

CSC Evaluation and Monitoring Programme

## From Research to Impact: Advancing Public Health, Nutrition and Food Security in Bangladesh

**Fahmida Akter**



**When Bangladesh gained independence in 1971, it was one of the world's poorest nations. Since then, significant economic growth and a declining poverty rate has led to its reclassification as a lower-middle-income country in 2015.**

However, despite this progress, approximately 16.5 million Bangladeshis continue to experience acute food insecurity. This issue is further aggravated by climate change, as the country's geographical location makes its food systems particularly vulnerable to environmental shocks. Ensuring sustainable food security in the face of these challenges remains a critical national priority.

Before receiving her Commonwealth Scholarship, Fahmida Akter studied Nutrition and Food Science at the University of Dhaka, where she explored various disciplines within her field. While her studies covered dietetics, clinical nutrition, food chemistry and technology, she was particularly drawn to food security and community nutrition and its role in development. Although she was passionate about research from the beginning of her career, she initially hesitated to pursue this, fearing it might lead to an academic career and distance her from direct engagement with the communities she wanted to support.

Her perspective shifted when she learned about the Research and Evaluation Division (RED), an independent multidisciplinary research body at BRAC. BRAC is a leading international development organisation in Bangladesh. Fahmida joined RED as a staff researcher in 2013. While working at BRAC's RED, she observed how evidence-based interventions could directly improve lives by reducing poverty and food insecurity, enhancing nutrition, and advancing maternal and child health. With each study, she realised that research was not just about knowledge - it was a tool for change. This experience reinforced her belief that research could play a vital role in community development.

Determined to expand her expertise, she applied for a Commonwealth Scholarship and was awarded funding in 2018 to pursue an MSc in Global Food Security and Development at Nottingham Trent University (NTU). This opportunity allowed her to fulfil her long-standing ambition to study in the UK while deepening her knowledge in a field closely aligned with her commitment to improving nutrition and food security.



**Fahmida Akter** is a dedicated researcher with a strong commitment to addressing malnutrition, food insecurity, and diet-related non-communicable diseases (NCDs) while promoting sustainable food systems. With over a decade of experience in implementation and evaluation research, she has contributed to numerous research projects focused on nutrition, food security, and public health. She holds an MSc in Global Food Security and Development from Nottingham Trent University where she studied on a Commonwealth Shared Scholarship.

Currently an Assistant Scientist and Assistant Director, Centre for Non-communicable Diseases and Nutrition (CNCDN) at BRAC James P Grant School of Public Health, BRAC University, Fahmida plays a key role in leading research initiatives, securing grants, and mentoring students and junior researchers. She has published 20 peer-reviewed articles and over 25 research reports, working papers, and book chapters. Recognised nationally and internationally for her contributions, she has received multiple awards, including best presentation accolades at conferences.

## Scholarship Studies: A Passion for Nature-Based Sustainable Solutions

As part of her Commonwealth Scholarship at Nottingham Trent University (NTU), Fahmida explored global perspectives on food security through courses such as Food Security and Food Systems Analysis, Food Security and International Development Cooperation, and Innovations for Food Security. These courses provided her with a deeper understanding of policy frameworks, global food challenges, and innovative approaches to food system transformation, further shaping her research interests.



Fahmida graduating from NTU in December 2019.

Throughout her studies, Fahmida maintained her focus on her Bangladeshi community. She was particularly interested in the skills and knowledge of the indigenous community in Bangladesh. She believed that local, nature-based solutions offered sustainable and culturally appropriate ways to address food security, malnutrition, and public health challenges, and she sought to promote such approaches to problems:

**'I prefer indigenous knowledge and farming systems over commercial, profit-driven initiatives when tackling issues related to food security, malnutrition, and public health. I always seek socially and ecologically sustainable solutions. Even as a researcher, I prioritise approaches that align with nature and promote environmental sustainability - solutions that are truly nature-based.'**

She was particularly drawn to indigenous approaches to farming. In certain regions of Southern Bangladesh, the monsoon season results in the land being flooded for six or seven months of the year, yet farmers have long found ways to continue cultivation. This inspired Fahmida's research into dhap, an age-old farming technique:

**'It's called floating farming. Farmers make floating beds using water hyacinths and other aquatic weeds. Then, they grow two types of crops. One is seedlings for winter-season vegetables, both leafy and non-leafy. The other is directly grown vegetables, mostly leafy ones, and spices which are light enough for the floating beds.'**



Farmers working in the floating beds at Pirojpur in July 2019.

Fahmida felt that this approach to farming was particularly valuable in the face of climate change. Whilst other researchers focussed on technological approaches to climate resilience, Fahmida saw the value of indigenous approaches that worked in harmony with nature. She wanted to study these approaches, but she was unsure if she could incorporate this into her Master's research. However, her supervisor at Nottingham Trent was encouraging, and suggested that she undertake primary data collection with indigenous communities in Bangladesh. In June and July of 2019, Fahmida visited 14 districts across Bangladesh and undertook a study of indigenous farming practices and its transferability to other regions with similar socio-ecological settings in Bangladesh.

**'People talk about innovation and technology, but this is also a form of technology - one that has existed for generations. Farmers have been practicing it in a way that respects the environment, without disrupting ecosystems or biodiversity. There's no pollution, no artificial chemicals, and no harmful inputs - just a natural, sustainable way of growing food.'**



Small balls made from local aquatic weeds. Seeds will be inserted for germination before they are installed in floating beds at Barishal in July 2019.



This research strengthened Fahmida's belief that nature-based, community-driven solutions hold the key to building resilient and sustainable food systems in the face of climate change.

## Post-Scholarship Career: From Researcher to Research Leader

Following the completion of her Scholarship, Fahmida returned to Bangladesh. In light of her new qualification, she was promoted to the level of Senior Research Fellow at the BRAC James P Grant School of Public Health (BRAC JPGSPH) in the Centre of Non-Communicable Disease and Nutrition (CNCDN). Her responsibilities as a Senior Research Fellow were wide-ranging, including writing grant proposals, managing budgets, designing research projects, and training colleagues in data collection. She also expanded her research scope to include non-communicable diseases (NCDs).

NCDs account for 74% of all deaths worldwide, and share five major risk factors: tobacco use, physical inactivity, the harmful use of alcohol, unhealthy diets, and air pollution. As a Senior Research Fellow, one of Fahmida's flagship projects where she has played key role is establishing a nutrition and food security panel database covering all life stages to support long-term research initiatives. This is an ongoing project, and Fahmida and her team are currently in the process of using the database to write up papers for publication.

In January 2024, Fahmida was further promoted to the position of Assistant Scientist, a role that she still holds. In this role, Fahmida leads on all nutrition-related projects, leveraging her expertise in both quantitative and qualitative research methodologies. Fahmida also leads qualitative research projects on NCDs at BRAC JPGSPH.

Fahmida has worked on collaborative research projects with Imperial College London, McGill University in Montréal, as well as manuscript writing initiatives with International Food Policy Research Institute (IFPRI) and King's College London. Among her current collaborative projects, she is actively involved in a large-scale, multi-country project called the South Asia Biobank (SAB) study, where she serves as the focal person for the 'Intake24' component, coordinating with Imperial College London and the University of Cambridge:

**'This research (SAB) is being implemented in four South Asian countries - Bangladesh, Sri Lanka, India, and Pakistan. Along with other indicators, all the participants have to report what they consumed in the last 24 hours, including portion sizes. In the first round, we recruited 71,064 adults for this study, and we are now conducting follow-ups.'**

She is also leading the 'School Meals Case Study: Bangladesh', collaborating with the Research Consortium for School Health and Nutrition based at the London School of Hygiene and Tropical Medicine, UK.

Her role has expanded beyond research, and she now mentors junior researchers. She is also involved in teaching two modules in the Master's of Public Health programme at BRAC JPGSPH. She teaches on public health and nutrition, and also on ageing and non-communicable diseases. She has also supervised MPH students to complete their theses, further contributing to academic mentorship and capacity building. Moreover, Fahmida has mentored several Bangladeshi applicants for the Commonwealth Scholarships. She actively shares her knowledge and experience with the next generation of the CSC Scholars through the CSC Mentoring Programme.

In recognition of her leadership in establishing the CNCDN, BRAC JPGSPH as a prominent research centre for nutrition and NCDs in Bangladesh and beyond, Fahmida was appointed Assistant Director of CNCDN, BRAC JPGSPH in January 2025 in addition to her role as Assistant Scientist.

### Reflecting on the impact of the Commonwealth Scholarship, Fahmida credits the CSC with the progress that she has made in her career as a researcher.

'As a researcher, CSC has broadened my thought process, scope, and scale of work. If I had to summarise its impact in one line, this would be the most significant change. Additionally, I feel more confident both personally and professionally, and as a researcher, I am now more competent than before CSC'.



Fahmida conducting a field visit with the IFC project to a community clinic in Sarail in July 2023.

## Empowering Communities: Improving Maternal and Newborn Health in Bangladesh

In her research career with BRAC JPGSPH, Fahmida has led a wide variety of research projects. However, one stands out to her. She is particularly proud of her work with BRAC as the Project Coordinator on the 'Implementation of the World Health Organisation's framework for working with individuals, families, and communities (IFC) to improve maternal and newborn health in Bangladesh' project. This project, funded by Enfants du Monde through BRAC, focussed on engaging families and communities to improve maternal, newborn and child health (MNCH):

'In this, the individual refers to the mother, the family includes the father and other family members, and community consists of community action groups (CAGs) formed around community clinics (CCs) and union health and family welfare centres (UH&FWC), which are the lowest level of primary healthcare facilities in Bangladesh. Additionally, the project develop capacity among healthcare providers at CCs, UH&FWC and sub-district levels in BrahmanBaria district. The project also developed CAGs to hold healthcare providers accountable and to advocate so that people can claim their rights - rights to maternal health and respectful care.'

### Fahmida considers the IFC Project at BRAC JPGSPH to be the most impactful change she has contributed to her community.

'The IFC Project at BRAC stands out as the most significant project I have been a part of. Since 2019, I have been deeply engaged in this initiative, which focuses on improving maternal and child health by involving individuals, families, and communities.

The project also strengthens healthcare providers and establishes community action groups to ensure accountability and advocacy for maternal health rights and respectful care. My contributions span operational research, process documentation, and impact evaluation, shaping interventions based on findings. Seeing real change in healthcare providers and communities has been deeply rewarding, making this project a testament to the impact of evidence-driven interventions.'

As the project coordinator, Fahmida was involved in every stage of this project. This included managing the operational elements of the research, processing all relevant documentation, evaluating the impact of the work, and disseminating the findings of the project. Fahmida was pleased to see the results of this research project being implemented; based on her work, BRAC, the project implementing partner, have restructured the way that their teams are implementing work on the ground in Bangladesh. She identifies this as the most significant change that she has been able to produce in her community:

'They rescheduled the frequency of service delivery and made various adjustments based on the findings of our research. The CAGs developed an action plan on how to improve primary healthcare services and support service providers at CC and UH&FWC. They followed up at six-month intervals, and then we assessed what they had planned to do, what they had achieved, and what risks remained.

The process was highly detailed, and if I had to highlight one key contribution I made to this project, it would be this structured, evidence-based approach to improving healthcare services.'



An IFC Training Session on rights and respectful maternal care, which took place in November 2022

## Advocating for Evidence-Based Policy: The Trans-Fat Regulation

Throughout her career, Fahmida has maintained her focus on producing research with meaningful, real-world impact. For this reason, she was interested in using her skills as a nutrition expert to contribute to policy development in Bangladesh. This is a difficult and complex process; whilst Fahmida and her colleagues have advocated for evidence-based policy-changes, this has not always led to a change in governmental approach:

'Influencing policy is not always straightforward. Even when research provides strong evidence, it may not be considered if it does not align with existing priorities. At the end of the day, policy decisions rest with the government - we can advocate, we can provide recommendations, but the final call is theirs.'



However, despite these challenges, Fahmida worked as part of a team that successfully contributed to shaping a national policy regarding the quality of edible oil. The quality of edible oil in Bangladesh was variable, with significant inconsistencies observed between branded, packaged oil, and unbranded, open oil. Recognising the potential health risk, Fahmida's team were commissioned by the Global Alliance for Improved Nutrition to investigate this. They collected edible oil samples from all over the country, prepared composite samples, and analysed them. She and her team assessed three factors relating to the quality of oil: the percentage of trans-fats in the oil; the presence of toxic heavy metals, such as mercury, arsenic and cadmium; and the expected levels of essential vitamins in the oil. Fahmida and her team provided critical evidence that helped shape Bangladesh's trans-fat policy, which was launched by the Bangladesh Food Safety Authority in 2021. This policy set a strict limit of trans fat to a maximum level of 2% of total fat in oils. This is predicted to reduce the prevalence of diet-linked non-communicable diseases like heart disease.

Moreover, Fahmida and her team published their findings on high trans-fat levels in edible oils in the journal 'Food Chemistry Advances', which gained widespread media attention in Bangladesh and accelerated the formulation of bylaws to enforce the trans-fat regulation. For Fahmida, this achievement reinforced her belief that research, when persistently and effectively communicated, has the power to drive meaningful policy changes and improve public health on a large scale.

## International Recognition and Networking: Opportunity for Knowledge Exchange

Whilst Fahmida has returned to Bangladesh following her Scholarship, she has remained actively engaged in global research networks. In 2024, she presented her research at the Global Food Security Conference in Belgium, a prestigious platform for leading experts in the field. Despite the fact that years had passed since the completion of her Master's degree, she was selected to present her research findings on the resilience of floating farming. She directly credits her Commonwealth Scholarship for this opportunity:

**'I had the privilege of presenting my Master's research in Belgium at a highly competitive conference where securing an oral presentation slot is challenging. My supervisor congratulated me, acknowledging what a significant opportunity it was. This is one of the many ways the Commonwealth Scholarship has contributed to my academic journey.'**



Fahmida presenting her Master's research at the 5th Global Food Security Conference in Belgium, April 2024.

Beyond presenting her research, Fahmida has also represented BRAC JPGSPH in organising the Delivering Nutrition for South Asia (D4N) Conference in 2023 and 2024. She worked in collaboration with the International Food Policy Research Institute (IFPRI) - an organisation dedicated to developing policy solutions for reducing poverty, hunger, and malnutrition in low- and middle-income countries through sustainable approaches - along with other co-hosts. She is also member of several alumni networks including the Bangladesh Association of Commonwealth Scholars and Fellows (BACSAF).



Hosts and co-hosts of the Delivering Nutrition in South Asia Conference 2023 in Kathmandu, Nepal.

Looking back on her Scholarship, Fahmida notes the importance of the connections that she made whilst studying in the UK:

‘This Master’s degree significantly expanded my professional network at both regional and international levels. The connections I made during my studies continue to influence my work. Many of my former classmates, fellow Commonwealth Scholars from the same cohort, and colleagues remain valuable collaborators, reinforcing the power of networking in advancing research and policy.’

## Looking Ahead: A Future in Evidence-Based Programme and Policy

As Fahmida’s research career progresses, she is in the process of pursuing a PhD. Her vision for the future is one where evidence-based research plays a crucial role in shaping policies and programmes, ultimately fostering healthier communities and more resilient food systems. Her journey exemplifies the power of higher education, international collaboration, and evidence-driven solutions in addressing global health and nutrition challenges.

### Learn more about Fahmida Akter’s work:

<https://www.linkedin.com/in/fahmida-akter-7b366a66/>

### Access Fahmida’s publications:

<https://orcid.org/0000-0001-9294-265X>

<https://scholar.google.com/citations?user=IPRZWREAAAAJ&hl=en&oi=ao>

### Learn more about the BRAC James P Grant School of Public Health:

<https://bracjggsph.org/about-the-school>

<https://bracjggsph.org/staff-details/12572>

### Read about the Intake24 project:

<https://www.mrc-epid.cam.ac.uk/research/measurement-platform/dietary-assessment/intake24/>

### Learn more about dhap – floating farms:

<https://www.bbc.com/future/article/20200910-the-remarkable-floating-gardens-of-bangladesh>

### Details of the International Food Policy Research Institute Conference:

<https://southasia.ifpri.info/delivering-for-nutrition-in-south-asia-connecting-the-dots-across-systems/>

## Commonwealth Scholarship Commission in the UK

Woburn House

20-24 Tavistock Square , London WC1H 9HF

Email: [evaluation@cscuk.org.uk](mailto:evaluation@cscuk.org.uk)

Website: [cscuk.fcdo.gov.uk/csc-evaluation/](https://cscuk.fcdo.gov.uk/csc-evaluation/)