

ThinkSpace

A Quarterly Research Digest

Vol. 02



THE INVISIBLE
DETERMINANTS

ThinkSpace

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THE INVISIBLE DETERMINANTS

The decisions that shape our health are often made long before we step into a clinic. It is influenced by the cities we live in, the policies that guide our choices, the technologies we embrace, and the systems that quietly determine who has access, who is protected, and who is left behind.

In this edition of ThinkSpace, we uncover the hidden forces shaping health in Bangladesh. From the economics behind life-saving treatments and the growing role of artificial intelligence in research, to urban heat, nutrition, mental health, and healthier cities, each story reveals how decisions made beyond the clinic ripple through our everyday lives.

We invite you to look beyond the obvious and explore the systems beneath the surface. Because understanding how health is shaped is the first step toward creating a future where it is shaped more fairly.



A CHANGING CITY, A CHANGING SYSTEM

Rethinking urban health in Dhaka

Sirat-E-Rowshan Islam | Research Uptake and Communication Officer

Cities do not change in a day. They grow, take in and adjust—sometimes quicker than the systems can support them. In a city like Dhaka where development is constant and tangible, healthcare has always struggled to keep up with the demands of its citizens.

To most of the residents, especially those who have to fight with the realities of lower- and middle-income urban living, access to healthcare is not only a question of finding a facility. It is concerned with affordability, continuity, and trust. These people do not visit a clinic until the

symptoms are severe. Preventive care is a far-fetched idea for them. And for chronic conditions, such as hypertension and diabetes, which are collectively known as non-communicable diseases (NCDs), this delay can silently become a long-term risk.

This is the landscape in which the CHORUS (Community-led Responsive and Effective Urban Health Systems) research consortium started its work— not as a solution in itself, but as a part of a greater project to rethink how urban health systems operate and whom they serve.

The burden spills beyond clinics into work, income, relationships, and daily functioning.

FRAGMENTED SYSTEM

People face multiple barriers, duplicated visits, and gaps in care.



MORE COORDINATED CARE

Connected services, shared information, and people at the centre.



Urban Health Under Pressure

Urban healthcare in Dhaka has long been described as being fragmented. NGO-led initiatives, public services and private providers tend to run parallel, with limited coordination. Patients switch among them looking for better care, but often end up paying out-of-pocket and facing uneven quality of care. Within such an environment, managing chronic diseases can become difficult. Constant check-ups, regular supply of medicine, and long-term follow-up, which are vital elements of NCD management, are not easy to maintain.

CHORUS came into this space with a different focus: to strengthen primary healthcare systems internally, and to put more responsibility on the local level.

WHAT CHORUS HELPED SHIFT



1. Local ownership
City corporations taking stronger responsibility



2. Prevention focus
Hypertension and diabetes managed earlier



3. Digital follow-up
Simple app supports continuity of care



4. Strategic purchasing
Resources allocated more rationally and equitably

» Continued from page 05

Shifting Ownership to the Local Level

One of the most noticeable changes has been the role of city corporations in urban health governance. Instead of just depending on the national level's systems, there has been a slow shift towards the local ownership - where the urban authorities are gradually beginning to take active responsibility in ensuring essential health services. These cover resource allocation decisions, service delivery and prioritizing community health needs.

An important part of this shift has also been the introduction of strategic purchasing approaches through CHORUS project 2 in Bangladesh, which aims to help city authorities think more rationally about how resources should be allocated, which services must be prioritized, and how to ensure value and equity in service delivery. It is a step in the direction of active spending as opposed to passive spending.

This change to local governance is not just an administrative change. It indicates a more profound acknowledgement that the issues of urban health must be solved through the prism of the realities that the city has to live in.

*Access to healthcare
is not only a question
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A gradual change towards prevention

Meanwhile, CHORUS has helped to bring about something not as visible but equally important, a change in mindset. In most urban environments, people only visit hospitals when illness interferes with daily life; regular checkups, early diagnosis, and lifestyle modification are mostly ignored. By focusing on NCDs, CHORUS has focused on bringing preventive care into the conversation. Hypertension and diabetes are no longer considered as isolated medical issues, but they are a part of a larger urban health issue that needs to be addressed frequently.

This shift has been supported by the introduction of digital tools like the Simple app through CHORUS project 1, which allows healthcare providers to track patients with hypertension over time. What this does, in practice, is quite powerful - it transforms care from a one-time visit into an ongoing relationship. Patients can be followed up more systematically, treatment adherence improves, and providers have clearer visibility of patient outcomes.

Such a transformation is not just in awareness, but in the practical side as well. Primary healthcare centers are now being structured as the first line of contact in NCD services, increasing the rate of early diagnosis and regular management of patients. The concept is very straightforward, yet very strong: care must come before the complications arise.

The Policy to Practice: What Has Changed

With these changes, there are also some tangible improvements, which address the realities of healthcare delivery. The long-standing challenge of inconsistent access to essential medicines is beginning to ease, as primary healthcare facilities move toward more stable and reliable supply systems. Also, institutional commitment is growing through steps to specific budget allocation to necessary NCD services. When resources are planned and allocated with specific health priorities in mind, it reduces uncertainty and strengthens the overall system.

Such transformations are not always seen on the surface of the city immediately. They have no dramatic indicators and no defining moments. They instead show changes over time - by delivering better services, better coordination, and by providing more consistent presence of care in communities.

Looking Ahead: A System Still in Transition

From our perspective, what stands out is how these shifts merge together to tell a larger story. It is not simply about a project that introduces new interventions. It is about a process that contributed to aligning different components of the system to a common goal: to make urban healthcare more accessible, reliable, and responsive.

In this sense, CHORUS can be considered less of an independent project and more of a catalyst. It points out what can be done when the focus is on strengthening our healthcare systems rather than developing alternative solutions.

As Dhaka continues to grow, the strain on its health systems will only grow. The burden of NCDs is expected to increase, as changing lifestyles, environmental factors, and demographic shifts are responsible for it. To overcome these difficulties, long-term planning, sustained effort and the ongoing cooperation between institutions will be required.

WHAT NEEDS TO CONTINUE



Strengthening local government capacity for planning and management



Ensuring stable medicine supply and last-mile delivery



Allocating and protecting budget for NCD services



Building long-term follow-up into routine practice



Deepening coordination across institutions and sectors



Embedding evidence-to-policy feedback loops

But perhaps the most important lesson from CHORUS is this: meaningful change in urban health does not always come from large-scale interventions. It can start with minor, strategic changes. In a city that is constantly in motion, these small changes matter. They shape how care is delivered, how systems respond, and ultimately, how people experience health in their everyday lives.

And in that ongoing transformation, the story of urban health in Dhaka is still being written.

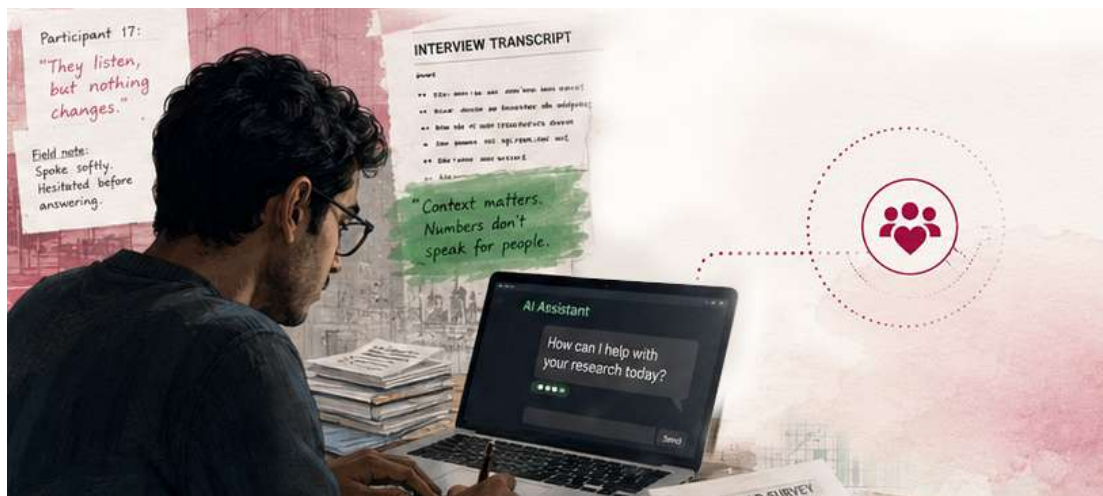
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ALGORITHMS AND EMPATHY: NOTES FROM A RESEARCHER

On AI as a tool, not a replacement, in public health research

Ibrahim Hasan | Research Assistant



It is 11 PM. I am staring at a folder of interview transcripts and survey data that will, in the weeks ahead, be coded line by line – by hand or with the help of qualitative software. Tonight, I use an AI simply to get a rough sketch of the terrain before the real work begins. A few years ago, even that rough sketch would have taken days of reading and re-reading before I could hold the shape of the data in my head. The speed is still disorienting, no matter how many times I do it.

According to a 2025 Wiley survey of nearly 5,000 researchers worldwide, AI adoption in research and publication tasks has already reached the majority of respondents, with most expecting its role to expand further across the research process (Wiley, 2025). That shift is already here for many of us. But as the novelty fades, a harder question stays: how do we use this processing power without stripping the human empathy out of our public health work?

Where AI works well

For early-career researchers, the benefits are immediate and real. AI clears the heavy lifting: rapid literature reviews, citation formatting, restructuring messy field data into readable summaries. Time that used to disappear into administrative work becomes available for actual thinking.

It also partially levels an uneven playing field. I use AI to translate my notes from non-native English into formal academic prose. My colleagues from high-income research settings rarely face that barrier. I do – and the tool helps me present local insights on a global platform without losing the substance in the translation.

AI is a co-pilot. It is never the one accountable for where the work lands.

Where the algorithm goes quiet

The gap that AI cannot cross is the human one. I can feed an LLM a transcript from a tobacco survey and get clean thematic codes. What it cannot do is hear the hesitation before someone answers, “Did you actually quit?” or register the small, complicated smile that follows. It reads only text. It drops the context that lives between the lines.

There is also a structural problem emerging in how research is done. A 2026 analysis in *Nature*, examining 41 million papers, found a striking trade-off. Scientists who adopted AI tools saw their work cited nearly five times more often, on average, and moved into research leadership roles more than a year earlier than peers who did not.

But this individual gain comes with a collective cost. Across the same dataset, AI adoption measurably narrowed the range of topics researchers explored. We are producing more output while taking fewer intellectual risks – a research environment that churns out papers without generating new questions is a productive-looking problem.

WHAT AI CAN HELP WITH



LITERATURE REVIEWS

Scan, summarise, and synthesise research quickly.



WRITING & FORMATTING

Draft text, check grammar, and format citations.



SUMMARISING DATA

Identify patterns and themes in large, messy datasets.



LANGUAGE SUPPORT

Help non-native English writers express insights clearly and confidently.

WHAT STILL REQUIRES A HUMAN



CULTURAL CONTEXT

Understand local norms, power dynamics, and lived realities.



ETHICAL JUDGEMENT

Make responsible decisions about harm, consent & risk.



LISTENING & EMPATHY

Hear what is unsaid. Notice emotions, silences, and nuance.



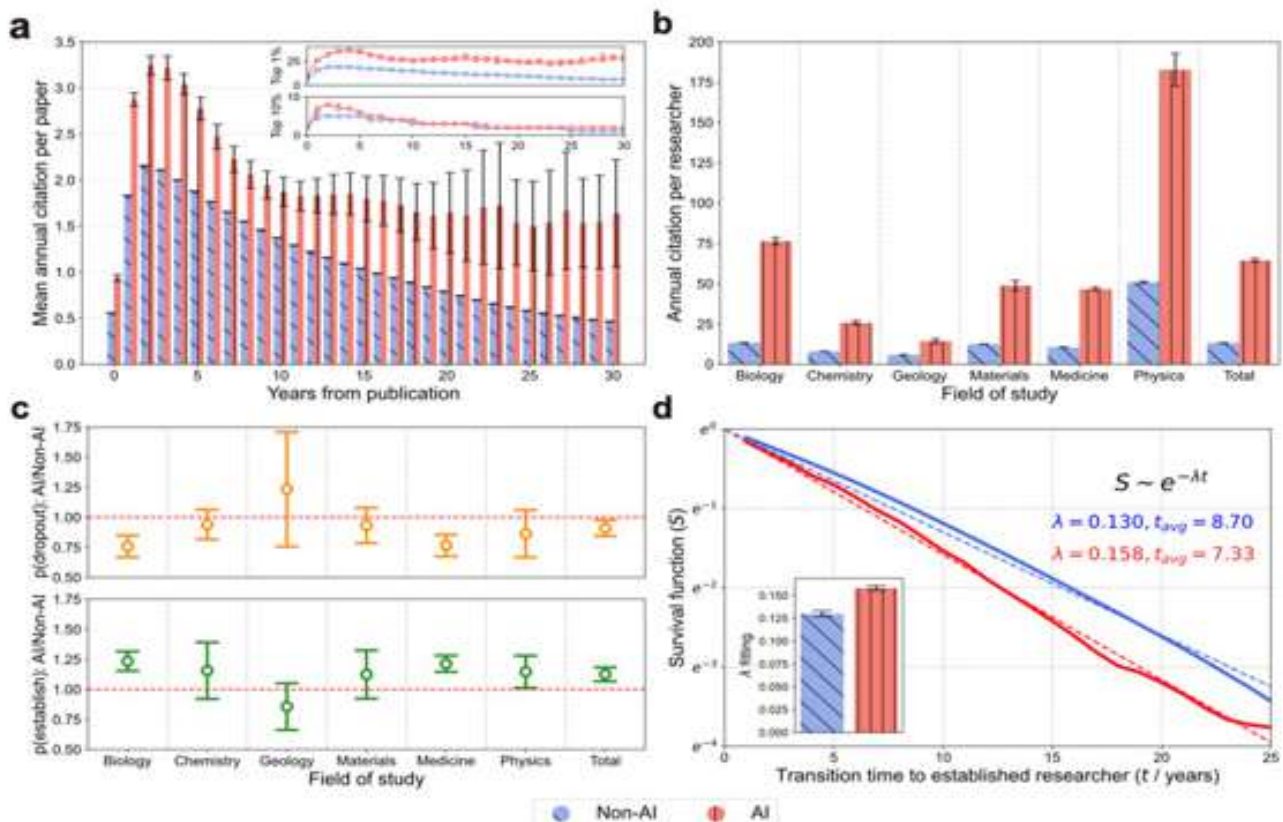
INTERPRETATION

Connect data to meaning and build conclusions with humility.

» Continued from page 9

Figure 1: (Hao et al., Nature 2026):

AI enlarges paper impact and enhances researcher careers: showing citation gains and faster career progression for AI-adopting scientists across six natural science disciplines.



There is a bias problem too. Most AI models are trained predominantly on data from high-income, Western settings – a gap documented in recent work on fairness and generalisability across income contexts (Yang et al., 2024). When I ask an AI to help structure a physical activity policy intervention for Bangladesh, its default assumptions often clash with realities it has never encountered.

It cannot picture the motorcycle rider waiting in a fuel queue that has already eaten into his morning – late for work, recalculating his day, his patience and his pocket both running thin. The algorithm does not know what it does not know.

Co-pilot, not autopilot

The Committee on Publication Ethics is direct on this point: researchers remain fully responsible for everything an AI helps produce, and using these tools without human oversight is a question of research integrity, not just style (COPE, 2023). AI is a co-pilot. It is never the one accountable for where the work lands.

I use it for the work that does not require judgment – cleaning data, organising literature, formatting. That frees up mental bandwidth for the things it cannot do: making ethical calls, understanding cultural context, actually listening to what people are telling us. In the

writing of this piece itself, AI helped shape structure and language – but the judgment about what mattered, and why, stayed with me.

At ARK Foundation, the data we collect and analyse is ultimately just different ways of telling real human stories. The algorithm can process the variables. But identifying which variables matter, understanding why a community behaves the way it does, deciding what the data is actually saying about people’s lives – that requires a researcher who has spent time in those lanes, in those clinics, in those households.

AI is a genuinely useful tool. But in public health research, useful tools can become dangerous when they replace the habit of staying curious, sceptical, and close to the ground. The brain behind the algorithm still has to belong to a human who cares about the answer.

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BEVERAGE TAX LOOPHOLE IN BANGLADESH

AND ITS IMPACT ON PUBLIC HEALTH

Ashikur Rahman Tonmoy | Intern

A hot summer day. Heat, sweat, exhaustion. The scorching sun is out at full intensity, and it feels like the weather is burning you from the inside out. In a moment like this, what wouldn't you give for a single sip of an icy, refreshing drink? It is a classic summer-time scenario. Naturally, your mind drifts toward a chilled soft drink to soothe the burn and cool you down.

You find a local corner store, and your hand instinctively reaches into the cooler for a carbonated soda. But right before your fingers touch the can, a flicker of hesitation stops you. All those warnings about sugar and health risks flash through your mind. Seeking a healthier escape, you pivot. You grab a packaged fruit juice instead. It looks equally cold and equally soothing, but it feels innocent.

That first sip is pure relief. As the chill hits your throat, you lean back and mindlessly scroll through your phone. An article

about rising taxes on soft drinks catches your eye. You scroll past it, but the headline leaves a faint impression. Looking down, the fruit drink in your hand suddenly feels like the ultimate victory. It feels healthier, smarter, and entirely guilt-free. It feels like a win.

Feels good, right? This scenario isn't unique to any one person. It is a shared modern experience. Almost every one of us has stood in front of that cooler and made the exact same pivot. But this comforting moment begs a critical question. Did we actually make the right decision, or did we just fall for a smarter illusion?

*Did we actually make the
right decision, or did we just
fall for a smarter illusion?*



Who is the Real Villain?

The quiet assumption that fruit drinks are somehow safer than carbonated sodas is deeply embedded in our daily choices. Surprisingly, it is also hardwired into Bangladesh's current beverage tax structure. This collective blind spot is costing us dearly, and the true health consequences will take years to fully realize.

The medical case against sugary drinks has absolutely nothing to do with bubbles or carbonation. Instead, it comes down to three major issues: rapid sugar delivery to your system, a complete lack of feeling full, and the fact that these drinks replace healthier options in our diet.

AT A GLANCE



Sugar, not carbonation, drives the health risk.



Different drinks can send the same metabolic signal.



Tax design may shape misleading consumer choices.

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The real villain is not the carbonation in the soda can. It is the hidden mountain of sugar hiding inside both bottles.

The data back this up clearly. In a massive meta-analysis published by researchers Vartanian, Schwartz, and Brownell, teams looked at eighty-eight different studies on the topic. They found a direct, undeniable link between soft drink intake and higher overall calorie consumption, weight gain, and a spiked risk for chronic medical conditions like diabetes. Essentially, liquid sugar pushes out essential nutrients, leading to a noticeable drop in milk and calcium intake.

Crucially, that exact same logic applies to fruit juice. Health experts Guasch-Ferré and Hu pointed out in their research that packaged fruit juices frequently contain just as much sugar and as many calories as standard sodas. They noted that once your body metabolizes the liquid, your biological response to the sugar is practically identical.

This reality is already reshaping global health policies. A recent study by researcher Boachie and a team of experts modeled what happens when a government takes this science seriously. In South Africa, policy designers explicitly reexamined fruit juices for heavy taxation because their sugar concentration matches soft drinks so closely. The projections showed that taxing these juice drinks would prevent diabetes cases, save lives, cut down on national healthcare spending, and generate vital public revenue.

When you look at the science, the message is clear. The real villain is not the carbonation in the soda can. It is the hidden mountain of sugar hiding inside both bottles.

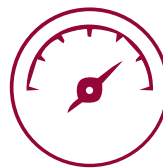
The Loophole in the System

Bangladesh taxes sugary drinks, but not always in a way that reflects their actual health risks. In many cases, the tax system treats carbonated soft drinks much more harshly than other sugary beverages, even when they contain similar amounts of sugar. The problem, however, is not the bubbles. It is the sugar.

Under the FY2025-26 Customs Tariff, sweetened carbonated beverages (HS 2202.10.00) are subject to a 100 percent supplementary duty, resulting in a total tax incidence of more than 212 percent. Many packaged fruit drinks, on the other hand, face a 25 percent customs duty and a 30 percent supplementary duty. While this approach generates revenue, it does not necessarily encourage healthier choices.

SUGAR, NOT BUBBLES

The health risk is driven by:



Rapid sugar delivery

Liquid sugar is absorbed faster than solid food, causing quick spikes in blood glucose & insulin.



No feeling full

Sugary drinks do not create satiety. We do not feel full, so we consume more calories overall.



Displacement effect

These drinks often replace water, milk or other healthier beverages in our daily diet.

This is where the loophole lies. A packaged fruit drink loaded with added sugar can face only a fraction of the tax imposed on a carbonated soft drink, despite carrying many of the same health risks. As a result, consumers may believe they are making a healthier choice when, in reality, they are simply switching from one sugary drink to another.

Research from Bangladesh suggests that taxes can play an important role in changing consumer behaviour. A study by Huque, Azad and Ahmed found that demand for soft drinks is highly sensitive to price changes. The researchers estimated that a 10 percent increase in price could reduce demand by approximately 11.7 percent. Put simply, when sugary drinks become more expensive, people buy less of them.

Evidence from other countries tells a similar story. In 2014, Mexico introduced a tax of one peso per litre on sugar sweetened beverages. According to Colchero, Molina and Guerrero López, purchases of these drinks fell by 6.3 percent after the tax was introduced. The policy did not eliminate consumption, but it encouraged many people to cut back.

The issue is particularly important for Bangladesh because sugary drinks have already become a regular part of everyday life. Research by Azad and Huque found that more than 70 percent of Bangladeshi households consume at least one sugar added beverage. On average, households spend around 2 percent of their monthly expenditure on these products.

Taken together, the evidence points to a simple conclusion. Taxes can help reduce the consumption of unhealthy drinks, but only when they are applied consistently. If two beverages contain similar amounts of sugar, they should not be treated very differently simply because one is fizzy and the other is not. If the objective is to protect public health, then the focus should be on sugar content, not carbonation.

CURRENT BEVERAGE TAX

Sweetened carbonated beverages (SSBs)



100%
Supplementary duty

Most packaged fruit drinks



25%
Customs duty
+30%
Supplementary duty

WHAT THIS MEANS



We are aiming at the wrong target when we tax carbonation but not sugar.



Consumers are misled into thinking some sugary drinks are healthier than others.



Public health goals remain out of reach when policy does not reflect science.

WHAT IT CREATES



Consumers switch from taxed soda to lightly taxed fruit drinks.



Sugar consumption remains high or even increases.



Health risks stay. The loophole wins.

» Continued from page 15

Don't let the headline number fool you

At first glance, a tax burden of more than 200 percent on carbonated soft drinks sounds severe. But large numbers on paper do not automatically translate into better health outcomes.

Bangladesh's experience with tobacco taxation offers an important lesson. Research by Nigar Nargis and colleagues found that, despite high tax rates on cigarettes, public health gains were often weakened by rising affordability, loopholes in the tax structure, and consumers switching to cheaper alternatives.

The same risk exists with sugary drinks. A tax system can appear tough while still failing as a health policy if it targets only certain categories of products and allows consumers to simply switch to other sugary alternatives. Bangladesh's current treatment of fruit drinks and beverage concentrates creates exactly that risk.

There is another problem. Despite a tax incidence exceeding 200 percent, sugary drinks remain affordable for many consumers. A tax that stays unchanged while incomes rise gradually becomes less effective. As households earn more, sugary drinks take up a smaller share of their budgets and become easier to buy.

In other words, a tax that does not keep pace with rising incomes is slowly losing its impact. The headline number may stay the same, but the health benefits quietly erode over time.

KEY EVIDENCE FROM BANGLADESH

- Soft drink price ↑10% → Consumption ↓11.7%
- Low-income groups reduce intake the most
- current taxation fails to disrupt total sugar consumption
- Consumers switch to cheaper, lightly taxed sugary drinks

WHAT WE DO NOW



- Target carbonation, not the real risk
- Encourage switching to other sugary drinks
- Create a false sense of protection

VS

WHAT WE SHOULD DO



- Target the actual health risk
- Keep taxation consistent across products & brands
- Deliver a clearer, stronger health signal

The Line Should Be Drawn Around Sugar, Not Carbonation

Let's return to that hot summer afternoon. The fruit drink was never the villain. Nor is it the government's responsibility to guarantee that every consumer makes the healthiest choice. The real issue lies elsewhere. It lies in the signal our tax system sends.

Taxes do more than raise revenue. They influence how people think about products. When carbonated drinks face a 100 percent supplementary duty while many packaged fruit drinks face only 30 percent, it creates the impression that one is significantly worse than the other. Yet from a health perspective, the concern is not the carbonation. It is the sugar.

What makes this distinction even harder to justify is that it often does not translate into a meaningful price difference. In many shops across Bangladesh,

carbonated soft drinks and packaged fruit drinks sit on the same shelf at similar prices. If the price is similar, the tax is neither discouraging consumption nor helping consumers make more informed choices.

Sugar is not a prohibited ingredient, and no single tax can solve Bangladesh's growing burden of diet related diseases. But if improving public health is one of the objectives of taxing sugary drinks, then the policy should reflect that goal. A system that heavily taxes carbonation while lightly taxing products with similar sugar content is not really targeting sugar. It is targeting bubbles.

The question, then, is not whether a drink is fizzy or still. The question is how much sugar it contains. Until our tax system reflects that reality, consumers will continue making choices that seem sensible, while the health risks remain largely unchanged.

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Urban Heat as an Emerging Public Health and Economic Risk in Bangladesh

How rising temperatures are reshaping health, work, and inequality in Bangladesh

Nusrat Jahan Jebin | Intern

By late morning in Dhaka and nearby areas, the heat is already shaping the day. Rickshaw pullers wait in stalled traffic with little to no shade. Construction workers and street vendors stand on exposed concrete around heated pavements, while buses, dust, and humid air thicken the already existing pollution burden.

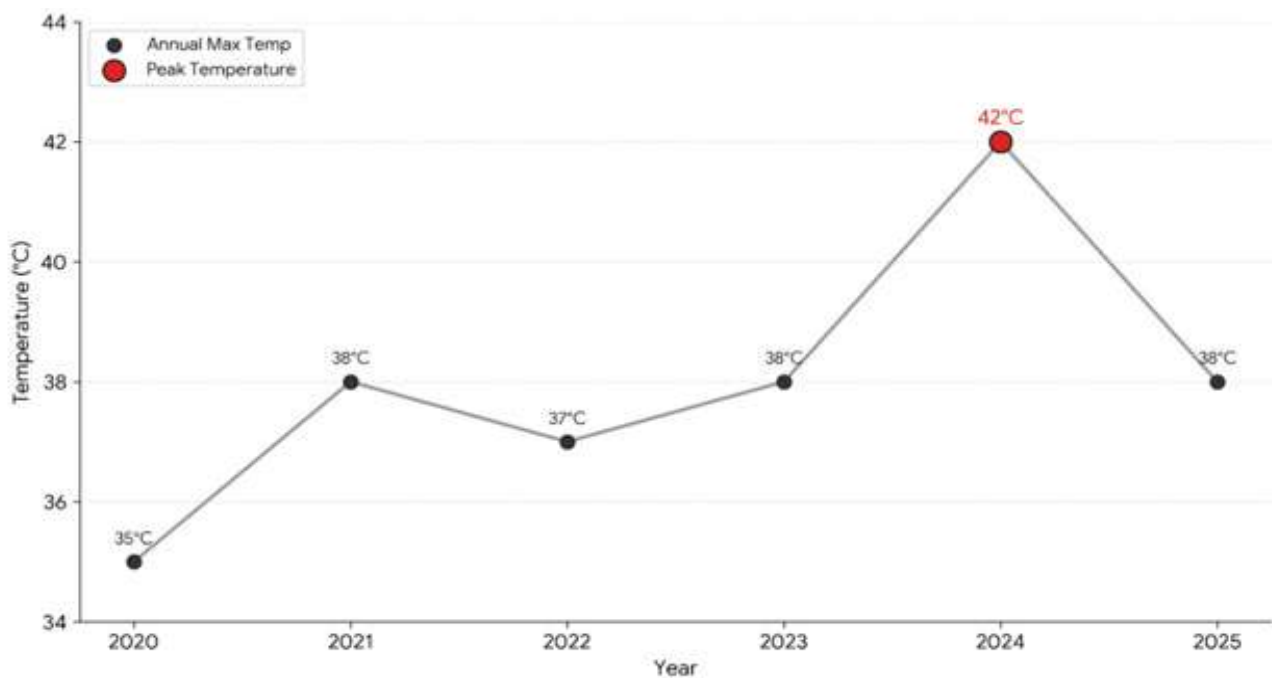
A hazard such as this, often treated as a routine summer inconvenience, has now emerged as a significant national issue, particularly in Dhaka, Bangladesh,

and we can safely assume that this was not an isolated shock. Increasing heat driven by climate change, urban factors, and socioeconomic inequalities presents compounded risks. It is not only a public health issue but also an economic one because it drives illness, worsens chronic disease, and reduces recovery at night while simultaneously slowing the labor force, cutting earnings, and shifting the burden onto households that lack the capacity to absorb it.

Heat is not merely a climatic issue; it is a manifestation of existing social inequalities



Figure: Analysis of annual maximum temperatures (2020-2025)



Graphically illustrated are the highest temperatures recorded over the past few years, the hottest months being April and May, average temperature of the past few years is a frightening 38°C.

» Continued from page 19

Everyday heat Exposure in Urban Populations

The most exposed groups are those who simply cannot step away from the heat. The majority are outdoor informal workers such as rickshaw pullers, and construction workers, who have to spend long hours beside asphalt, engines, and bare concrete during the hottest parts of the day. Urban poverty makes escaping the heat even harder.

Outdoor informal workers tend to experience greater heat-related health problems than their indoor counterparts. Heat follows low-income residents from work into crowded homes with poor ventilation, tin roofs and congested living spaces. In these settings, recovery from heat is minimal even after sunset.

Health Burden of heat

The first signs of cumulative heat strain often present as familiar symptoms such as heavy sweating, dry mouth, headaches, dizziness, weakness, and fatigue. These symptoms are frequently dismissed when they should instead be recognised as important warning signs rather than minor discomforts.

Heat-related illness in Bangladesh is often hidden because cases are recorded under immediate diagnoses such as dehydration, exhaustion, low blood pressure, cardiac events, or general weakness rather than heat itself. Heat often manifests through common symptoms or by worsening existing conditions, while workers, clinicians, and routine surveillance systems may all fail to identify it as a contributing cause.

A 2025 study of cardiovascular emergency visits in Dhaka found that heat was associated with increased risk, and that the effect rose sharply on the most humid days. This matters in Bangladesh because humid heat makes it harder for the body to cool itself, even when temperatures may seem familiar. Extreme heat can aggravate cardiovascular and kidney stress, worsen chronic illness, and heighten risks during pregnancy, especially where women are already socially or economically vulnerable. In garment factories, workers and health staff have also linked hot conditions to nausea, dehydration, low blood pressure, and reduced concentration, showing that the burden extends well beyond obvious outdoor labor.

AT A GLANCE



HEALTH

More heat stress, heatstroke, and chronic illness



PRODUCTIVITY

Work capacity drops significantly above 35°C



INCOME

Fewer workdays mean lower earnings



INEQUALITY

The poorest and outdoor workers bear the greatest risk



0.25 billion

lost workdays annually due to extreme heat



US\$1.33-1.78 billion

economy-wide losses each year



35°C+

productivity drops sharply as temperatures rise



Humidity

High humidity reduces the body's ability to cool itself.

WHO CARRIES THE HEAT BURDEN?



OUTDOOR WORKERS

Long hours in the sun with limited rest & hydration.



LOW-INCOME HOUSEHOLDS

Poor housing & limited access to cooling or safe water.



OLDER ADULTS

Higher risk of heat stress and chronic disease complications.



CHILDREN

More vulnerable to dehydration and heat stroke.



PREGNANT WOMEN

Heat increases risks for mothers and newborns.



PEOPLE WITH CHRONIC ILLNESS

Heat worsens heart, lung, kidney, and metabolic conditions.

Economic Costs and Distributional Inequalities of Heat Stress

In a country like Bangladesh, heat exposure is strongly influenced by socioeconomic factors, resulting in unequal living and working conditions. Heat negatively affects the livelihoods of low-income households by forcing workers to slow down, take more breaks, and finish work earlier, leading to reduced income, particularly for those paid per trip, shift, or piece, as seen in sectors such as the garment industry.

Higher-income households tend to suffer less from heat stress due to better housing, air conditioning, and enclosed transportation, while lower-income households face poor ventilation and outdoor labour. This disparity affects not only heat exposure but also the ability to recover from it.

This is why heat is a hidden economic burden, not just a health burden. The World Bank's recent Bangladesh heat report estimates that temperature-related productivity losses in 2024 amounted to approximately 0.25 billion lost workdays, with economy-wide losses of roughly US\$1.33 to US\$1.78 billion. The same report finds that productivity declines as temperatures rise above 35°C. These uneven losses fall hardest on daily wage earners, informal workers, and households with little savings, where even a small reduction in work capacity can quickly become a serious welfare problem.

Gender dynamics further intensify the issue, as women in various labour sectors are more likely to experience heightened health risks, compounded by other vulnerabilities such as poor housing and limited access to essential services.

Thus, heat is not merely a climatic issue but can also be understood as a manifestation of existing social inequalities.

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Structural Urban and Climatic Determinants of Heat Risk

Dhaka's heat burden is being built into the city itself. Recent research indicates that Dhaka is experiencing a faster increase in temperature than its surrounding rural areas, with the urban heat island effect being most pronounced during the evening and night when built surfaces release the heat they have stored throughout the day

Another recent study shows rising wet-bulb globe temperatures across Bangladesh, with more days now falling into high and extreme-risk categories for heat stress. This means residents are facing both broader climate warming and an additional urban penalty resulting from factors such as fewer trees, reduced water bodies, and increasing amounts of concrete.

According to a World Bank assessment, Dhaka has warmed faster than the national average, due to rapid urban development and loss of green space, which have been intensified by climate change.

Conclusion

Urban heat is becoming one of Bangladesh's clearest emerging public health challenges. It is already visible in school closures, worker exhaustion, rising cardiovascular risk, and the quiet erosion of productivity and income. The strongest recent evidence suggests that humid heat, hot nights, and unequal urban living conditions matter just as much as daytime temperatures. Bangladesh needs heat-aware urban planning, workplace protections that reflect real labour conditions, stronger public communication, and health systems that treat heat as a recurring seasonal hazard rather than an occasional anomaly. The larger question is no longer whether cities such as Dhaka are becoming too hot. It is whether urban policy can respond in ways that protect health, reduce inequality, and make a hotter future more liveable.

WHAT A HEAT-AWARE CITY NEEDS



SHADES & TREES

Expand urban trees, parks, and green corridors.



WORKPLACE PROTECTIONS

Heat breaks, hydration, rest rules, and schedule changes.



HEAT ALERTS

Timely forecasts and clear guidance for communities.



COOLER HOUSING

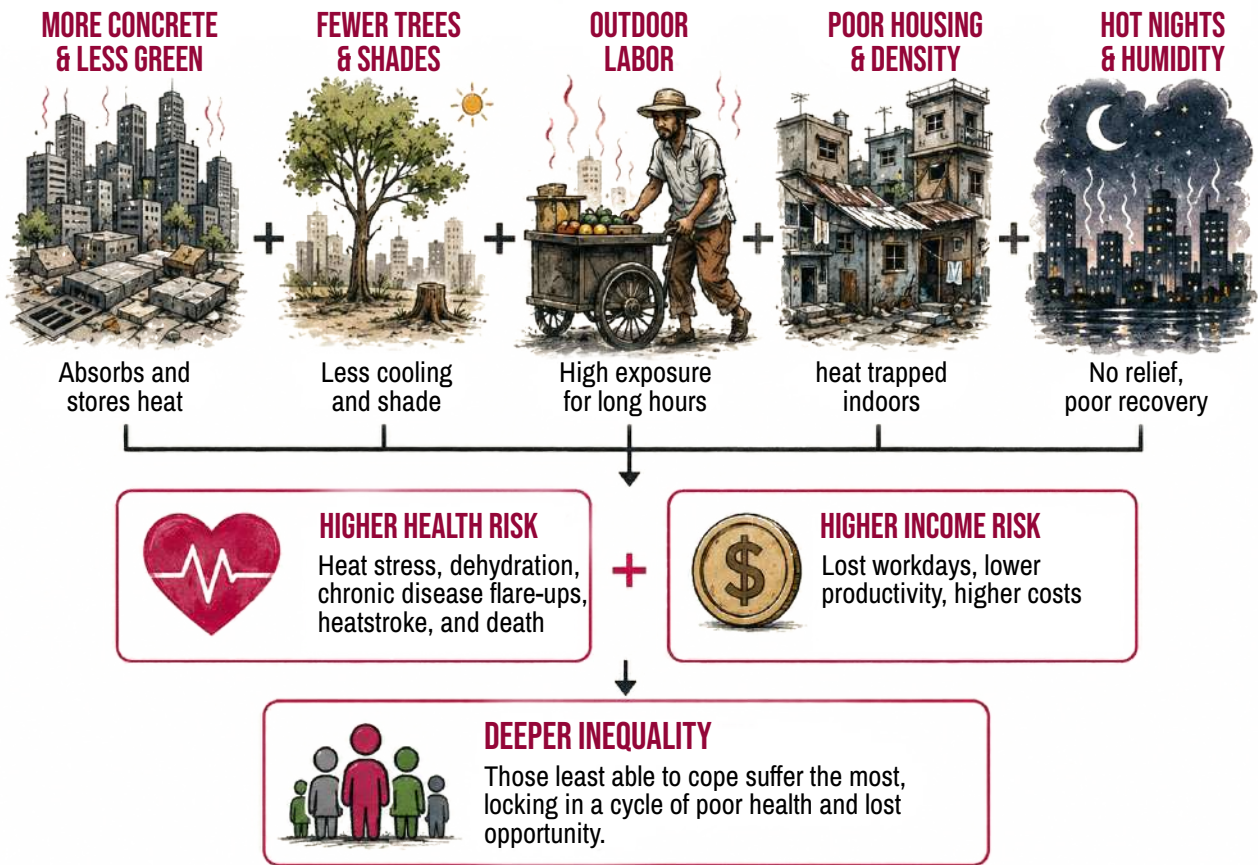
Better design, roofs, ventilation, and cool refuges.



HEAT-AWARE HEALTH SYSTEMS

Train staff, stock supplies, and protect vulnerable groups.

HOW THE URBAN HEALTH SYSTEM WORKS



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HOW MUCH IS A YEAR OF HEALTHY LIFE WORTH?

The uncomfortable mathematics of QALYs, and what the formula says about whose life counts

Marhouba Khan Asfi | Research Assistant

Fatema is forty-one years old, a garment worker in Gazipur, and she has been coughing for three months. The clinic near her factory referred her to the district hospital. The district hospital confirmed what everyone feared – drug-resistant tuberculosis and gave her a list of medications. One of them, the newest and most effective against her particular strain, was not available through the government programme. It existed.

It worked. But somewhere in the chain between the laboratory and her lungs, a formula had decided it was not worth the cost.

That formula has a name. And it is shaping more quietly than most people realise – which treatments reach patients in countries like Bangladesh, which diseases receive research investment, and whose year of life the global health system decides is worth saving.

The arithmetic says that a year of healthy life for a Bangladeshi person is worth, at most, one-sixtieth of what it is worth for an American.

QALY IN ONE MINUTE



1 year in perfect health
= 1.0 QALY



1 year at 0.5 health quality
= 0.5 QALY



2 years at 0.5 health quality
= 1.0 QALY

The formula behind the decision

A Quality-Adjusted Life Year – a QALY is health economics’ attempt to compress the value of being well into a single number. One year of life in perfect health equals 1.0. A year lived with serious illness might score 0.5. Two years at 0.5 produces one QALY – mathematically equivalent to one year in full health (York Health Economics Consortium, 2025)¹.

The logic, on paper, is practical. Global health budgets are finite. Donors, governments, and international bodies need a way to compare vastly different interventions: a tuberculosis drug, a maternal health programme, a vaccine rollout, a surgical procedure. The QALY converts all of them into a common currency and asks: how much health are we buying per dollar spent?

In wealthy countries, that question is answered against a fixed threshold. Following a pharmaceutical trade deal struck between the United Kingdom and the United States in late 2025, the UK’s National Institute for Health and Care Excellence (NICE) confirmed it would raise its cost-effectiveness threshold to £25,000-£35,000 per QALY from April 2026, up from the previous range of £20,000-£30,000 that had been in place since NICE’s founding in 1999 (NICE, 2025)². In the United States, the Institute for Clinical and Economic Review (ICER) uses a benchmark of \$100,000-\$150,000 per QALY (ICER, 2020)³. But in Bangladesh with a GDP per capita of roughly \$2,500 – the World Health Organisation’s guideline suggests a threshold of one to three times that figure (WHO-CHOICE, 2020)⁴. By that measure, a treatment could be considered cost-effective at just \$2,500 to \$7,500 per QALY gained.

Read that slowly. The arithmetic says that a year of healthy life for a Bangladeshi person is worth, at most, one-sixtieth of what it is worth for an American. Not because anyone said so out loud. Because the formula makes it so.



QALY THRESHOLDS		
	United Kingdom	£25,000-£35,000
	United States	\$100,000-\$150,000
	Bangladesh	\$2,500 to \$7,500

» Continued from page 25

Why the math cannot be neutral

There is a case to be made for cost-effectiveness analysis, and it deserves acknowledgement. Bangladesh's health budget is under severe strain; the government spends roughly \$10 per person per year on health, one of the lowest rates in South Asia (World Bank, 2022)⁵. Without some framework for prioritisation, resources risk flowing toward high-visibility conditions while routine killers such as diarrhoea, pneumonia, complications in childbirth often go underfunded. A rational tool for comparison is not worthless.

But the QALY carries a structural problem that falls hardest on low-income countries. Because thresholds are pegged to national income, treatments that are standard care in London or New York are effectively ruled out for patients in Dhaka or Sylhet – not because they are ineffective, but because the formula calculates their value against a much smaller number. A drug that adds two years of healthy life produces the same QALYs regardless of where the patient lives. But the threshold that determines whether those QALYs are “worth buying” shrinks with GDP. This plays out in research investment as well. Pharmaceutical companies conduct cost-effectiveness analyses before deciding where to seek approval and where to price products. When the Bangladeshi threshold is a fraction of the global benchmark, the commercial case for developing treatments targeting diseases concentrated in low-income populations weakens accordingly. The QALY does not create neglected diseases. But it quietly reinforces their neglect.

There is a second problem, less visible but just as significant. The health utility scores that feed QALY calculations – the numbers that define what different illness states are “worth” are drawn overwhelmingly

WHY THIS MATTERS



ACCESS

Lower thresholds can limit access to effective treatments today



RESEARCH INVESTMENT

Smaller markets and lower returns mean fewer trials and slower innovation



EQUITY

Using data from other worlds risks undervaluing Bangladeshi lives & realities.

from surveys conducted in high-income countries. A Bangladeshi garment worker's lived experience of chronic illness, of a body worn down by twelve-hour shifts and limited access to care, does not meaningfully inform the global formula. The inputs belong to one world. The outputs govern another.

Research published in the British Medical Bulletin identifies this as one of the QALY's most contested weaknesses: the question of whose values should determine health state scores, and whether those values should come from patients themselves or from populations that have never lived with the conditions being evaluated (Whitehead and Ali, 2010)⁶.

*The QALY does not create neglected diseases.
But it quietly reinforces their neglect.*

Fatema, and what the formula never counted

Fatema is still in treatment. The older drug regimen is longer, harder on the body, and less effective against her strain. She is managing. Whether she will fully recover is not yet clear.

Her case will not appear in a cost-effectiveness analysis. She does not have a QALY score. But the decision that shaped her treatment – the calculation that put the newer drug beyond reach was made using exactly this kind of arithmetic, in offices far from Gazipur, by people who have likely never met anyone like her.

Every health system must choose who gets what. In a world of limited resources, that is unavoidable and, done well, even necessary. But when the formula used to make that choice assigns a lower value to a year of Bangladeshi life than to a year of British or American life – not as cruelty, but as mathematics - it is worth asking what values the formula is actually encoding. And whether, the next time someone updates the threshold, anyone will think to ask Fatema what her year is worth.

when mathematics assigns a lower value to a year of Bangladeshi life than to a year of British or American life - it is worth asking what values the formula is actually encoding.

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LATE DIAGNOSIS OF ADHD/ AUTISM

and the health costs being missed

Saran Deb Nath | Research Assistant

A 35-year-old sits in a psychiatrist's chamber, and for the first time in life, things begin to make sense. Every failed task, every sense of being different, every anxiety spiral that seemed to arrive from nowhere. The diagnosis, ADHD, autism, or both, arrives as a long-overdue answer. The question that lingers in the room is quiet but heavy: what if this had come twenty years sooner?

This is not just one person's story. When someone is not diagnosed until their mid-thirties, those years do not simply pass. They accumulate through wrong prescriptions, misreading symptoms, while the main cause stays hidden. They simply pay later through mental health care, crisis care, and years of unavoidable strain.

Research shows how early the strain accumulates. In a review of psychiatric inpatients, people with undiagnosed ADHD were already deep inside the mental health system. They face heavier mental stress, higher risks of substance abuse, accidents, offending, lower income, and poor educational outcomes. And the harms do not stay with one. The burden spills beyond clinics into work, income, relationships, and daily functioning.

German insurance data tells the same story through numbers. The average age at first ADHD diagnosis was found to be around 35. In the year of diagnosis, average direct medical costs rose above €4,000 per person. Much of that spending sat in psychotherapy, inpatient care, and outpatient treatment. The system was

The burden spills beyond clinics into work, income, relationships, and daily functioning.



already paying. Just not for the right diagnosis. The diagnosis year is not the start of the burden but the point at which accumulated burden becomes visible to the system.

Another study, from Sweden, adds another layer. Adults diagnosed with ADHD between the ages of 30 and 45 were already using more psychiatric and somatic health care than matched controls before their diagnosis was made. Their psychiatric outpatient visits peaked in the year just before diagnosis. The reason for the increased visits is not the straightforward recognition of ADHD. It is because of the years of accumulated distress and complexity. The annual excess cost was estimated at around €2,500 per person, driven largely by inpatient care. One explanation the researchers raised was the late diagnosis itself. They asked if it is because of the years of untreated symptoms or the wrong conditions prioritized first.

Autism carries an added risk of being misread entirely. Among adults diagnosed at age 21 or later, rates of psychiatric conditions were far higher than among those diagnosed earlier. Interestingly, 80% of adults aged 40 and above with autism were diagnosed as adults. The burden did not fall equally. Females carried a heavier psychiatric load than males. Late diagnosis often came after years of confusion within care. Autism missed or mistaken for other psychiatric conditions. The cost of being missed is not just the lack of a name. It is the years in which autistic traits get overlooked or misread while psychiatric difficulties pile up.

WHAT GETS MISSED

- 1 Anxiety and depression treated separately
- 2 Burnout without root-cause recognition
- 3 Higher psychiatric care use before diagnosis
- 4 Misdiagnosis or delayed autism recognition
- 5 Costs pushed downstream into crisis care

» Continued from page 29

Looked at one by one, these may seem like private struggles. But together they form a pattern. The years before diagnosis are not blank. They were spent treating consequences without addressing the cause. The anxiety gets a prescription, the depression gets therapy, and the exhaustion is labeled as burnout. And underneath all of it, the actual condition waits, unnamed, accumulating its cost quietly.

This is why late diagnosis deserves to be treated less as a niche personal issue and more as a warning sign of system design. Better recognition in adult mental health services would not erase every difficulty. But it could reduce years of misdirected treatment and help support arrive before burnout, job loss, or crisis care becomes the main route into help.

The 35-year-old leaving that psychiatrist's chamber carries both relief and grief. Relief that there is finally a reason. Grief for the years spent in the wrong corridors. Neither feeling changes the record, the missed diagnoses, or the misallocated care. The cost of being missed does not disappear. It moves downstream, showing up as a heavier mental health burden.

Better recognition in adult mental health services would not erase every difficulty. But it could reduce years of misdirected treatment and help support arrive before burnout, job loss, or crisis care becomes the main route into help.

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01

UNDERNUTRITION

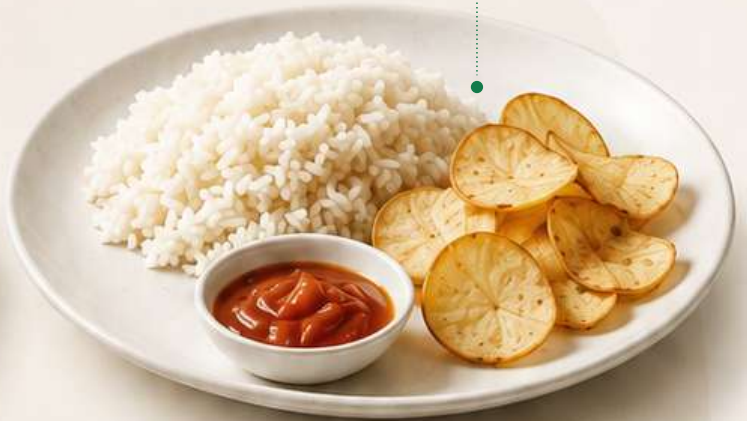
Too little food.
Too few nutrients.



02

MICRONUTRIENT

Enough calories, but
missing essential nutrients



03

OVERWEIGHT AND OBESITY

Too many calories,
from processed food & drinks

Hungry, Deficient, & Overweight: BANGLADESH'S TRIPLE BURDEN OF MALNUTRITION

How policy has evolved across fifty years and what it still needs to get right

Narmiaat An-noor | Research Assistant

Anik Hasan Shuvo | Senior Research Assistant

In the same neighbourhood, three children grow up eating very differently but none of them eats well. The first is stunted, his growth slowed by years of too little protein in his earliest years. The second has iron-deficiency anaemia; she is tired at school and struggles to concentrate, her condition invisible to almost everyone except the health worker who checked her eyes. The third is gaining weight rapidly on the cheapest food available including processed snacks and sugary drinks, because fresh vegetables cost more.

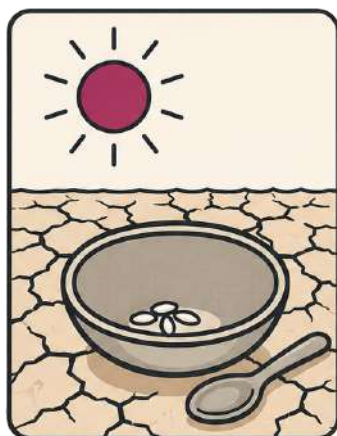
Three children. Three different forms of malnutrition. One neighbourhood.

This is the triple burden: undernutrition,

widespread micronutrient deficiency, and rising overweight and obesity, coexisting in the same communities and often within the same households. It is a problem Bangladesh did not expect to have. The country survived the famines that defined its early independence. It achieved food security. But food security, it turns out, is not the same as nutrition security.

*food security, it turns out,
is not the same as
nutrition security.*

A policy story in three acts



Act I: 1971-1980 from famine to survival

Bangladesh began its independence with a food crisis. The 1974 famine forced the government to rely heavily on international food aid while implementing rationing, price controls, and emergency distribution. Agricultural policy focused almost entirely on production: improving irrigation, fertiliser access, and high-yielding rice varieties to feed a hungry population



Act II: 1980-2000 from food security to self sufficiency

The strategy worked, almost too well in one narrow sense. The National Food Policy of 1988 kept the focus on cereals. But the 1996 Agricultural Extension Policy and the landmark National Food and Nutrition Policy of 1997 began a shift – nutrition was recognised for the first time as a human right, not just a production problem. Subsidised fertilisers, deep tube wells, and the spread of IR8 high-yield rice moved Bangladesh to self-sufficiency by 2000. Food aid dependence dropped sharply. Hunger retreated. But the policies of this era were largely disconnected from each other, and what people ate as opposed to whether they had enough to eat remained largely unaddressed.



Act III: 2000-Present nutrition & human development

The 2006 National Food Policy marked the beginning of a more comprehensive approach. The 2008-2015 National Food Policy Plan of Action tried to coordinate across multiple ministries – food, agriculture, health, education, and social welfare. It was followed by the Second National Plan of Action on Nutrition (NPAN2, 2016-2025), which set multisectoral targets covering food safety, dietary diversity, and maternal and child nutrition across 17 government ministries. But coordination between ministries has remained weak, implementation budgets have been thin, and alignment with local government has been inconsistent. Bangladesh is further along than it was fifty years ago. The triple burden, however, is still growing.

» Continued from page 33

What the data says today

In 2024, 44 percent of Bangladesh's population could not afford a healthy diet. The government spends roughly \$10 per person per year on health which is one of the lowest rates in South Asia (World Bank, 2022). Obesity in adults remains around 5 percent but is rising, driven by a nutrition transition in which cheaper processed foods are displacing traditional diets. Meanwhile, stunting and anaemia persist at rates that should not exist in a food-secure country.

The gap between food security and nutrition security is, in large part, a policy gap and one that research is now helping to close.

Policy levers that could change the trajectory

Drawing on recent research, a set of strategic policy instruments emerges across two areas: trade policy and fiscal policy. The goal is not to add more documents to an already crowded policy landscape; it is to target the specific pressure points where change would have the most effect on what Bangladeshis actually eat.

On the trade side, the key moves are straightforward: cut tariffs on nutritious imported foods that low-income households cannot currently afford; reduce duties on agricultural inputs like seeds and machinery so that domestic food production

The gap between food security and nutrition security is, in large part, a policy gap and one that research is now helping to close.

AT A GLANCE



44%

could not afford a healthy diet in 2024



Stunting & Anaemia persist among women & children.



Overweight & obesity are rising, especially in urban areas.

becomes cheaper; strengthen sanitary and food safety systems so that Bangladeshi food producers can access higher-value export markets and generate the foreign exchange needed to finance food imports when domestic harvests fall short. A regulatory framework for sugar-sweetened beverages and ultra-processed foods – not driven by revenue goals but by health goals – would slow the nutrition transition that is fuelling obesity and NCDs.

On the fiscal side, nutrition-indexed cash transfers – calibrated to food prices and dietary adequacy, and prioritising women, rural households, and high-burden districts are among the most direct tools available for protecting purchasing power. Excise taxes on sugary drinks and ultra-processed foods can generate revenue to fund school feeding programmes and maternal nutrition. Public investment in food safety laboratories, cold-chain logistics, and clean water and sanitation infrastructure (WASH) addresses the underlying conditions that turn food availability into food access into food safety.

The distance between policy and a dinner table

Bangladesh has one of the most detailed nutrition policy landscapes in South Asia. It also has three malnourished children living on the same street.

The challenge is not a shortage of frameworks. It is implementation: cross-ministry coordination that actually functions, budgets that match stated commitments, local government capacity to deliver services, and research that keeps identifying where the gaps are widest. Progress on the triple burden will not come from a single ministry or a single plan. It will come from the kind of sustained, multisectoral effort that treats what people eat – not just whether they have enough – as a core measure of a country's health.

The three children are still growing. The policies described in this piece would shape what their next decade looks like. That is not an abstraction. That is the point.

POLICY LEVERS

TRADE POLICY

- ✓ Lower tariffs on nutritious foods, fortificant premixes, micronutrients, and climate-resilient inputs to improve affordability & availability.
- ✓ Strengthen food safety systems across the food chain to ensure safe, nutritious food.
- ✓ Regulate marketing of ultra-processed foods, especially to children; adopt front-of-pack labelling & clear standards.

FISCAL POLICY

- ✓ Nutrition-indexed cash transfers for vulnerable households, prioritising pregnant women & young children.
- ✓ Taxes on sugary drinks and ultra-processed foods; close harmful tax loopholes.
- ✓ Sustained financing for school feeding, adolescent and maternal nutrition, and community nutrition services.
- ✓ Increase and ring-fence budget allocations for nutrition-sensitive sectors.

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WHEN THE PARK GATE IS LOCKED BY CULTURE, NOT KEYS

Building a community scorecard for safer physical activity spaces

Umme Salma Anee | Senior Research Assistant

It is 6:30 in the evening in Mirpur. The park near Rokeya's home is technically open. She does not go. The footpath to get there passes a cluster of men who will watch her the entire way. The park itself has no working lights, no functional toilet, and no one responsible for what happens inside it after dark. If she stays out too long, there will be questions at home. The park exists on the map. For Rokeya, access to it does not.

This is not an unusual story. Across urban Bangladesh, women and adolescent girls describe the same pattern: spaces that appear open and public do not feel that way. The barriers are rarely a locked gate. More

often they are inadequate lighting, broken paths, absent toilets, the presence of groups of men, and the quiet calculation each woman makes about whether the discomfort is worth it.

It matters more than it might seem. Regular physical activity reduces the risk of non-communicable diseases (NCDs) – conditions like diabetes, hypertension, and heart disease that are rising across all income groups in Bangladesh. When women and girls are effectively excluded from public spaces, their options for safe movement shrink. That is not a personal choice problem. It is a health equity problem.

*The park exists on the map.
For Rokeya, access to it does not.*



» Continued from page 36

What the research set out to ask

The Community-Led Responsive and Effective Urban Health Systems (CHORUS) programme supported a study to map the usability of physical activity spaces and co-design a community tool that can hold planners accountable for what gets built and what gets fixed. The study worked across two cities: Dhaka North City Corporation (DNCC) and Khulna City Corporation (KCC), chosen to capture contrasting urban realities: DNCC's dense mix of planned areas and informal settlements, and KCC's rapidly growing city still stretching its infrastructure.

The approach was participatory. Community groups including adolescent girls, working women, housewives, elderly women, and women with physical disabilities - did not just answer questions. They mapped their own neighbourhoods, visited spaces together, described what they felt, and ultimately helped design the tool that would come out of this work.

What they found on the ground

Across sessions in both cities, participants described the same practical barriers that kept spaces out of reach:

- Basic amenities were missing or broken. Most parks had no functional toilet, making longer stays unrealistic for women, older adults, and caregivers.
- Lighting shaped behaviour. Evenings were effectively off-limits - not because spaces closed, but because poor lighting created fear and discomfort.
- Harassment changed how women moved. Many described feeling watched or verbally harassed along footpaths and near parks, which discouraged regular use even in daylight.
- Maintenance eroded trust. Broken equipment, waterlogged paths, and visible neglect made spaces feel unsafe and not worth the effort.
- Footpaths were occupied by hawkers, parked vehicles, and ramps for driveways; reducing walking routes to obstacle courses.

Participants also pointed to a gap that rarely makes it into official assessments: schools in urban areas are mostly housed in buildings with no outdoor space. Children have no place to play during school hours, which drives them indoors and onto phones. The absence of a playground is not only a comfort issue; it is a lost daily opportunity for physical activity in the years when habits form.

We have many educational institutions in our area, but there are not enough space or playgrounds for the children to play in. We do not have playgrounds or open space in any of our schools. Traffic, especially from rickshaws, slows pedestrian movement.” – Group 1, PLA sessions 2



Researchers & Community participants involved in the physical activity space mapping sessions

The Citizen Scorecard: turning experience into accountability

The main output of this work was a community-designed tool – the Healthy Spaces Citizen Scorecard. It was built through participatory sessions where groups discussed what mattered most to them, ranked their priorities, and agreed on observable criteria that could be scored consistently by any community member, without specialist training.

The scorecard covers four areas: accessibility, safety and security, social and cultural acceptability, and infrastructure and facilities. Each is scored on a 10-point scale. Critically, the tool was not designed by researchers to be handed to communities. It was built with them which means it reflects the conditions that actual users navigate, not the conditions that planners assume they face.

After piloting the scorecard with PLA participants, it was distributed via a snowball approach across wider communities, collecting 183 responses in DNCC and 183 in KCC. The findings confirmed what the group discussions had already shown: spaces that officially exist are consistently rated low on safety, social acceptability, and usable amenities.

Footpaths are obstructed by hawkers, and parked vehicles cause inconvenience. Entry fees for the botanical garden are high, and not eco-friendly.” – Group 3, PLA session 2.

Why a scorecard matters

The value of this tool is not the score itself. It is the process where communities naming what “inclusive space” actually means and creating a shared, documented basis for pressing local authorities to act. Without tools like this, improvement requests stay informal and easy to dismiss. With a scorecard, communities can show decision-makers precisely what is missing, compare spaces across areas, and track whether changes are made. Creating safer physical activity spaces for women and girls is not an infrastructure upgrade. It is a health equity investment. The connection runs directly to NCD prevention: when movement becomes possible, consistent, and safe, it reduces long-term health risk in exactly the populations that carry the highest burden. A well-lit footpath and a working toilet are not small details. They are the difference between a space that exists and a space that works.

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