

SUSMITA GHOSH



Ph.D. Candidate

Interdepartmental Nutrition Program
Purdue University
West Lafayette, IN 47907
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Assistant Professor

Dept. of Food Tech. & Nutrition Science
Noakhali Science & Technology University
Sonapur Road, Noakhali 3814, Bangladesh
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Education

Ph.D. Candidate, Nutrition Science

Purdue University, West Lafayette, Indiana

Jan 2021 - present

- *Dissertation Title:* Drivers of caregiving behaviors and interventions to improve child nutrition and development in low-resource settings
- *Mentor:* Dr. Nilupa S Gunaratna

M.S., Nutrition and Food Science

2016

University of Dhaka, Bangladesh

- *Dissertation title:* Antimicrobial activity of different types of tea against some pathogenic bacteria.
- *Mentor:* Dr. Sharmin Rumi Alim

B.S. (Honors), Nutrition and Food Science

2015

Institute of Nutrition and Food Science (INFS), University of Dhaka, Bangladesh

Certificates & Trainings

Graduate Certificate

Fall 2025

Advanced Methods in Behavioral, Health, and Social Sciences
Purdue University, West Lafayette, Indiana

Bangalore Boston Nutrition Collaborative Course

Jan 2019

2-week short course in International Nutrition Research Methods
St. John's Research Institute, Bangalore, India

Research Experience

Graduate Research Assistant

Oct 2024 – Present

Department of Nutrition Science, Purdue University, West Lafayette, Indiana

- Project: Development of External Food Environment Surveillance Systems of Informal and Formal Food Vendors in Two Secondary Cities in Kenya
- Skills: Data analysis (SAS and STATA), GIS software for outcome mapping.

Graduate Research Assistant

Jun 2021 - Sept 2024

Interdepartmental Nutrition Program, Purdue University, West Lafayette, Indiana

- Project: Applied Nutrition Research Capacity Building (ANRCB) - A Lao American Nutrition Initiative (LANI) project.
- Responsibilities: Preparing training modules, mentoring small research grant groups, conducting professional development workshops, and lecturing on topics such as effective poster presentation, writing research questions, and reference management.

Graduate Research Assistant

Jan - May 2021

Interdepartmental Nutrition Program, Purdue University, West Lafayette, Indiana

- Project: Engaging Fathers for Effective Child Nutrition and Development (EFFECTS) in rural Tanzania.
- Skills: Randomized control trial (RCT), STATA, SAS.

Internship**Jun - Aug 2014***International Center for Diarrheal Disease Research, Bangladesh (ICDDR); Dhaka Hospital*

- Research area: Managing Severe Acute Malnutrition (SAM).
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Teaching Experience

Teaching Assistant**Summer 2025***MCAP Summer Institute, Methodology Center at Purdue (MCAP), Purdue University*

- Workshop: Longitudinal Data Analysis for 59 graduate students from different US universities, faculty, and professionals.
- Responsibilities: Assisted instructors with pedagogy, slide preparation, R and STATA coding, problem solving, and student projects.

Assistant Professor (*Currently on Sabbatical*)**Apr 2019 - present***Department of Food Technology and Nutrition Science
Noakhali Science and Technology University, Bangladesh***Undergraduate Courses Taught:**

- Nutritional Biochemistry I & II (FTNS 3101, FTNS 4101)
- Nutrition and Dietetics (FTNS 4105)

Graduate Courses Taught:

- Advanced Human Nutrition (FTNS 5101)
 - Planning and Project Design (FTNS 5103)
 - Epidemiology and Community Health (FTNS 5201)
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Lecturer**Apr 2017 – Apr 2019***Department of Food Technology and Nutrition Science
Noakhali Science and Technology University, Bangladesh***Undergraduate Courses Taught:**

- Intro to Food Tech & Nutrition (FTNS 11010)
 - Organic Chemistry (FTNS 1105)
 - Microeconomics (FTNS 1107)
 - Biochemistry (Macronutrients) (FTNS 2101)
 - Macroeconomics (FTNS 2209)
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Mentoring

Noakhali Science and Technology University**2017-2020***Noakhali, Bangladesh*

- Undergraduate: Mentored 16 students for their thesis
- Graduate: Mentored 6 students for their MS thesis

(1) Smaranima Ghosh Jui (2019-20)

Current Position: Assistant Professor, Noakhali Science and Technology University, Bangladesh

(2) Sabrina MamtaZ (2019-20) *Current Position:*

(3) Sudipta Das (2019-20)

Current Position:

(4) Faria Sharmin (2018-19)

Current Position:

- (5) Tahmina Akhter (2018-19)
Current Position: Practicing Dietitian, Chittagong, Bangladesh
- (6) Anamul Haque (2018-19)
Current Position: Nutrition site supervisor, Concern Worldwide, Bangladesh
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Manuscripts Under Preparation/Review

- (1) **Ghosh S**, Shively GE, O'Malley SF, Gunaratna NS. Exploring the Gaps: Early Childhood Nutrition and Development Among Under-Five Children Across Ethnolinguistic Groups in Lao PDR. (*Manuscript in Preparation*)
- (2) Gunaratna N, **Ghosh S**, Verissimo CK, et al. Effects of engaging fathers and bundling nutrition and parenting interventions on child nutrition outcomes and related parent behaviors in rural Tanzania: Results from EFFECTS, a five-arm cluster-randomized controlled trial". (*Submitted*).
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Publications

- (26) Shively, G., Ambikapathi, R., Eddens, K., **Ghosh, S.**, et al. (2024). Demand-driven capacity building for public health nutrition research in Lao PDR. *Global Health Research and Policy*, 9(1), 36.
- (25) O'Malley, S. F., Ambikapathi, R., **Ghosh, S.**, et al. (2024). Contribution of Food from Market Purchases and Home Production to Child Nutrient Intake. *The Journal of Nutrition*, 154(6), 1907-1916.
- (24) Kundu, S., Kundu, S., Seidu, A. A., Okyere, J., **Ghosh, S.**, et al. (2023). Factors influencing and changes in childhood vaccination coverage over time in Bangladesh. *BMC Public Health*, 23(1), 1-13.
- (23) Kundu, S.; Rejwana, N.; Al Banna, M.H.; Kawuki, J.; **Ghosh, S.**, et al. (2022). Linking Depressive and Anxiety Symptoms with Diet Quality of University Students. *Healthcare*, 10, 1848.
- (22) Kabir, M. R., Halima, O., Rahman, N., **Ghosh, S.**, et al. (2022). Linking farm production diversity to household dietary diversity controlling market access and agricultural technology usage. *Heliyon*, e08755.
- (21) Akter T, Mokbul M, **Ghosh S**, Dey M. (2021). Raw milk in Noakhali, Bangladesh: Quality assessment and antibiotic resistance of identified microorganisms. *Current Research in Nutrition and Food Science*, 9(3):1104-1112.
- (20) Alam, M. R., Karmokar, S., Reza, S., Kabir, M. R., **Ghosh, S.**, et al. (2021). Geriatric malnutrition and depression: Evidence from elderly home care population in Bangladesh. *Preventive medicine reports*, 23, 101478.
- (19) Habib, M. A., Alam, M. R., **Ghosh, S.**, et al. (2021). Impact of knowledge, attitude, and practice on iodized salt consumption at the household level in selected coastal regions of Bangladesh. *Heliyon*, 7(4), e06747.
- (18) Mamtaz, **S.**, **Ghosh, S.**, Jui, S. G., et al. (2021). Aloe vera: An Unconventional Food Used to Reduce Hyperglycemia and Hyperlipidemia. *Current Nutrition & Food Science*, 17(8), 814-825.
- (17) **Ghosh, S.**, Kabir, M., Islam, M., et al. (2021). Association between water, sanitation, and hygiene practices (WASH) and anthropometric nutritional status among selected under-five children in rural Noakhali, Bangladesh. *Journal of Water, Sanitation and Hygiene for Development*, 11(1), 141-151.
- (16) Alam, S. S., Rahman, T., **Ghosh, S.**, et al. (2021). The Prevalence and Associated Factors of Caesarean Section at Noakhali Sadar, Bangladesh. *Journal of Complementary and Alternative Medical Research*, 13(1), 1-12.

- (15) Chowdhury, A. I., Habib, M. A., & **Ghosh, S.** (2021). Effect of Saffron (*Crocus sativus L*) on Common Non-Communicable Disease. *Journal of Ayurvedic and Herbal Medicine*, 7(2), 93-108.
- (14) Rahman, T., Al Mamun, A., **Ghosh, S.**, et al. (2021). Nutritional Status of Under-five Children among Urban Slum Dwellers in Dhaka City, Bangladesh. *Indian Journal of Public Health Research & Development*, 12(1).
- (13) Alam, S. S., Haque, A., Shipu, T. A., **Ghosh, S.**, et al. (2020). Assessment of hand washing knowledge and practice among primary school children in Noakhali District, Bangladesh. *American Journal of Public Health Research*, 8(6), 197-201.
- (12) **Ghosh, S.**, Nurain, N., Hasan, M. F., et al. (2020). Identification of Coliform in common street food and associated factors of contamination in Noakhali, Bangladesh. *Methodology*.
- (11) Chowdhury, A. I., **Ghosh, S.**, Hasan, M. F., et al. (2020). Prevalence of insomnia among university students in South Asian Region. *Journal of Preventive Medicine and Hygiene*, 61(4), E525.
- (10) **Ghosh, S.**, Kabir, M. R., Alam, M. R., et al. (2020). Balanced diet related knowledge, attitude and practices (KAP) among adolescent school girls in Noakhali district, Bangladesh. *International Journal of Adolescent Medicine and Health*.
- (9) Chowdhury, M. H., **Ghosh, S.**, Kabir, M. R., et al. (2020). Effect of supplementary omega-3 fatty acids on pregnant women with complications and pregnancy outcomes. *The Journal of Maternal-Fetal & Neonatal Medicine*, 1-17.
- (8) Rahman, N., Sultana, M. M., Sultana, M., **Ghosh, S.**, et al. (2020). Stem Cell Therapy in Treatment of Non-communicable Diseases. *Asian Journal of Immunology*, 4(1), 10-18.
- (7) **Ghosh, S.**, Kabir, M. R., Khan, M. M. I., et al. (2020). Knowledge, Attitude, and Practice (KAP) regarding personal hygiene among primary school going children in Sadar Upazilla, Noakhali District, Bangladesh. *Indian Journal of Public Health Research & Development*, 11(6).
- (6) Kabir, M. R., **Ghosh, S.**, Al Mamun, M. A., et al. (2020). Factors associated with antenatal and health facility delivery care in selected areas of Subornochor upazila, Noakhali, Bangladesh. *Clinical Epidemiology and Global Health*, 8(3), 983-988.
- (5) Sabuj, M. P., Chowdhury, R., Al Mamun, M. A., Kabir, M. R., **Ghosh, S.**, et al. (2020). Assessment of dietary diversity of mothers (0-2 years childbearing) in Noakhali District of Bangladesh. *Journal of Noakhali Science and Technology University (JNSTU)*, 4(1&2), 1-11.
- (4) Alam, M. R., Reza, S., Kabir, R., **Ghosh, S.**, et al. (2019). Prevalence and association of different lifestyle factors with overweight and obesity among the children of selected private English Medium Schools from Dhaka City. *World*, 7(2), 42-47.
- (3) Kabir, M. R., **Ghosh, S.**, & Shawly, A. (2019). Causes of early marriage and its effect on reproductive health of young mothers in Bangladesh. *American Journal of Applied Sciences*, 16(9), 289-297.
- (2) Dey, M., Dey, S. C., Alim, S. R., & **Ghosh, S.** (2018). Effect of Groundwater Iron and Other Micronutrients on Anaemia in Bangladesh: A Literature Review.
- (1) **Ghosh, S.**, Masud, M. S., Tabassum, M., & Dey, M. (2018). Effect of dietary intake and socio-economic factor on nutritional status of primary school going children: a cross-sectional study in old Dhaka City. *Bangladesh*, 5(3), 93-100.

Invited Talk

- (3) Applied Nutrition Research Capacity Building (ANRCB) - A Lao American Nutrition Initiative (LANI) project (ARNCB) seminar series in Lao PDR on January 4th, 2023: Understanding the Determinants and Measures of Early Childhood Development
- (2) Asian American and Asian Resource and Cultural Center's (AARCC) Spring 2025 Lunch & Learn series on March 13, 2025, at Purdue University: Finding Home and Purpose: Journey Through Life and Research at Purdue

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- (1) Noakhali Science and Technology University Student Association on April 5th, 2025: Information Session on Higher Studies in the USA
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Oral Presentations

- (4) Gunaratna NS, Kimenju S, Kamau JW, Boncyk M, Ambikapathi R, Ndanu P, Ndirangu AC, **Ghosh S**, et al. "Temporal transects: A methodology to study temporal variation in food environments." Oral presentation, 10th Annual Agriculture, Nutrition, and Health (ANH) Conference, 2025, Dar es Salaam, Tanzania.
- (3) Boncyk M, Blake CE, Kimenju SC, Kamau JW, Ambikapathi R, Frongillo EA, Wang C, Hiscox A, Avula R, Matangi ES, Ndanu P, **Ghosh S**, et al. "Heat exposure in Kenya's outdoor food markets." Oral presentation, 10th Annual Agriculture, Nutrition, and Health (ANH) Conference, 2025, Dar es Salaam, Tanzania.
- (2) Heniff L, Boncyk M, Ambikapathi R, Verissimo CK, Froese SL, Ruiz Y, **Ghosh S**, et al. "I was working out daily prior to COVID": Impact of the COVID-19 Pandemic on the Physical Health of Purdue Graduate Students." Oral presentation, Purdue University Spring Undergraduate Research Conference, April 12-19, 2021.
- (1) Matangi ES., Boncyk M., Froese S. L., Verissimo C.K., Ruiz Y., Ambikapathi R., **Ghosh S.**, et al. "Do Demographics, Basic Needs Security, or Health Affect Online Survey Participation During the COVID-19 Pandemic?" Oral presentation, Joint Statistical Meeting Seattle, Washington, August 7 – 12, 2021.
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Poster Presentations

- (16) **Ghosh S**, Tessema M, Tesfa A, Murray-Kolb LE, Gunaratna NS. "Risk factors for Anemia in young children in Rural Ethiopia: A longitudinal study." Poster presentation, Women's Health Research Annual Symposium on Nov 10, 2025, Purdue University, USA.
- (15) Boncyk M, Frongillo EA, Gunaratna NS, Ambikapathi R, Wang C, Matangi ES, **Ghosh S**, et al. "Heat exposure in Kenya's outdoor food markets." Poster presentation, American Society of Nutrition, Nutrition 2025, Florida, USA.
- (14) **Ghosh S**, Tessema M, Tesfa A, Murray-Kolb LE, Gunaratna NS. "Risk factors for Anemia in young children from Rural Ethiopia: A longitudinal study." Poster presentation, Global Perspective on One Health, 2024, Purdue University, USA.
- (13) **Ghosh S**, Shively GE, O'Malley SF, and Gunaratna NS. "Maternal and child nutrition, parenting behaviors, and early childhood development: Evidence from Lao PDR." Poster presentation, Global Perspective on One Health, 2024, Purdue University, USA.
- (12) **Ghosh S**, Tessema M, Tesfa A, Murray-Kolb LE, Gunaratna NS. "Risk factors for Anemia in young children from Rural Ethiopia: A longitudinal study." Poster presentation, Fall Research Day, 2024, Purdue University, USA.
- (11) **Ghosh S**, Tessema M, Tesfa A, Murray-Kolb LE, Gunaratna NS. "Risk factors for Anemia in young children from Rural Ethiopia: A longitudinal study." Poster presentation, American Society of Nutrition, Nutrition 2024, Chicago, USA.
- (10) Thongmixay S, Gunaratna NS, Sychareun V, Rajsavong L, Phimmavong C, **Ghosh S**. "Nutrient Intake and Adequacy in Children aged 12-23 months in Lao PDR." Poster presentation, Life Inspired Poster Session, Purdue University, March 2024.
- (9) **Ghosh S**, Shively GE, O'Malley SF, and Gunaratna NS. "Maternal and child nutrition, parenting behaviors, and early childhood development: Evidence from Lao PDR." Poster presentation, Life Inspired Poster Session, Purdue University, March 2024.

- (8) Thongmixay S, Gunaratna NS, Sychareun V, Rajsavong L, Phimmavong C, **Ghosh S.** "Nutrient Intake and Adequacy in Children aged 12-23 months in Lao PDR." Poster presentation, Lao Annual Public Health Conference, November 2023.
- (7) **Ghosh S**, Shively GE, O'Malley SF, and Gunaratna NS. "Maternal and child nutrition, parenting behaviors, and early childhood development: Evidence from Lao PDR." Poster presentation, Lao Annual Public Health Conference, November 2023.
- (6) **Ghosh S**, Shively GE, O'Malley SF, and Gunaratna NS. "Maternal and child nutrition, parenting behaviors, and early childhood development: Evidence from Lao PDR." Poster presentation, Global Food & Nutrition Security and Human Health Session, Purdue University, September 2023.
- (5) **Ghosh S**, Shively GE, O'Malley SF, and Gunaratna NS. "Maternal and child nutrition, parenting behaviors, and early childhood development: Evidence from Lao PDR." Poster presentation, American Society of Nutrition, Nutrition 2023, Boston, USA.
- (4) Tesfa A, Tessema M, **Ghosh S**, Murray-Kob LE, Hussen A, Woldeyohannes M, and Gunaratna NS. "Risk factors of anemia and co-occurrence of nutrient biomarker deficiencies among women of reproductive age in Ethiopia." Poster presentation, Micronutrient Forum's 6th Global Conference, The Hague, Netherlands, October 16-20, 2023.
- (3) O'Malley SF, Ambikapathi R, **Ghosh S.**, Matangi ES., et al. "Contribution of foods produced at home vs. purchased to adult and child dietary diversity and child nutrient intakes: Results from the EFFECTS trial." Poster presentation, ANH conference, 2023.
- (2) **Ghosh S**, Shively GE., O'Malley SF, Gunaratna NS. "Early childhood impacts of fathers' engagement in the home learning environment (HLE): Evidence from Lao PDR." Poster presentation, Purdue University Fall Research Day Conference, November 3rd, 2022.
- (1) O'Malley SF, Ambikapathi R, **Ghosh S.**, Gunaratna NS. "Contribution of foods from home production versus purchase on nutrient intakes of young children in rural Tanzania." Poster presentation, Purdue University Fall Research Day Conference, November 3rd, 2022.

Grant Support (*Funded*)

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| <p>(5) Cultivation of South African Black Grapes on the NSTU Campus</p> <p>Co-Principal Investigator</p> <p>Grant amount: \$2000</p> <p>Ministry of Science and Technology (MOST), Bangladesh.</p> | 2019-2020 |
| <p>(4) Effects of <i>aloe vera</i> and fenugreek on blood glucose and cholesterol</p> <p>Principal Investigator</p> <p>Grant amount: \$1000</p> <p>Ministry of Science and Technology (MOST), Bangladesh.</p> | 2019 |
| <p>(3) Knowledge, Attitude, and Practice regarding balanced diet and anemia among adolescent schoolgirls</p> <p>Principal Investigator</p> <p>Grant amount: \$600</p> <p>Research Cell, Noakhali Science and Technology University, Bangladesh.</p> | 2019 |
| <p>(2) Raw Milk in Noakhali, Bangladesh: Quality Assessment and Antibiotic Resistance</p> <p>Principal Investigator</p> <p>Grant amount: \$1000</p> <p>Ministry of Science and Technology (MOST), Bangladesh.</p> | 2019 |
| <p>(1) Knowledge, Attitude, and Practice (KAP) regarding Personal Hygiene among Primary School-going Children in Sadar Upazilla, Noakhali District, Bangladesh</p> <p>Principal Investigator</p> <p>Grant amount: \$650</p> <p>Research Cell, Noakhali Science and Technology University, Bangladesh.</p> | 2018 |

Fellowship and Awards

Compton Travel Grant (\$400) <i>Department of Nutrition Science, Purdue University, West Lafayette, Indiana</i>	2023
Purdue Graduate Student Government (PGSG) Travel Grants (\$500) <i>Purdue University, West Lafayette, Indiana</i>	2023
Rickard scholarship for research on infants and childhood nutrition (\$4000) <i>Department of Nutrition Science, Purdue University, West Lafayette, Indiana</i>	2022-2023
Mary Fuqua Fellowship (\$2000) <i>Department of Nutrition Science, Purdue University, West Lafayette, Indiana</i>	2021
National Science and Technology Fellowship (\$700) <i>The Ministry of Science and Technology, Bangladesh</i>	2015

Training Module

Ghosh S, Oula R, and Gunaratna NS. (2022) "Introductory Concepts in Nutrition."

- This training module consists of eight topics (videos) available in English and Lao.
 - Faculty and researchers at the University of Health Sciences, the Lao Tropical and Public Health Institute, and the Center for Nutrition (under the Ministry of Health) (n=19)
 - Two cohorts of MSc students at the University of Health Sciences, with integration into the following courses: Basic Nutrition, Nutrition Assessment, Food Composition Pattern during the Life Cycle, Public Health and Food Hygiene (n=54)
 - Undergraduate students in the Faculty of Nursing and the Faculty of Health, University of Health Sciences Maternal and child health staff at Central Hospitals, District Hospitals, civil society, and non-profit organizations (n=47)
 - Viewers via YouTube (approximately 1K viewers)
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Workshop & Learning Lab

Conducted workshops for researcher groups in Lao PDR (Nov 2023) on topics including:

- Effective Poster presentation
- Writing a Research question
- Reference management.

Conducted Learning Labs at the 14th International Conference on Public Health among Greater Mekong Sub-Regional Countries (Jun 2024) on topics including:

- Research Methods
 - How to apply for higher studies in the USA.
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Professional Service

Member , Climate or Environment, Health, Agriculture and Improved Nutrition (CHAIN) GEM, American Society of Nutrition	2025-26
Member , HHS Graduate Student Council	2025-26
Member , Curriculum Committee, Nutrition Science Graduate Student Organization	2025-26
President , Nutrition Science Graduate Student Organization	2024-25
Diversity, Equity, & Inclusion (DEI) Officer , NSGSO	2023-24
Social Committee Member , NSGSO	2022-23
Presenter , FORGE-Purdue Survey to University Residences, Graduate Council, etc.	2021-22

Ad-hoc peer reviewer for

- Springer Nature
 - JAMA Pediatrics
 - Elsevier
 - BMC Public Health
 - Frontiers in Nutrition
 - Journal of Health, Population and Nutrition
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Professional Memberships

American Society for Nutrition (ASN)	2021-Present
Agriculture, Nutrition and Health (ANH)	2021-Present
Society for Nutrition Education and Behavior	2025-Present

Skills

- **Statistical software:** STATA, IBM SPSS, SAS, and R
- **Dietary assessment:** 24-hour recall, Food Frequency Questionnaire (FFQ)
- **Microbiology:** Inoculation of bacteria and media (liquid, slant, and plate cultures), staining