

CV of Dr Sabuktagin Rahman, PhD

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A. Personal Information

Name: Dr. Sabuktagin Rahman

Father: Md. Lutfur Rahman

Mother: Mst. Mansura Rahman

Date of Birth: 25/12/1971

Nationality: Bangladeshi

B. Professional Interest

Public health nutrition is an ever evolving, complex and highly technical super specialty. Through utilization of my technical expertise I am keen to pursue the following professional goals—

1. To provide the **technical support** to the national nutritional **programs and policies** to enable the evidenced based programming and evaluation towards the optimum impact in the population.
2. To develop **skilled professional** through **teaching in public health nutrition**.
3. To foster **national and international** research and academic **collaborations**.
4. To continue the efforts on national and international **policy formulation**.

C. Education

1. **PhD** in Public Health Nutrition: Griffith University, Queensland, Australia [2017--2022]. The topic of the research is a randomized controlled trial to assess the effect of the low-dose iron MNP supplements for prevention of childhood anemia in the background of high groundwater iron in Bangladesh.
2. **Master in Food Science and Nutrition**: Ghent University, Belgium [2006-2007]; obtained **Distinction**.
3. **M.Sc. in Nutrition**: Institute of Nutrition and Food Science, University of Dhaka [2000-2001]; obtained **First Class**.
4. **M.B.B.S.:** Dhaka Medical College [1998]

D. Work Experience/Area of Interest

I have a predominantly research background in public health nutrition which spans over 16 years. The areas of research interest are--**micronutrients, anemia, dietary assessment, gut microbiota, nutritional biomarkers, household food security, infant and young child feeding (IYCF), nutritional epidemiology, research methodology,**

large-scale nutritional surveys and the national nutritional surveillance. I was the Principal Investigator to the first national micronutrient survey 2011-12 of Bangladesh. I am experienced in designing and implementation of the **epidemiological studies, surveys, surveillance, program evaluation, methods/tools development and validation studies** and the **randomized controlled trial.**

I have worked for—

1. Griffith University, Australia as the **PhD fellow**
2. Nutrition and Clinical Sciences Division of icddr,b as a **Scientist**
3. Global Alliance for Improved Nutrition (GAIN) as the **Technical Lead**
4. Save the Children UK as a **Program Officer (Health and Nutrition)**

While working for icddr,b, I was an adjunct faculty to teach nutritional topics for the MPH courses at the **James P. Grant School of Public Health, Brac University** (2013-14) and North South University (2008-09).

Currently, I am working as a **senior consultant (Scientist)** to the **Brac James P. Grant School of Public health, Brac University.**

E. Some Major Projects Undertaken Over the Past 10 Years

1. **Site-Principal Investigator** to the low-iron MNP project, 2017-2019 [Griffith University & University of Dhaka]
Donor: Nestle Foundation; Fund: **USD 125,000**
2. **Principal Investigator** to the National Micronutrient Status Survey 2011-2013 [icddr,b/UNICEF/GAIN]
Donor: GAIN/UNICEF; Fund: **USD 330,000**
3. **Technical Lead/Sr. Program Manager** to the Maternal, Infant and Young Children Nutrition (MIYCN) project, 2013-2015 [GAIN/BRAC/BMGF]
Donor: BMGF; Fund: **USD ~8 millions**
4. **Co-Principal Investigator** to the Mainstreaming Nutrition into Health Systems Project 2012-2013 [icddr,b/USAID]
Donor: USAID; **Fund: USD 275,000**
5. **Principal Investigator** to the evaluation of the “Window of opportunity” program 2010-2011 [icddr,b/CARE]
Donor: CARE, USA; **Fund: USD 90,000**
6. **Co-Principal Investigator** to the evaluation of IYCF intervention using the Primary Health Care platforms of GoB [2022-23]

Donor: FHI360/UNICEF; Fund: USD 150,000

Research fund earned as PI/Co-PI/Technical Lead: USD over 9 millions

F. Academic Scholarship

- 1. Belgian Government Scholarship:** To undertake the Master degree in food science and nutrition at Ghent University, Belgium
- 2. International Post Graduate Research Scholarship (IPRS) commissioned by Government of Australia:** To undertake the Ph.D. at Griffith University, Australia

G. Selected Scientific Works

Overview: My research concentrated in some key areas of public health nutrition, such as micronutrients, anemia, dietary assessment, validation studies, epidemiological studies, national surveys and the randomized controlled trials. Some of the notable works are,

1. Establishing the relationship of groundwater iron and iron status in Bangladeshi populations at the nationally representative level.

Contribution to the knowledgebase: This established an additional layer in the understanding of global determinants of anemia.

Link: <https://doi.org/10.1017/S1368980015003651>

2. Establishing the efficacy of a low-dose iron MNP formulation for control of anemia in Bangladeshi children exposed to high iron content in the drinking groundwater.

Contribution to the knowledgebase: This is the first work globally in the background where population is naturally iron sufficient. By proving the efficacy of a low-iron formulation, a new intervention is readied for policy adoption for better management of childhood anemia.

Link: <https://doi.org/10.3390/nu11112756>

3. Development and standardization of a simplified, non-device based tool (e.g. taste-rating of the groundwater sample) for a semi-quantitative assessment of iron content in groundwater.

Contribution to the knowledgebase: The tool offers the scope of a low-cost, non-device based assessment of iron level in groundwater which can be used to generate a robust renewed mapping of Bangladesh for groundwater iron. Thus, a customized intervention strategy for anemia control could be feasible.

Link: <https://doi.org/10.1016/j.gsd.2020.100455>

4. Development and validation of a novel Food Frequency Questionnaire (FFQ) for the dietary assessment in the Bangladeshi children.

***Contribution to the knowledgebase:** This validated novel dietary assessment tool is suitable to use in Bangladeshi context. The application of the tool can contribute to the ongoing generation of the **quantitative database of the intakes of the nutrients** which might provide robust dietary information for the planners and policymakers.*

Link: DOI: [10.1017/jns.2021.19](https://doi.org/10.1017/jns.2021.19)

H. National Policy Work [Bangladesh]

1. Under the directive of the Bangladesh National Nutrition Council (BNNC), MOHFW; I spearheaded to develop a guideline on **multi-sectoral national nutritional surveillance system** for Bangladesh in the aftermath of the pandemic COVID-19 (**January-August 2021**). The final report was launched by the MOHFW. The report is available in the following link.

[https://bnnc.portal.gov.bd/sites/default/files/files/bnnc.portal.gov.bd/page/1f1d0f32_ab6f_49f3_8b9c_b52ccefd63c4/2021-09-22-04-58-040d0ed96b34e759aaa598dce50a9d13.pdf]

2. Under the auspices of the Bangladesh National Nutrition Council (BNNC), MOHFW; I was tasked to lead the research of the **projected decline of the micronutrient status in the Bangladesh population in the aftermath of the pandemic COVID-19 (January-August 2021)**. The final report was launched by the MOHFW. The report is available in the following link.

[https://bnnc.portal.gov.bd/sites/default/files/files/bnnc.portal.gov.bd/page/1f1d0f32_ab6f_49f3_8b9c_b52ccefd63c4/2021-09-22-06-07-e918fe1818c07a43e6da76464d02f48d.pdf]

3. My scientific work was pivotal to the formulation of the “Strategy for Prevention and Control of the Deficiency of Micronutrients in Bangladesh, 2015-2023” (**2014**); under the directive of the National Nutrition Service, MOHFW.
4. I contributed as a keynote speaker to the first “National Anemia Consultation” to upgrade the national anemia prevention policy of Bangladesh (**2016**).

I. Mentoring and Staff Supervision (selected)

1. I have **mentored** a number of young scientists at icddr,b with their projects. Currently, I work as **external co-supervisor** to the projects for students of the Masters course at the INFS, Dhaka University
2. As the **PI** of the National Micronutrient Survey 2011-12, I supervised about **200** field personnel (field coordinators, field supervisors, enumerators, phlebotomists, data processors) for an operation of the nationwide scale.
3. As the **site-PI** of a community based randomized controlled trial (“Efficacy of the low-iron MNP in prevention of childhood anemia”), which was a Griffith University-University of Dhaka joint collaboration (2017-2019), I supervised a team of **25** personnel to complete the trial successfully.

J. Research Collaboration (ongoing & upcoming)

1. I am nominated as a **Chief Investigator** in a joint research grant application to collaborate with the researchers of University of Sydney, University of Melbourne and icddr,b for a NHMRC Australia grant (2021 Clinical Trials and Cohort Studies). The project features the efficacy of the lactoferrin and low-iron supplements in preventing childhood anemia in Bangladesh.
2. I am collaborating as the **Technical Advisor** to the National Institute for Preventive and Social Medicine (**NIPSOM**) providing technical support to conduct the first round of the multisectoral national nutritional surveillance (2022).
3. a. I am collaborating with the **Institute of Nutrition and Food Science**, University of Dhaka to study the contribution of groundwater iron to the total iron intake in women in four districts of Bangladesh. Data collection is completed (2021-22).

b. I am collaborating as the **Co-PI** with the **Institute of Nutrition and Food Science**, University of Dhaka to study the contribution of groundwater iron to the total content of iron in the cooked rice in Bangladesh. Data collection is complete (2022).
4. **Upcoming Project:** A joint-bid collaborating with the Griffith University, Australia for a project to determine the **optimum iron supplementation dose and strategy in pregnant women** in Bangladesh. Approximated fund: **USD 300,000-500,000**. My role is the **site-PI**.

K. Scientific/Technical/Management skills

1. Grant proposal writing, study design, study conduction, statistical analysis using STATA/SPSS (e.g. Mixed-effect analysis, GLM, GEE, Agreement analyses), report/manuscript writing and publication, study dissemination, personnel training.

2. Staff recruitment, management and performance appraisal.

L. Editorial & Academic Review Activities

1. **Editorial Board Member to World Nutrition**, the official journal of the World Public Health Nutrition Association.

Link: <https://worldnutritionjournal.org/index.php/wn/about/editorialTeam>

2. A regular **reviewer for the premier journals in nutrition**—Journal of Nutrition, Nutrients, Public Health Nutrition, Maternal and Child Nutrition, PLOS One, BMC Nutrition, Journal of Health Population and Nutrition.

M. Selected Publications [Over last 10 years]

1. **Sabuktagin Rahman**, Patricia Lee, and Faruk Ahmed. Intake of iron in rural Bangladeshi Children living in a low-iron groundwater setting: Low-iron micronutrient powder is a potential intervention for the prevention of childhood anemia. [Accepted for publication, June 2022] **[IF: 1.6]**
2. **Sabuktagin Rahman**, & Nazma Shaheen. (2022). Phytate-iron molar ratio and bioavailability of iron in Bangladesh. *Tropical Medicine & International Health*, 10.1111/tmi.13750. Advance online publication. <https://doi.org/10.1111/tmi.13750> **[IF: 2.62]**
3. **Sabuktagin Rahman**, Nazma Shaheen. An alternative approach to adjust the iron status for inflammation in population: an exploratory study. *World Nutrition*, Vol 12 No 4 (2021), <https://worldnutritionjournal.org/index.php/wn/article/view/831>
4. Towfida J. Siddiqua, Nuzhat Choudhury, Tanvir Ahmed, Shahed Rahman, **Sabuktagin Rahman**, Tahmeed Ahmed. Iron content of drinking water is associated with anemia status among children in high ground water iron areas in Bangladesh. *Trop Med Int Health*. 2021; 00:1–9. DOI: 10.1111/t mi.13710 **[IF:2.62]**
5. **Sabuktagin Rahman**, Santhia Ireen, Nazma Shaheen. Anemia, Iron Deficiency and Malaria amidst the Impoverishment: A Nexus for the Anemia Management Challenge. *World Nutrition*; DOI: <https://doi.org/10.26596/wn.2021122119-122>
6. **Sabuktagin Rahman**, Patricia Lee, Santhia Ireen, Moududur R. Khan, Faruk Ahmed. Validation of an interviewer-administered seven-day semi-quantitative food frequency questionnaire for the dietary assessment of preschool children in rural Bangladesh. *Journal of Nutritional Science* 2021 Apr 19; 10:e26. doi: 10.1017/jns.2021.19. **[IF/CiteScore: 9.4]**

7. **Sabuktagin Rahman**, Avonti Basak Tukun, Santhia Ireen, Nazma Shaheen. Evaluation of the food composition tables: Beyond the divergence of intakes. *Maternal and Child Nutrition*, Volume17, Issue3, July 2021 e13149, <https://doi.org/10.1111/mcn.13149> [IF: 3.66]
8. **Sabuktagin Rahman**, Guus Kortman, Jos Boekhorst et al. Effect of low-iron micronutrient powder (MNP) on the composition of gut microbiota of Bangladeshi children in a high-iron groundwater setting: a randomized controlled trial. *European Journal of Nutrition* (2021). <https://doi.org/10.1007/s00394-021-02523-1> [IF: 5.614]
9. **Sabuktagin Rahman**, Moudud ur - Rahman Khan, Patricia Lee, Faruk Ahmed. Development and standardization of taste-rating of the water sample as a semi-quantitative assessment of iron content in groundwater. *Groundwater for Sustainable Development*, July 2020; DOI: 10.1016/j.gsd.2020.100455 [IF: 7.9]
10. **Sabuktagin Rahman**, Santhia Ireen. Iron-supplementation and diarrhoea from the perspective of groundwater iron. *World Nutrition* 11(2):115-119, June 2020; DOI: 10.26596/wn.2020112115-119
11. **Sabuktagin Rahman**, Santhia Ireen. Groundwater Iron and the Basis for Microbiota-Directed Complementary Food Treatment of Child Undernutrition. *World Nutrition* 11(2):108-111, June 2020; <https://doi.org/10.26596/wn.2020112108-111>
12. Christine M McDonald ,Parminder S Suchdev, Nancy F Krebs, Sonja Y Hess, K Ryan Wessells, Sanober Ismaily, **Sabuktagin Rahman**, Frank T Wieringa, Anne M Williams, Kenneth H Brown, and Janet C King. Adjusting plasma or serum zinc concentrations for inflammation: Biomarkers Reflecting Inflammation and Nutritional Determinants of Anemia (BRINDA) project. *American Journal of Clinical Nutrition* 111(4):927-937, April 2020, DOI: 10.1093/ajcn/nqz304 [IF: 7.047]
13. **Sabuktagin Rahman**, Patricia Lee, Rubhana Raqib, Anjan K. Roy, Moududur R. Khan and Faruk Ahmed. Effect of Micronutrient Powder (MNP) with a Low-Dose of Iron on Hemoglobin and Iron Biomarkers, and Its Effect on Morbidities in Rural Bangladeshi Children Drinking Groundwater with a High-Level of Iron: A Randomized Controlled Trial. *Nutrients* 11(11):2756, November 2019; DOI: 10.3390/nu11112756 [IF:6.70]
14. **Sabuktagin Rahman**, Santhia Ireen. Groundwater iron has the ground: Low prevalence of anemia and iron deficiency anemia in Bangladesh. *American Journal of Clinical Nutrition* 110(1), May 2019; DOI: 10.1093/ajcn/nqz052 [IF: 7.047]
15. Ramkripa Raghavan, Grant J. Aaron, Baitun Nahar, Jacky Knowles, Lynnette M. Neufeld, **Sabuktagin Rahman**, Prasenjit Mondal, Tahmeed Ahmed. Household

coverage of vitamin A fortification of edible oil in Bangladesh. *Plos One*, 2019; doi.org/10.1371/journal.pone.0212257 [IF: 3.24]

16. Mohd S. Iqbal, **Sabuktagin Rahman**, Md Ahshanul Haque Mohammad Junayed Bhuyan Abu Syed Golam Faruque Tahmeed Ahmed. Lower intakes of protein, carbohydrate, and energy are associated with increased global DNA methylation in 2- to 3-year-old urban slum children in Bangladesh. *Maternal and Child Nutrition*, 23 March 2019; doi.org/10.1111/mcn.12815 [IF: 3.66]
17. S. M. Tafsir Hasan, **Sabuktagin Rahman**, Lindsey Mina Locks, Mizanur Rahman, Samar Kumar Hore, Kazi Nazmus Saeed, Md. Alfazal Khan, Tahmeed Ahmed. Magnitude and determinants of inadequate third-trimester weight gain in rural Bangladesh. *Plos One*, April 26, 2018; doi.org/10.1371/journal.pone.0196190 [IF: 3.24]
18. **Sabuktagin Rahman**, Malay K. Mridha, Patricia Lee, Faruk Ahmed. Can Taste Rating of Groundwater Samples for the Presence of Iron Be A Novel Approach to Groundwater Iron Assessment? *World Nutrition* 11(2):115-119, April 2018; <https://doi.org/10.26596/wn.20189122-30>
19. **Sabuktagin Rahman**, Tahmeed Ahmed, Ahmed Shafiqur Rahman, Nurul Alam , A. M. Shamsir Ahmed, Santhia Ireen, Ireen Akhter Chowdhury, Fatima Parveen Chowdhury and S. M. Mustafizur Rahman. (2016). Determinants of iron status and Hb in the Bangladesh population: The role of groundwater iron. *Public Health Nutrition*, 19(10), 1862-1874. doi:10.1017/S1368980015003651 [IF: 4.02]
20. **Sabuktagin Rahman**, Ahmed Shafiqur Rahman, Nurul Alam, AM Shamsir Ahmed, Santhia Ireen , Ireen Akhter Chowdhury, Fatima Parveen Chowdhury, SM Mustafizur Rahman and Tahmeed Ahmed. Vitamin A deficiency and determinants of vitamin A status in Bangladeshi children and women: findings of a national survey. *Public Health Nutrition*, Volume 20, Issue 6 April 2017 , pp. 1114-1125; doi.org/10.1017/S1368980016003049 [IF: 4.02]
21. Magali Leyvraz, Arnaud Laillou, **Sabuktagin Rahman**, Tahmeed Ahmed, Ahmed Shafiqur Rahman, Nurul Alam, Santhia Ireen and Dora Panagides. An Assessment of the Potential Impact of Fortification of Staples and Condiments on Micronutrient Intake of Young Children and Women of Reproductive Age in Bangladesh. *Nutrients* 2016, 8(9), 541; <https://doi.org/10.3390/nu8090541> [IF: 6.70]
22. **Sabuktagin Rahman**, Tahmeed Ahmed, Ahmed Shafiqur Rahman, Nurul Alam , A. M. Shamsir Ahmed, Santhia Ireen, Ireen Akhter Chowdhury, Fatima Parveen Chowdhury and S. M. Mustafizur Rahman. Status of zinc nutrition in Bangladesh: the underlying associations. *Journal of Nutritional Science*, DOI: <https://doi.org/10.1017/jns.2016.17> [IF/CiteScore: 9.4]

23. **Sabuktagin Rahman**. Vitamin A fortification of vegetable oil in Bangladesh. *Experimental Biology* 2016 [IF: 3.31]
24. M. Aminul Islam, Tahmeed Ahmed, ASG Faruque, **Sabuktagin Rahman**, SK Das, Dilruba Ahmed. *European journal of clinical nutrition* 66 (11), 1242-1246 [IF: 4.97]
25. Tahmeed Ahmed, Santhia Ireen, **Sabuktagin Rahman et al.**, (2012). Nutrition of Children and Women in Bangladesh: Trends and Directions for the Future. *Journal of Health, Population and Nutrition*, 30(1), 1-11.
<https://doi.org/10.3329/jhpn.v30i1.11268> [IF: 2.0]
26. Tahmeed Ahmed, **Sabuktagin Rahman**, Alejandro Rafael Cravioto. Oedematous malnutrition. November 2009The *Indian Journal of Medical Research* 130(5):651-4 [IF: 2.38]
27. Anbrasi Edward, Shannon Barkley, David H Peters, Tahmeed Ahmed, **Sabuktagin Rahman**. Framing Research on Delivery and Utilization in Nutrition Programs - Lessons from Health Systems Research. January 2009 *Annals of Nutrition and Metabolism* 55:21-22 [IF: 5.92]

Researchgate link: <https://www.researchgate.net/profile/Sabuktagin-Rahman>

Papers currently under review in the submitted journals

1. "Behind the Scene of the Prevalence of Anaemia: An Extended Way of Reporting" [in a journal with IF+4]
2. "Can Guava (*Psidium guajava*) Leaf Extracts Develop An Indigenous, Simplified Tool For A Semi-quantitative Assessment of Iron in Groundwater?" [in a journal with IF+2.25]
3. "Thalassemia carrier status and groundwater iron: Implication for iron supplementation programme for children in Bangladesh" [in a journal with IF+2.5]

N. Referees

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Dated: 03.07.2022

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