patient.

Contrary to the guidelines, we found that the health workers advised all patients, especially those with pulmonary tuberculosis, to maintain some distance from their family members, especially children. Nasrin, a recovered female patient, said, "I was told, 'Do not kiss your children. Make sure your breath does not fall on your husband'".

All the health workers also agreed to this; they mentioned that infected individuals should avoid kissing children and coughing and sneezing near others. This advice further confirms that the health workers consider the mouth to be a problematic area because of the infectiousness of droplets. This is also why patients are expected to follow certain coughing and sneezing etiquette, as the NGTIC indicate.¹¹ All patients must use a mask according to both the guidelines and the instructions from health workers. It is interesting to note that despite this, health workers still instructed patients to keep distance from their family members.

We found that only the *shebikas* promote personal hygiene among both pulmonary and extra-pulmonary patients and give instructions that match those in the guidelines for programme organisers.¹² For example, a wife of a patient with extra-pulmonary tuberculosis said, "I was told, 'Keep his clothes clean. Wash his clothes daily with hot water and soap'". Such instructions suggest that according to health workers, the disease is associated with dirt and lack of hygiene, which could aggravate transmission. Therefore, irrespective of the type of tuberculosis, health workers promote hygiene, unlike the official guidelines which do not promote hygiene.

Lastly, there were other less common instructions that we grouped under "Others" during analysis, as Table 3 shows. These instructions include avoiding smoking and taking other forms of tobacco, such as betel leaves, and eating good food for efficient recovery.

Divergence in verbal instructions

Table 3 also indicates that verbal messages given by health workers to patients regarding how to prevent tuberculosis transmission were divergent and confusing. The factors that appear to contribute to the differences in the instructions of health workers are:

Uncertainty about mode of transmission

We found that confusing messages arose from the uncertainty about the mode of transmission of tuberculosis. A possible connection between intercourse and transmission did not always seem clear to the health workers, as the following quotes illustrate:

"You know that thing that happens between a husband and a wife? It does not spread that way. Very little chance. Still I suggest that patients adopt any [contraceptive] method." (Hashi, *shebika*, FGD)

In the above quote, Hashi contradicts herself about the sexual transmission of tuberculosis. Despite believing that tuberculosis does not spread through intercourse, she recommends condoms anyway, just to be safe. Similarly, Ruma also expresses opposing views on transmission. She is against sharing utensils but believes close contact between patients and family members to be safe:

"I advise them about living arrangements. They can be together and sit together. But about food, they

must maintain separate eating arrangements for two months." (Ruma, *shebika*, FGD)

Another *shebika*, Joba, said, "You can sleep together. You only must not share utensils". Therefore, it is not clear if, after washing them, one can eat from the same plate or drink from the same glass as a patient.

Lack of clarity about the period of infectiousness

The divergent messages were also embedded in the lack of clarity about the period of infectiousness, regarding which the health workers held various opinions. For example, according to some *shebikas*,

"I try to make them understand that if one takes medicines for fifteen days, it no longer spreads through sneeze or cough." (Rahima, *shebika*, FGD)

"After diagnosis, if a person takes treatment and wears a mask for two months, then the infection is not there and cannot spread." (Saleha, *shebika*, FGD)

We found similar confusion among programme officials in the FGD:

Hasan: Fifteen days after [the] intake of medicines, it [tuberculosis] no longer spreads.

Ratan: Not fifteen days; we tell them two months.

Hasan: We tell them two months.

Ratan: Until it [smear] tests negative.

The above quotes show inconsistencies in the perceived period of infectiousness. The documents too do not clearly mention whether infectiousness persists throughout the treatment period or appears only for a certain amount of time. According to the National Guidelines and Operational Manual for Tuberculosis Control, upon initiation of treatment, a patient becomes non-infectious within "approximately two weeks".¹⁰ But according to the National Guideline for Tuberculosis Infection Control, a person with pulmonary tuberculosis is infectious "until the patient has had two consecutive negative sputum smears on different days, with at least one morning sputum", which is different for multi-drug resistant tuberculosis patients who "respond to treatment more slowly and may remain smear-positive and culture positive longer than new tuberculosis patients".¹¹ This ambiguity surrounding the infectious period also persists in the BRAC documents, which mention two different infectious periods. The

Guidelines for Organizers of the Tuberculosis Control Programme mention that once treatment starts, the tuberculosis bacteria does not spread through air via coughing, sneezing, or spitting.¹² But later, the same document seems to suggest that the period of infectiousness is two months: "... for the first two months, patients should use a cloth or handkerchief when coughing or sneezing".¹² However, the Guidelines for Orientation Seminars of Tuberculosis Control Programme mentions that tuberculosis does not spread two weeks after starting treatment.¹³ Therefore, the inconsistency in the official guidelines seems to reappear in the instructions by health workers.

Discomfort when talking about intercourse with the opposite gender

We found that intercourse was a difficult topic on which to give messages. Programme officials reported that they felt uncomfortable telling women to abstain from intercourse. This came up during the FGD with the programme officials:

Bashar: We tell a married woman that neither she nor her husband shall use contraception. This is how we tell them – indirectly. We tell [her] that there is a harmful side to conceiving. If she conceives during treatment ... one can never tell ...

Interviewer: This is what I wanted to know ... if you could give an example.

Kalam: You know we are men ... how can we directly [tell them]?

Bashar: First we tell them about the harmful side [of conceiving during treatment].

Parvez: For the women there are female workers. We tell the men.

The male health workers also added that they feel they are at an "advantage" (*shubida*) when they encounter male patients as they can tell them directly to "keep distance (durey thaken) from their wives for a few days ... [until] the sputum turns negative at the end of two months" (Enam, programme official, FGD). Programme officials find it easier to talk about contraceptive use than intercourse, so they use this vocabulary to indicate that the patient should not have intercourse. This was also evident in the interview with the medical doctor, who informed us that he does not advise married women on intercourse and that "BRAC people do that". However, he also stated that he advises women to stop taking contraceptive pills and asks men to use condoms.

Although the *shebikas* did not say anything about this, the quotes above suggest that they talked to women more directly about this, compared to the male programme officials and the doctor. These accounts not only reveal the shame associated with discussing intercourse with members of the opposite sex, but they also show that women and men receive different messages. Female patients advised by male health workers receive confusing and even dangerous messages, especially when they receive advice to stop contraceptives. It not only leads to more chances of transmission but also unwanted pregnancies.

Gendered social sexual norms

Finally, gendered sexual norms contributed towards differences in messages. On the one hand, health workers advised patients to abstain from intercourse for different periods. On the other hand, they were instructed to use condoms or other contraceptive strategies during intercourse:

“I was told [that] if I get [sexually] excited, I can use a condom.” (Raisul, male pulmonary patient)

The coexistence of both messages indicates an expectation that abstinence is actually not possible, and that men in particular cannot – or will not – control their urge for intercourse. As we also discussed earlier, some *shebikas* also promoted strategies to follow if couples fail to adhere to their instructions. For example:

Rima: I think it is better not to do it [intercourse] for a few days [...] they can sleep together but not face to face.

Interviewer: So that the breath does not – [interrupted]

Rima: Yes, fall on husband’s face [...] when I do it [intercourse], I can simply turn my head away or cover my mouth with my hand. I cannot put my relationship at risk by saying no.

Thus, the *shebikas* are aware of the actual living situations of their patients and of the unequal gender relations that can influence women’s decisions on sexual matters.

The differences between the *shebikas* and the programme officials is especially interesting, given that both work under the same programme, and the latter train and supervise the former. Despite the ambiguity and medical credibility of some of the instructions, it is clear that some degree of isolation is recommended. The

messages seem to convey that the onus to control the disease is higher, and goes beyond clinical knowledge, even fusing with morals and social norms related to it.

Adapting to measures: strategies and challenges

The findings show that patients tried to avoid close contact with family members. They shared the health workers’ concerns about preventing transmission of the disease to other household members. However, they could follow the instructions only to the extent that their living conditions allowed them. For example, when it came to sleeping arrangements, those who did not share a bed slept either on the floor or on a different bed alone.[†] However, some could not manage a separate sleeping arrangement. For instance, Dulaal, a male pulmonary patient on treatment who lives with his wife and son, said, *“You see, now my daughters are visiting with their husbands and children. They sleep in that room. Here, my wife and I sleep with our grandchildren.”*

This shows that when many people live in one household, the patient cannot help but share sleeping space. Misha, a recovered patient, faced a similar challenge. She said, *“How could I sleep separately? We had only two rooms at my parents’ place. We are many sisters. [We have] financial problems. We do not have many rooms. So, I acted as safe as I could. I slept with my mother.”* Her family’s financial constraints did not allow her a separate sleeping arrangement. Misha referred to strategies to prevent transmission which were also reported by some of the other patients:

“I slept together with my wife and child. I acted safe. My child slept in the middle. She [my wife] was on the other side. I slept on this side. I slept with my back to them. After a month or two passed, I faced them and slept. I tried doing what I must. I wore a mask.” (Recovered male patient with pulmonary tuberculosis)

Such an example shows that facing away from the person sleeping beside them, wearing a mask, and avoiding physical contact are strategies used to prevent transmission among family members.

However, not everybody opted for a separate sleeping arrangement even when it was possible.

[†]Here *bed* refers to the piece of furniture, typically a framework with mattress.

For instance, the wife of Shafik, who is undergoing treatment, mentioned that she shared the bed with her husband because he was very ill and she wanted to look after him while her children slept in a different room. In this case, the challenge was not insufficient sleeping space; the severity of a family member's illness created the need to care for them beyond the need for isolation to prevent transmission.

Some patients and their family members were able to adopt separate eating arrangements. They reserved a plate and a glass for their exclusive use and did not share their leftover food or water. For example, Aklima, a female pulmonary patient, said, *"I did not give my leftover food to my son. Not even to my husband. I finished all my food by myself."* Some reported having already allocated a plate and glass to themselves and other householders even before their infection. Mofiz (45 years old recovered pulmonary patient), who had a separate plate already, said:

"My son has a glass for himself... my daughter as well. So does my wife. I have one too. For a long time [we have had this arrangement]. There have been times in the past when I drank or ate from whichever [glass or plate] was available in front of me. But no, that time [when I had tuberculosis], mine were totally separate."

However, not all patients who wanted to reserve separate plates or glasses for themselves during treatment managed to do so. The quotes below illustrate some such scenarios:

"There is a separate glass [for my husband]. But I sometimes drink from it forgetfully [laughing]." (Mili, wife of a male pulmonary patient)

"My child is little, okay? When I ate something from my plate, he [also] came and ate from my plate. He also drank from the glass or bottle I used without me noticing. Sometimes his father also accidentally drank from my glass. That is why I could not maintain a separate arrangement. You cannot always make a child understand, can you? And he would only eat from my hand." (Asha, recovered female extra-pulmonary patient)

"We have only two plates in the house. We do not have an extra plate. Both plates look the same. I cannot figure out which is whose." (Misha, female pulmonary patient)

Misha, who did not reveal her diagnosis to her husband, further added that she and her husband

would each have their separate glasses, which they would not share. Therefore, it is not clear whether she could not have another plate because of affordability or because a separate plate would raise suspicion about her undisclosed condition.

In one case, the plate reserved for the patient was also used for purposes other than eating. The wife of a pulmonary patient undergoing treatment said,

"I use his plate to keep chopped fish or vegetables when I cook. Every now and then [after use], I wash this plate with soap, [and] his glass as well. We do not drink from his glass or eat from his plate."

These cases show that not everyone had extra utensils at their disposal. What is also apparent from the above is that sometimes people find it difficult to change their daily behaviour. Therefore, a separate eating arrangement is a challenge for those who do not disclose their status; have financial constraints; do not have enough utensils in the house for their exclusive use; or find it difficult to adapt to new changes.

Besides eating and sleeping arrangements, the patients also reported following health workers' advice on interacting with children – that is, they kept as safe a distance from their children as they could and avoided kissing them. One patient said, *"I take my child on my lap but I do not kiss her"* (Male, 23, pulmonary tuberculosis, on treatment). The patients also tried to follow instructions of *shebikas* on washing clothes. However, they faced challenges in this as well. One respondent said, *"I cannot do it daily. We are poor people. I have to work and earn money, especially when my husband is ill. So, I did it every other day, if not daily"* (Wife, 24, cured patient).

Although the female interviewees did not mention any instructions on whether not to cook or serve food, some reported having cooked anyway:

"I did everything. During my treatment, I cooked. Nobody else did it... [...] ... My family asked me, 'doesn't the smoke from the cooking make you cough even more?' Now what can one do when coughs are more frequent? You see, these two children [that I have] – I admitted them to a school. My sister-in-law takes them [to school]. Then she has to bring them back. When will she cook? I should be understanding, shouldn't I? Now if

Allah keeps disease in one's fate, what can one do?" (Rasheda, 23, recovered female pulmonary patient)

Rasheda's quote paints a reality where women have no choice but to continue their assigned household chores even when they are sick, especially when there is no other family member who can take over. It seems that had Rasheda's sister-in-law not been engaged elsewhere, she could have helped Rasheda. But some married women may not have any help except for their husbands, who need to go to work. Since dominant gendered norms and practices demand that Bangladeshi women perform the cooking and serving of food, the instructions of health workers should also take this into account. As smoke triggers coughing,²¹ there could be more chances of transmission through food. Even if a patient is following instructions to not share food, it is likely that any food that they cook or serve is also at risk of transmitting the disease.

The practices listed here so far show that one of the biggest challenges people faced was in maintaining separate eating and sleeping arrangements in their homes. Nevertheless, despite these challenges and individual lapses, we noticed an overall understanding and acceptance of the temporary lifestyle changes. Almost all the cured patients went back to their prior arrangements after they recovered.

The fact that messages were delivered, interpreted, and acted upon reveals the governmentality of tuberculosis care. Health workers, using their knowledge, experiences, and values, aimed to shape the ways in which people with tuberculosis could live after their diagnoses. The health workers also chose to give instructions that came partly from their training and partly from their own ideas, norms, values, and experiences in the community, which often deviated from the official guidelines. People with tuberculosis responded by improvising according to their situations. In this way, they also disciplined themselves in accordance with the health workers' instructions to prevent the spread of tuberculosis. Thus, all the actors in this process – the health workers and the individuals with tuberculosis – reproduced ideas and norms about tuberculosis through their practices and also adapted the messages to their socio-cultural contexts.

Discussion

This paper has aimed to examine the extent to which SRH issues are addressed in policies on tuberculosis control in Bangladesh, covered in the instructions of health workers, and reproduced and challenged in the practices that patients undertake. The study presented several findings. First, the policies do consider reproductive health but only from a biological perspective; they hardly address sexual health. Second, there are discrepancies between the information in the guidelines and the instructions delivered to patients and their family members and how they interpret them. Third, we found the messages from health workers to be inconsistent, confusing, and influenced by who delivered them to whom. We found that men and women received different instructions. Finally, we found that the instructions led to implementation challenges for patients.

Two critical questions left unanswered are whether women on treatment should become pregnant and whether one can have intercourse during treatment. First, while the guidelines only focus on treating pregnant women with tuberculosis, the health workers prohibit pregnancy altogether due to the adverse effects of the treatment on the foetus. Since there is inadequate information on the side effects of various tuberculosis medicines on pregnancy,¹⁷ it would be difficult for healthcare providers to provide correct and safe treatment to pregnant women. Second, the official guidelines are silent on sexual intercourse. Sexual intercourse, like eating, sleeping or looking after children, is among regular life activities and also places infectious people in close contact with family members. Yet, the guidelines do not address this critical aspect. There are two possible reasons for this silence: one is that, according to the guidelines, patients should wear masks all the time, so in this scenario, it would not matter whether they have intercourse or not. The other is that cultural sensitivity in Bangladesh to public discussions on sex²² means it would be very unusual to include them in written policy guidelines. This cultural sensitivity was also seen among male health workers who reported feeling uncomfortable about giving messages on abstinence to women. However, such sensitivity can be problematic when there is a need for clear instructions on sexual abstinence (or not) to control the spread of tuberculosis. One solution

for this could be involving husbands of women with tuberculosis who disclose their diagnosis, where male health workers could counsel the husbands, and the *shebikas* could advise the female patients. Nevertheless, both *shebikas* and programme officials should be trained with correct and consistent information and should have a gender-sensitive approach.

A Bangladeshi study found that the taboo associated with discussing sex could make it difficult to deliver messages on intercourse. Female teachers from a rural community reported feeling uncomfortable discussing family planning with adolescents, particularly boys, and skipped topics on sexually transmitted diseases and AIDS.²³ However, another study found that *shebikas* and other health providers – such as traditional birth attendants and healers – successfully disseminated messages on sexual matters in a rural community in Bangladesh using flipcharts.²⁴ The study also showed that informal providers, such as village doctors and traditional healers, may be the appropriate choice to deliver messages on intercourse and abstinence, as they are comfortable with and aware of the vocabulary used for sexual matters in their communities. It is important that the messages people receive are consistent and not confusing, irrespective of who delivers them.

Given that tuberculosis is easily transmissible through air, a strong focus on infection control and efficient treatment in messages delivered by health workers is not surprising. But the messages are highly problematic in three senses. First, inconsistent instructions can be detrimental to people's sexual and reproductive lives when decisions need to be made. Instructions to abstain mean reduced sexual intercourse and chances of pregnancy. Since sexual availability and pregnancy are essential aspects of marital life for many Bangladeshi women, correct and consistent messages can help them make decisions. Second, the underlying assumption of the messages is that people's living conditions can be adapted to the required measures, that individuals with tuberculosis are responsible for preventing transmission and that all individuals have equal access to decision-making power in the sexual and reproductive domains. As we presented elaborately elsewhere,⁴ not all women with tuberculosis have decision-making powers regarding sex, contraceptives or pregnancy. Third, focusing only on infection control overlooks the lived realities of individuals affected with tuberculosis who receive

and interpret mixed instructions and face challenges and implications that extend beyond the clinical approach, as presented in this paper.

Moreover, the instructions assumed that contagious diseases are always preventable and controllable.²⁵ The problem with this assumption is that not only are living circumstances limited, but so is agency, as indicated earlier. As Chan and Reidpath²⁶ put it, if limitations are imposed that individuals cannot comply with, such measures will fail. This means that if infected individuals cannot abide by the required measures, the transmission of tuberculosis will not be efficiently prevented.

Furthermore, there is an underlying assumption in the guidelines and instructions that people will always wear masks and follow all the directions. But we found that the practices have their own limitations. Their living conditions may not provide opportunities for patients to follow the guidelines, and people may simply forget. Moreover, not all people master the self-discipline required to change daily behaviours, such as kissing their children or maintaining suitable cough hygiene. It is also unclear whether people who reported wearing masks wore them all the time. That health workers incorporate sexual intercourse into their instructions shows that they are aware of the lived realities of life in their communities. However, in this respect, the only problem would be the incorrectness and the inconsistencies in the information, which raises serious questions about the medical validity of the advice.

It is crucial to note here, however, that it can be challenging to achieve correctness and consistency in information when there is already confusion in the guidelines, as well as in the literature, regarding how long a person remains infectious after beginning treatment.¹⁹ While the Centers for Disease Control and Prevention (CDC), one of the top-level international organisations that work with tuberculosis, deems the infectious period to be two to three weeks,²⁷ another study states that the infectious period may extend beyond this duration.²⁸ The difficulty in determining a definite period of infectiousness is that the conversion of sputum from positive to negative takes place differently in different people.²⁹ If the sputum test is the indicator for infectiousness, then this information should appear consistently in all documents and be disseminated to all patients. Since the treatment duration is long, it should also be assured that patients are informed

if they are no longer infectious, as this would affect how soon an infected person can go back to close physical contact with other household members without putting them at risk of infection.

There needs to be further research into the link between the prohibited activities and tuberculosis transmission. As it is, the local and international guidelines do not mention whether sharing utensils can spread the disease, and it is not clear how safe it is to share a patient's food and water. We found that the focus was more on managing a separate plate and glass for exclusive use rather than on trying to understand the possible connection between sharing food and transmission. A message that focuses strongly on not sharing leftover food and water, rather than on the use of a separate plate and a glass, could perhaps be a solution for the households that do not have enough plates or glasses for an individual's exclusive use.

There is a need to examine the sources of a variety of instructions as they are confusing and sometimes even irrational. Particularly, a thorough investigation into the cultural aspects surrounding sexual experience and tuberculosis is warranted. In a study in India, people in a rural community associated sexual promiscuity or excessive sex as a cause of tuberculosis.³⁰ Although this was not one of our findings, the cultural similarity between the two countries may yield similar results, especially when a rural community in Bangladesh mentioned that people with tuberculosis should abstain from sexual intercourse.³¹

Moreover, it is worth exploring more deeply whether the messages are driven by non-official policies or myths and taboos carried by the community health workers themselves. In this respect, it is important to remind ourselves of their position in the tuberculosis care chain. They work in communities that have their own norms and values. They are honoured and admired for their work as well. They also have moral commitments. They have certain duties towards the programme. They are given the responsibility to successfully identify and treat patients and prevent further transmission. It may be interesting to note here that a past study in Bangladesh found that key community members, including village doctors and imams (religious leaders), had similar perceptions on mode of transmission to those of *shebikas* in general.²⁰ Future research can study further the source of the *shebikas'* messages, particularly the

training cascade, and also explore their perceptions in depth to conclude whether they reproduce community norms.

Lastly, the policies and the messages delivered should adopt a rights-sensitive approach. It is important to acknowledge that all individuals with tuberculosis have a right to a favourable sexual and reproductive life. Due to the cultural sensitivity surrounding sexuality, speaking about sexual and reproductive rights in terms of autonomy in a context where rights are not socially acknowledged is difficult. Instead, when rights are presented as access to health, they become easier to talk about and act on. Through health, rights become a subject of well-being for all individuals and are more culturally acceptable. Therefore, if the focus can be on how proximity can facilitate transmission, then messages on intercourse can be provided. For example, people could be made aware of how contact between people is risky when a patient is infectious rather than telling them not to use contraceptives; thus, messages can be made more explicit and people can make decisions themselves.

Conclusion

This paper demonstrates that the tuberculosis control policies in Bangladesh hardly focus on SRH. We found that the messages provided to and interpreted by patients with tuberculosis are mixed and confusing and can have implications for their sexual and reproductive lives and living arrangements. Women and men with tuberculosis were also found to receive different messages depending on who delivered them. Our findings show that there is a need to go beyond a strictly clinical approach to treating this disease. Future interventions should include accurate and consistent messages based on a rights-sensitive approach that take into account the sexual needs of those infected with the disease and their living conditions.

Author contributions

Mrittika Barua: conceptualisation, data curation, formal analysis, investigation, methodology, project administration, supervision, visualisation, writing – original draft, writing – review & editing. Francien van Driel: supervision, writing – review & editing.

Data availability

The data that support the findings of this study are available on request from the corresponding author, [MB]. The data are not publicly available due to sensitive nature of the data that could compromise the privacy of research participants.

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Résumé

On dispose de peu d'informations sur les instructions données par les agents de santé aux patients chez qui la tuberculose a été diagnostiquée et les conséquences que ces instructions ont sur la santé et les droits sexuels et reproductifs ainsi que la lutte contre la tuberculose au Bangladesh. Cet article vise à attirer l'attention sur les directives de lutte contre la tuberculose et les pratiques de diffusion des informations qu'il peut être nécessaire d'adapter aux modes de vie des patients tuberculeux. Les données ont été recueillies dans les sous-districts de Monohardi et Narsingdi Sadar à Narsingdi et dans le bidonville de Mirpur à Dhaka, Bangladesh, entre décembre 2015 et mars 2016. Nous présentons les résultats d'une analyse de quatre documents importants, 45 entretiens approfondis (de patients souffrant ou ayant souffert de la tuberculose, des membres de leur famille et des agents de santé), et deux discussions par groupe d'intérêt avec des agents de santé. Les conclusions montrent que les directives et les politiques officielles n'abordent presque pas la santé et les droits sexuels. Pendant la période du traitement, les patients reçoivent des instructions ambiguës et contradictoires des agents de santé sur les rapports sexuels, la contraception, la grossesse et les modalités de vie. Les messages ont été interprétés différemment selon les personnes qui les ont transmis et celles les ont reçus, alors que les hommes et les femmes ont reçu des instructions différenciées. Les instructions n'étaient pas spécifiques au mode de vie des patients et ont donc donné lieu à des difficultés pour les suivre. Les futures interventions

Resumen

Existe escasa información sobre las indicaciones proporcionadas por trabajadores de salud a pacientes diagnosticados con tuberculosis y sobre las implicaciones que tienen estas indicaciones para la salud y los derechos sexuales y reproductivos y para el control de la tuberculosis en Bangladesh. El objetivo de este artículo es llamar la atención a las directrices para el control de la tuberculosis y a las prácticas de difusión de información que podrían necesitar ser adaptadas a las situaciones de vida de quienes viven con tuberculosis. La recolección de datos fue realizada en los subdistritos de Monohardi y Narsingdi Sadar, en Narsingdi y en el barrio bajo de Mirpur en Dhaka, Bangladesh, entre diciembre de 2015 y marzo de 2016. Presentamos los hallazgos del análisis de cuatro documentos importantes, 45 entrevistas a profundidad (con pacientes actuales y anteriores con tuberculosis, sus familiares y trabajadores de salud) y dos discusiones en grupos focales con trabajadores de salud. Los hallazgos muestran que las directrices oficiales y las políticas apenas abordan la salud y los derechos sexuales. Durante el período de tratamiento, los pacientes recibieron del personal de salud indicaciones mixtas e incoherentes sobre el coito sexual, la anticoncepción, el embarazo y acuerdos de vivienda. Los mensajes fueron interpretados de diferentes maneras según la persona que los transmitía y la persona que los recibía, y se proporcionaron diferentes indicaciones a mujeres y hombres. Las indicaciones no estaban relacionadas específicamente con las situaciones de vida de los pacientes, por lo cual resultó difícil

devraient garantir la formulation de messages corrects et cohérents et les politiques devraient être adaptées aux besoins sexuels des personnes infectées par la maladie.

aplicarlas. Futuras intervenciones deben asegurarse de transmitir mensajes correctos y coherentes, y las políticas deben adaptarse a las necesidades sexuales de las personas infectadas con la enfermedad.