THE SLOW SUFFOCATION OF A CITY

Dhaka's silent COPD burden

FABI HUDA

The first thing you notice, on entering the lanes of Shyampur, is how little sky there is. Tin walls press close on both sides, laundry is strung overhead, and the air is filled with the dark fog of industrial smoke from the adjacent factories. When asked whether the smoke bothers them, residents simply shrug, calling it "Dhaka'r aboha" (Dhaka's weather).

Across the city in Dakshinkhan, a woman in her mid-forties stands over a makeshift gas stove, boiling water for a cup of tea. She does so, punctuating the task with a heavy cough, which she explains is just part of her daily life. When prompted about the cough, she laughs: "Daktar ki bolbe? Dhaka-y toh eishob shobar e hoy" (What would the doctor say? It happens to everyone in Dhaka.)

She says it as matter-of-factly as the women of Shyampur.

Bangladesh is home to one of the most densely populated megacities in the world. On top of that, Dhaka continues to record some of the worst air quality in the world. IQAir's 2023 World Air Quality Report recorded Dhaka's mean annual PM2.5 concentration at 80.2 micrograms per cubic metre, which is more than sixteen times the WHO's recommended guideline of 5 µg/m³. Yet Chronic Obstructive Pulmonary Disease (COPD) is probably unheard of by many. It is a progressive, irreversible inflammatory disease of the airways and one of the most underreported health crises in urban Bangladesh. The association between long-term PM2.5 exposure and COPD development is now well established in the literature: higher exposure leads to a higher disease burden. Which is why it is surprising that national studies have estimated the prevalence of COPD at approximately 12.5% among Bangladeshi adults over 40, with slightly steeper rates in densely populated urban areas.

Dhaka's residents are exposed to multiple sources of contaminants due to unregulated industries within the boundaries of the city corporation. Along with this, the increasing number of vehicles pushes nitrogen oxides and black carbon into dense residential lanes, while some households, particularly in informal settlements, rely on biomass-burning clay stoves that fill small, unventilated rooms with smoke that, by some estimates, carries health risks equivalent to smoking 400 cigarettes per hour.

In Shyampur's settlements, where workers bring factory overflow home, every family member is in danger of being exposed to the same chemical contaminants as a factory worker. While random coughing and sneezing may seem inconsequential to work productivity, if left untreated, over time they reduce lung function. Exposure to occupational dust directly impairs physical work capacity and endurance, which can leave daily wage earners, who have no sick leave or job protection, with a household that does not eat that day.

Diagnosing COPD uses spirometry as the clinical gold standard, a lung function test that measures airflow obstruction. Studies on respiratory health services have found spirometry available in fewer than 20% of Bangladesh's public secondary-care facilities, suggesting a negligible presence at the primary care level, where most patients first present. And why would it be otherwise when individuals themselves do not consider their consistent coughing an issue? As seen in peri-urban Dhaka among adults with symptoms consistent with COPD, the majority attributed their symptoms to dust, ageing, or tobacco use, citing these as reasons for not seeking immediate medical consultation. Even if a patient reaches an upazila-level care facility with respiratory symptoms, they are typically managed symptomatically, usually treated for a presumed acute infection, prescribed a short course of antihistamines, and discharged.

Moreover, Bangladesh's national health reporting does not disaggregate COPD as a distinct diagnostic category in most institutional settings. While it is mandated that spirometry tests be available at the NCD corners at the Upazila Health Complex (UHC) level in Bangladesh, they are still not reaching enough people, as the national protocol for COPD management at the primary health care level remains awaiting implementation.

The national DHIS2 health information platform has not been updated to incorporate disaggregated NCD data, which results in an incomplete epidemiological record. This, coupled with a lack of community-based spirometry screening initiatives targeting high-risk populations such as informal settlement residents, and the absence of any systematic effort to equip community health workers with validated and low-cost screening tools such as CAPTURE (the COPD Assessment in Primary Care to Identify Undiagnosed Respiratory Disease and Exacerbation Risk), only exacerbates this knowledge gap. A disease that is not measured cannot generate the policy pressure required to fund treatment. The result is an unanswered burden in the health system, in which millions carry a diagnosable, manageable condition that eventually leads to deteriorating health and work capacity. Women are generally disproportionately impacted, as research documents that non-smoking women with high biomass exposure develop COPD at rates comparable to male smokers. Yet women with respiratory symptoms face compounded barriers to care: restricted mobility, household responsibility, economic dependence, and the gendered expectation that physical suffering is part of the domestic role.

At the policy level, COPD must be integrated explicitly into Bangladesh's NCD surveillance framework, with standardised diagnostic coding, systematic prevalence estimation, and reporting requirements that make the burden legible to planners. At the community level, public health communication must actively discourage the normalisation of respiratory issues, clearly and repeatedly asserting that buke bhaar and morning cough are symptoms of diseases that can be identified and managed. But most importantly, while Bangladesh's ambient air quality standards exist on paper, enforcement remains chronically weak, with PM2.5 concentrations persistently exceeding national standards for nearly half the year. Weak institutional capacity and political barriers to industrial compliance have been identified as key drivers of this phenomenon; industrial emission regulation in peri-urban Dhaka, specifically for unregistered factory discharge in areas like Shyampur, remains aspirational at best.

Whether it stays that way is in the hands of current policymakers, and in their commitment to a cleaner Dhaka city.

A narrow lane in a Shyampur informal settlement: tin walls press close on both sides, laundry strung overhead, and no through ventilation.

A cooking space in a Dakshinkhan informal settlement: a gas burner on a soot-darkened ledge, walls blackened with years of combustion residue, and a lattice vent as the only source of air.

A clay biomass stove in active use in Dakshinkhan, a Dhaka informal settlement, its open flame visible at the mouth of the vessel. The wall behind shows years of accumulated soot.

Interior of a single-room dwelling in a Shyampur informal settlement: a young mother with her infant, clothes hung to dry overhead, and cooking and living spaces undifferentiated.

Industrial smoke rising from factory compounds adjacent to a residential area in Shyampur. PHOTOS: FABI HUDA

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When boys don't know

The missing half of menstrual conversations in our slums

MOSHARRAT MONIMA

In recent years, Bangladesh has made significant progress in destigmatising menstrual hygiene. Yet the reality reflects the harrowing gap that remains to be addressed: globally, 500 million people lack access to adequate menstrual hygiene facilities (World Bank, 2023), and in Bangladesh, one in three adolescent schoolgirls still misses school every month due to menstruation, while only 53% had heard about menstruation before their first period (UNICEF Bangladesh, 2022).

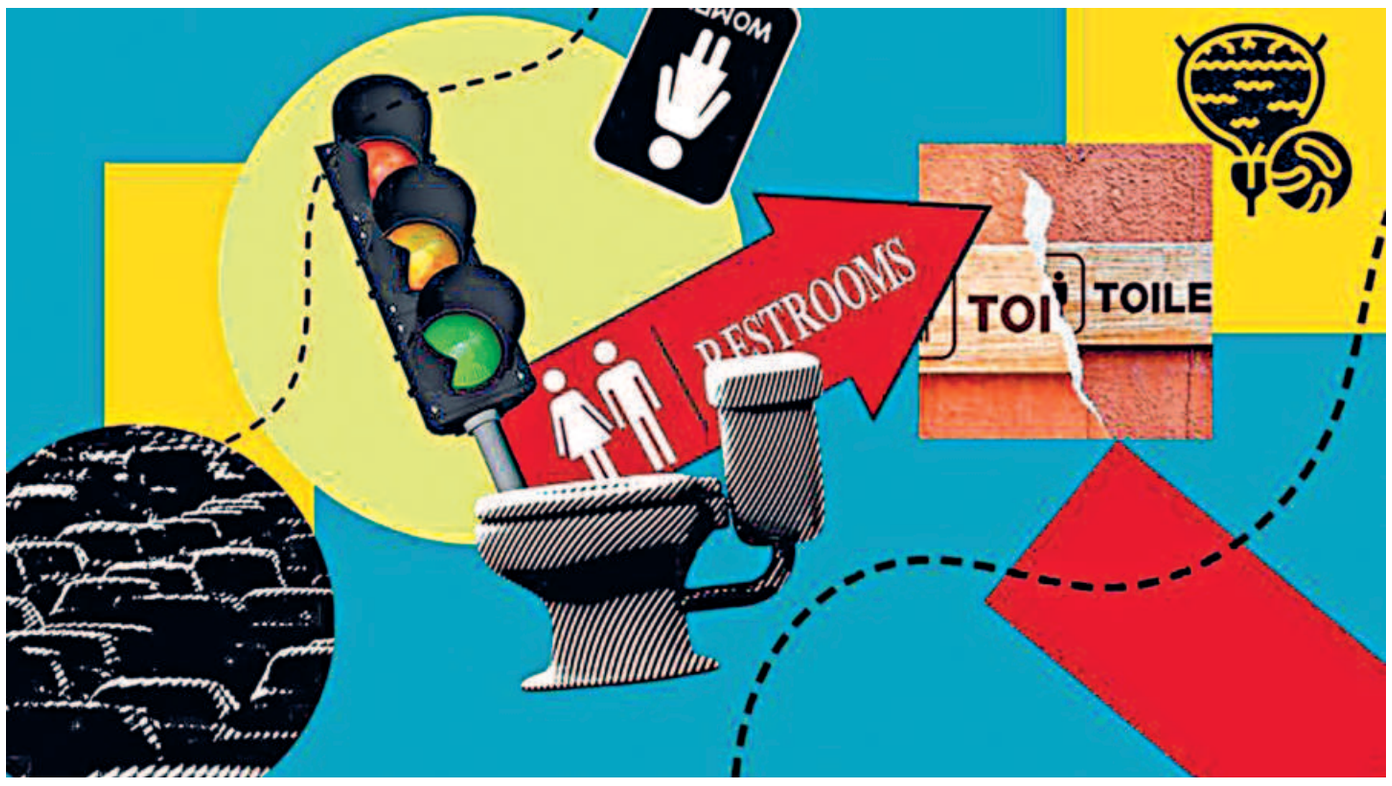
But this is just one side of the coin. In conventional research, we have yet to see the conversation on menstrual hygiene being brought forward to educate and raise awareness among a crucial group: adolescent boys.

While walking through the narrow lanes of Kalyanpur slum in Dhaka, I spoke with 12 adolescent boys aged 15–19 to understand what they knew and felt about menstruation. What emerged was a picture of silence, stigma and missed opportunities.

LEARNING FROM WHISPERS, NOT FROM SCHOOLS

Two-thirds of the boys had some idea about menstruation from friends, Facebook reels and television dramas. Not one mentioned learning about it in school. This is unsurprising. Although the National Curriculum and Textbook Board (NCTB) includes basic puberty content in grades six to ten, these chapters are routinely skipped by teachers who feel culturally ill-equipped (The Daily Star, 2023). Where content does exist, girls are taught in segregated sessions, while boys receive nothing comparable. Adolescent Sexual and Reproductive Health programmes in Bangladesh have historically focused predominantly on girls (Population Council, 2017), creating a structured information gap: boys are not uninformed by accident; they are deliberately excluded.

One boy confused sanitary pads with nappies. Another recalled a television scene of a girl's stain but remembered only the embarrassment, not the biology. Knowledge about menstruation and nutrition was even less explored; only two boys vaguely suggested that girls might need more iron. Yet iron deficiency is the most prevalent nutritional deficiency in the world, disproportionately affecting women of reproductive age because monthly blood loss more than doubles their dietary iron requirements (Percy, Mansour, & Fraser, 2017; Fernandez-Jimenez et al., 2020). In informal settlements like Kalyanpur, where food insecurity is chronic, this gap has real consequences. These boys, on the precipice of adulthood and future husbands and fathers making household decisions, remain unaware of the nutritional needs of the women beside them.



FILE VISUAL: ALIZA RAHMAN

THE VEIL OF EMBARRASSMENT

Eight of the twelve boys were uncomfortable discussing menstruation, describing it as a "girls' matter", private, embarrassing and off-limits. This discomfort is not incidental. Gender sociologists have long observed that boys are socialised to treat menstruation as belonging to a "female sphere" they should not enter (Johnston-Robledo & Chrisler, as cited in Bobel et al., 2020). Goffman's theory of stigma explains this further: shame around menstruation emerges not from biology but from the interactional space, enacted through exclusion and the anticipation of ridicule (Bobel et al., 2020). A 2022 Plan International survey across multiple countries found that more than one in three boys believes periods should be kept secret (Plan International, 2022).

The effects are evident. In the cases we considered, the boys confessed that teasing accompanies stains at school because boys simply do not understand what is happening. Stigma breeds where there is ignorance. In a pilot study conducted in Bangladesh, it was found that if boys are incorporated into MHM discussions, bullying is reduced and boys begin to raise concerns with teachers if they see signs of discomfort emanating from their peers (Khan et al., 2023). The Government of Bangladesh's own National MHM Strategy (2021), under which MHM discussions are being conducted, has identified male engagement as one of its guiding principles; however, it has not been fully implemented (MoHFW, 2021).

A QUIET SHIFT

Yet the story does not end in pessimism. Seven boys described menstruation as a natural process that should not be shameful. Ten out of twelve expressed a clear desire to learn more. "I'd like to start from the basics and learn everything properly," one said, recalling how girls were taught separately while boys were left out. "If it had been shared with everyone, it would have helped." Their curiosity signals something important: boys are not resistant to inclusion. They are waiting for it.

CAN BOYS BE PART OF THE SOLUTION?

When asked if they could support menstruating girls, five said yes, that they could buy pads, offer help and reduce embarrassment. Seven felt they had no role, not because they were indifferent, but because they lacked knowledge. "If I know about things, I can surely help," one boy said. The divide was not ideological. It was informational.

Evidence confirms this. In Uganda, including boys in school health clubs focused on menstrual health reduced bullying and turned male students into active supporters (Plan International, 2022). In Bangladesh, a quasi-experimental study is currently testing the effects of involving male family members in menstrual hygiene management, with the expectation that greater male awareness will reduce stigma and improve outcomes (Murshid et al., 2023).

BEYOND PADS AND POLICY

Bangladesh has made commendable strides in promoting menstrual hygiene management. The Bangladesh Bureau of Statistics' 2018 National Hygiene Survey reported that 97% of women had a place to wash and change during their periods. Between 2014 and 2019, the proportion of women using old cloth during menstruation dropped from 85% to 63%. School absenteeism among girls due to menstruation fell from 40% to 30% over the same period (BBS, 2018; The Daily Star, 2022). Bangladesh was one of only two countries out of 46 to report on Menstrual Health Indicators for the UN's Joint Monitoring Programme in 2021 (The Daily Star, 2022). Most significantly, the Government of Bangladesh released its National Menstrual Hygiene Management Strategy in 2021, signalling an institutional commitment to systematic MHM across the WASH, health and education sectors (MoHFW, 2021). Yet infrastructure and product distribution alone cannot dismantle silence. Cultural taboos, gender norms and educational gaps must be addressed alongside physical facilities.

There should be education on reproductive health for both girls and boys. Community-level projects by NGOs, adolescent-led clubs and "uthan boithok" should specifically target boys. Teachers and parents should be encouraged to discuss the topic with girls without hesitation or shame.

The boys I spoke to are not dismissive. They are curious. They asked me questions about cramps, nutrition, length of time and how they could help in the future. They spoke about how schoolboys laughed and asked how they could change this.

When boys are left out of the lesson, girls carry the burden alone.

Breaking the silence means bringing boys into the classroom, into the conversation and into shared responsibility. Only then can menstruation move from being a whispered topic in slum alleyways to one discussed with knowledge, dignity and respect.

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