

SNEHA MAJUMDER

Researcher and Nutritionist/Dietitian

COMMUNICATION

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🗣️ Bengali, English, Hindi

EDUCATION

Doctor of Philosophy (Ph.D.)

Faculty of Medical and Health Sciences

Symbiosis Centre for Medical Image Analysis (SCMIA)

Symbiosis International (Deemed University) (SIU), Pune, Maharashtra, India 2018- 2026

Master of Science (M.Sc.)

Applied nutrition

Indian Council of Medical Research (ICMR) - National Institute of Nutrition, Hyderabad, India.

Dr. NTR University of Health Sciences. 2013-2015

Bachelor of Science (B.Sc.)

Food and nutrition (Honours)

Seth Anandram Jaipuria College, University of Calcutta, Kolkata, India 2010-2013

RESEARCH EXPERTISE

- Obesity
- Nutritional Neuroscience (Neuroimaging)
- Magnetic Resonance Imaging
- Exercise nutrition
- Public health and chronic disease epidemiology

CLINICAL EXPERTISE

- Metabolic diseases and bariatric nutrition
- Exercise nutrition

ABOUT ME

I am a Clinical Researcher and a Dietitian/ Nutritionist with research expertise in nutritional neuroscience (neuroimaging) with a focus in multi-modal magnetic resonance imaging techniques. My primary research interests are the applications of neuroimaging techniques in metabolic disorders, especially Obesity. My clinical specialization as a Dietitian is in the metabolic diseases and exercise nutrition. I am interested in exploring cognition, mental health outcomes and behavioral aspects of metabolic health with neuroimaging markers. Additionally, I am experienced in handling research projects related to exercise nutrition, epidemiology and public health. I enjoy teaching, mentoring, and science communication (formal and informal).

PUBLICATIONS

● Research articles

1. Sneha Majumder, Kavitha Menon, Amol Gautam, Bhushan Borotikar. The default mode network in mid-life obesity: a seed-based functional connectivity analysis on Indian men (Under preparation)
2. Sneha Majumder, Kavitha Menon, Amol Gautam, Bhushan Borotikar. Mid-life obesity and brain health: evidence of white matter alterations among Indian men (Under preparation)
3. Sneha Majumder, Kavitha Menon, Amol Gautam, Bhushan Borotikar. Impact of obesity on brain structures and association of obesity indices with brain volumetry and voxel-based morphometry (Under preparation)
4. **Majumder, S.**, Menon, K., & Borotikar, B. (2025). Impact of obesity on human brain metabolites: a systematic review on magnetic resonance spectroscopy studies. *Nutritional Neuroscience*, 1-19.
5. **Majumder, S.**, Menon, K., & Borotikar, B. (2025). Impact of obesity on brain structure: A critical review of the evidence from Magnetic Resonance imaging studies. *Brain Research*, 1865, 149823.
6. **Majumder, S.**, Das, D., & Menon, K. (2022). Knowledge, Attitude, and Practice of Sports Nutrition among Adolescent Indian Kabaddi Players. *Journal of Sports Research*, 9(2), 76-85
7. Rao, A., **Majumder, S.**, & Menon, K. (2019). Effects of Dance (Bharatanatyam) on the Body Composition, Nutritional Status, Fitness and Mental Abilities of Children and Adults—A Narrative Review. *Indian Journal of Public Health Research & Development*, 10(7).
8. **Majumder, S.**, Arlappa, N., Palla, S., & Vadakattu, S. S. (2019). A Preliminary Study on Prevalence of Non-Communicable Diseases and their Association with Physical activity among the Urban Geriatric Population. *Indian Journal of Community Health*, 31(1), 10-15.
9. **Sneha M.**, Arlappa N, Suryanarayana P, Balakrishna N, Santosh VS (2017) Prevalence of Metabolic Syndrome among Urban Older Adults of Hyderabad Metropolitan City in South India. *J Nutr Obes* 1: 101.

● Book chapters

Nutrigram – creative communication of nutrition (ISBN: 978-81-954644-0-1), 2022

Udaynarayana Madhabilata Mahavidyalaya, University of Calcutta
[Diagnosis of obesity in adults: beyond the BMI](#)

The PURPLE book – a Handbook on Diets for Diseases (Eat Right India), 2019

Food Safety and Standards Authority of India (FSSAI), Ministry of Health and Family Welfare, Government of India

[Diarrhea](#)

[Irritable Bowel Syndrome](#)

● Article

Good Health – a boon to beauty, 2018

Indian Dietetic Association – Gujarat Chapter

<https://idagujarat.wordpress.com/2018/01/11/good-health-a-boon-to-beauty/>

LABORATORY AND RESEARCH SKILLS/EXPERIENCE

Technical skills

Medical Imaging (MRI - data acquisition, data processing and analysis)

- Structural MRI (Volumetry and Morphometry)
- Diffusion Tensor Imaging
- Functional MRI (resting state, functional connectivity analysis)
- Magnetic Resonance Spectroscopy (MRS- single Voxel)

Community and Clinical Nutrition

- Body composition analysis and interpretation by Bioelectrical Impedance Analysis (BIA) method
- Body composition analysis by skinfold techniques
- Nutritional anthropometry
- Dietary assessments
- Design and implementation of tools and questionnaires for survey based studies and field work
- Clinical and physiological assessments

Biochemistry

- Spectrophotometry
- Autoanalyzer and ELISA applications

Cognition

Cognition assessment by MoCA

Research tools and software proficiency

- FMRIB - FSL
- MRICron
- 3D slicer (beginner)
- ITK snap (beginner)
- R - SPANT (beginner)
- SPSS
- GPower
- EpiInfo
- Linux (Ubuntu, CentOS)
- Bash Scripting

Research communication

- Research grant writing
- Project proposal development and writing
- Ethics committee approval documentations for human studies
- Systematic literature review
- Research articles and book chapters writing

RESEARCH PROJECTS

Projects, year and institute	Funding	Relevance
Brain imaging and its association with obesity among Indian middle-aged men September 2018 - December 2025 Symbiosis Centre for Medical Image Analysis, SIU, Pune, India	Major Research grant (MjRP) - SIU	Doctoral thesis
Comparative study on prevalence of metabolic syndrome among walkers and non-walkers of urban geriatric population of Hyderabad 2014 - 2015 ICMR- National Institute of Nutrition, Hyderabad, India	Department of Science and Technology (DST) - Government of India	Master's degree dissertation
Effect of junk food consumption on sleepiness - alertness of obese and non obese young adult urban men 2021 Symbiosis Institute of Health Sciences, SIU, Pune, India	Departmental funding	Co-mentored a Master's degree dissertation student
Effect of Bharatnatyam dance on nutritional status, body composition, fitness levels and stress on female Indian dancers. 2019-2020 Symbiosis School of Biological Sciences, SIU, Pune, India	Departmental funding	Co-mentored two Master's degree dissertation students
Assessment of nutritional adequacy and evaluation of body composition of sub elite players of different sports disciplines 2016-2018 Sports Authority of India, Gandhinagar, India	Sports Authority of India, Ministry of Youth Affairs and Sports, Government of India	Independent project
Knowledge, Attitude and Practice related to Sports Nutrition among Sub Junior and Junior Kabaddi Players in India 2016-2017 Sports Authority of India, Gandhinagar, India	Sports Authority of India, Ministry of Youth Affairs and Sports, Government of India	Independent project

CONFERENCE PRESENTATIONS

Conference details	Year	Category	Title of the presentation/ paper
2026 ISMRM & ISMRT Annual Meeting & Exhibition, 09-14 May 2026, Cape Town, South Africa.	2026	Digital posters (E. K Zavoisky stipend award)	Alterations of white matter in mid-life obesity among Indian men: A multi-method obesity diagnosis and multi-parametric MRI Obesity impacts the default mode network among Indian men: A cross-sectional resting state fMRI study
SymResearch 2.0, Pune, Maharashtra, India	2025	Oral presentation (Best oral presentation award - Biomedical Imaging)	Mid-life Obesity and Brain Health: Evidence of White Matter Alterations among Indian Men
International Society for Magnetic Resonance in Medicine (ISMRM) - Indian Chapter, IIT- Hyderabad, India	2025	Traditional poster	Do brain volumes of obese and non-obese Indian middle-aged men differ? - a first look
Nutrition Society of India (54th Annual National Conference) at ICMR-National Institute of Nutrition, Hyderabad, India	2022	Poster - Free Communication Session	Impact of obesity on structural changes of the brain: A review of the evidence from Magnetic Resonance Imaging studies
Nutrition Society of India (50th Annual International Conference) at ICMR-National Institute of Nutrition, Hyderabad, India	2018	Poster - Free Communication Session	Assessment of Nutritional Adequacy and Evaluation of Body Composition of Sub-elite Players of Different Sports Disciplines
Nutrition Society of India (51th Annual National Conference) at Rajiv Gandhi Centre for Biotechnology (RGCB), Trivandrum, Kerala, India	2019	Oral - Free Communication Session	Determinants of Knowledge, Attitude, and Practice of Sports Nutrition among Adolescent Indian Kabaddi Players
1st SAICON 2017 at JLN Stadium, New Delhi, India	2017	Oral - Free paper Presentation	Knowledge, Attitude and Practices Related to Sports Nutrition among Sub-junior and Junior Kabaddi Players in India
Nutrition Society of India (47th Annual National Conference) at ICMR-National Institute of Nutrition, Hyderabad	2015	Oral - Free Communication Session	Comparative study on prevalence of metabolic syndrome among walkers and non-walkers of urban geriatric population of Hyderabad

INVITED LECTURES

Topic	Organization / Conference	Year
Basics of quantitative MRI: Techniques and applications of MRI in clinical research (neuroimaging)	Pre-conference workshop: Introduction to Quantitative Magnetic Resonance Imaging: Image acquisition and processing techniques, SymResearch 2.0, Pune, India	2025
Obesity and its journey in the brain: the blend of research and clinical perspectives	One day National Seminar : National Nutrition Week, 2024 - Seth Anandram Jaipuria College, University of Calcutta, Kolkata, India	2024
Food of thought and fuel for the brain : role of nutrition in brain health and cognition	Diabetes Awareness and You (DAY)	2024
Methods to improve nutritional quality of common foods	HALFBREED PRENEURS webinar series	2021
Obesity: the brain game!	Mahadevananda Mahavidyalaya, Barrackpore, West Bengal (Department of Physiology)	2020

TEACHING AND MENTORSHIP EXPERIENCE

- Teaching assistance to M.Sc. students of Nutrition and Dietetics, Masters in Public Health (MPH) and B.Sc. (Medical Technology) – 2018 to 2025
- M.Sc. dissertation co-mentorship 2018-2020
- Teaching assistance to Diploma in Sports Coaching students for the subject of Sports Nutrition at Sports Authority of India, Gandhinagar – 2016 to 2018

PROFESSIONAL MEMBERSHIPS

- Life Member of Indian Dietetic Association (IDA) (L.M no : 12565)
- Life Member of Nutrition Society of India (NSI) (LM no : LM – 2018-0235)
- Indian Association of Parenteral and Enteral Nutrition (IAPEN)
- Indian Science Congress Association (ISCA)
- International Society for Magnetic Resonance in Medicine (ISMRM)

ACHIEVEMENTS AND AWARDS

- Cleared University Grant Commission National Eligibility Test (Lectureship) (UGC NET - LS) on December 2014 and June 2015.
- Ranked 3rd in M.Sc. at ICMR-National Institute of Nutrition
- Finalist (top 20): Pan India e-quiz competition organized by Nutrition Society of India.
- Finalist (top 300): DST-AWSAR (Department of Science and Technology - Augmenting Writing Skills for Articulating Research): 2022
- Recipient of research fellowship from Sports Authority of India (2016-2018)
- Recipient of SIU-junior research fellowship (2018-2022)
- Best oral presentation - biomedical imaging track : SymResearch 2.0 (September 2025)
- Conference funding: E. K Zavoisky stipend award (full funding) (ISMRM- 2026, Cape Town, South Africa).

CO-CURRICULAR ACTIVITIES

- Trained in Indian (Hindustani) classical music (Vocal)
- 'Visharad' diploma with distinction in Indian classical dance (Odissi) from Pracheen Kala Kendra, Chandigarh, India
- Diploma in Manipuri and Rabindranitya
- Creative writing : awards in various competitions

CERTIFICATIONS

FSL course

Centre for Integrative Neuroimaging, University of Oxford - 2025

Montreal Cognitive Assessment (MoCA) certification

MoCA clinic, Montreal, Canada- 2023

Fundamental Neuroscience for Neuroimaging

John Hopkin's University - 2021 via Coursera

Principles of fMRI

John Hopkin's University and University of Colorado Boulder - 2021 via Coursera

Doping control officer course

National Dope Testing Laboratory, New Delhi - 2017

WORK EXPERIENCE

June 2016 - September 2018

Sports Authority of India | Gandhinagar, Gujarat, India

Research fellow and nutrition expert

Food service management and diet planning for resident players and implementation of food safety audits according to FSSAI guidelines. Management of state, national camps and para-athletes with individual and group diet counseling. Taught (Sports nutrition) for students of Diploma in Sports Coaching. Planning and execution of several research projects on exercise science.

February 2016 - April 2016

All India Institute of Medical Sciences | New Delhi, India

Intern dietitian

Rotational training on the specialties : Gastroenterology and Surgical gastroenterology, Bariatrics, Organ transplantation, Trauma and Critical care).

September 2015 - January 2016; April 2016 - June 2016

Digestive surgery clinic, Belle Vue Clinic | Kolkata, India

Bariatric nutritionist

Specialized training (internship) for 3 months on nutritional care and diet planning for peri operative bariatric patients (IPD+OPD)/morbid obese/obese and overweight/ other metabolic diseases followed by independent practice.

November 2014 - January 2015

Sunshine hospital | Secunderabad, India

Intern dietitian

Internship as a part of M.Sc. curriculum. Training and orientation on clinical practice in a hospital setting followed by rotational training in different specialties. Case studies done on ESRD- Kidney transplant, Chronic pancreatitis, Cirrhosis of liver, Cerebrovascular accident/ Stroke, CAD-PTCA.

September 2012

Nightingale hospital | Kolkata, India

Trainee, Department of Dietetics

Internship as part of B.Sc. curriculum. General orientation of clinical nutrition in a hospital setting.

FREELANCING EXPERIENCE

May 2020 - present

Nutriknowtion | e-clinic and nutrition education platform

Founder member

2018 - present

Health help : with Sneha Majumder | e-clinic

Founder and consultant nutritionist