

MD. MONERUZZAMAN | BPT, MSc, PhD (c)

PhD Researcher | Neurorehabilitation & Cognitive Neuroscience

China Rehabilitation Research Center,

Capital Medical University, Beijing, China.

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Research Profile:

Rehabilitation researcher with clinical physiotherapy training and doctoral research experience in neurorehabilitation and cognitive neuroscience. My research focuses on understanding neural mechanisms underlying post-stroke cognitive impairment through clinical assessment, resting-state functional MRI, functional connectivity analysis, lesion network mapping, and computational approaches. My broader interests include neuroplasticity, rehabilitation biomarkers, brain-behaviour relationships, and precision rehabilitation strategies.

Publication statistics:

Published articles: 10+ | Under review: 1+ | Peer reviews completed: 8+ | International Research collaborations: 3+

Research Interests:

Neurorehabilitation | Functional Rehabilitation | Stroke Rehabilitation | Rehabilitation Biomarkers | Brain–Behavior Relationship | Exercise therapy

Work Experience:

PhD Researcher

2023 to Current

China Rehabilitation Research Center, Beijing, China.

Key Responsibilities:

- *Investigating domain-specific neural mechanisms associated with post-stroke cognitive impairment.*
- *Exploring lesion network mapping and connectivity-based biomarkers for rehabilitation outcomes.*
- *Integrating clinical assessment, neuroimaging, and computational analysis for translational rehabilitation research.*
- *Applying resting-state fMRI and functional connectivity approaches to identify altered brain networks.*

Contact: + 86 1370 135 6685 (Supervisor, 2023)

Sports Physiotherapist

2018 to 2019

Chittagong Abahoni Ltd- Professional Football Club, Segunbagicha, Dhaka, Bangladesh.

Key Responsibilities:

- *Treat national and international professional soccer players.*
- *On and off-field sports injury management.*
- *Primary and emergency health care.*
- *Plan a rehabilitative exercise program and routine health check-ups.*

Contact: + 880 1747 688 001 (Team Manager, 2019)

Clinical Physiotherapist

2017 to 2018

CPHD General Hospital Limited, Physiotherapy and Rehabilitation Department, Tejgaon, Dhaka, Bangladesh.

Key Responsibilities:

- *Patient assessment and diagnosis.*
- *Plan treatment and consult with a supervisor.*
- *Perform manual and exercise therapy for the patient.*
- *Plan a home-based rehabilitative exercise program and follow-up.*

Contact: + 880 1711 074 691 (Dr. S N Talukder, PT; In-charge)

Intern Physiotherapist

2016 to 2017

Gonoshasthay Kendra Hospital, Physiotherapy Department, Savar, Dhaka, Bangladesh

Key Responsibilities:

- *Attend patient and consult with a resident physiotherapist.*

- Perform manual and exercise therapy for the patient.
- Report and note the patient's current condition and changes in the treatment plan.
- Educate patients about home-based rehabilitative exercise or disease-related personal care.
- Communicate with other health practitioners

Contact: + 880 1717 702 145 (Dr. Nasima Yesmin, PT; HOD)

Education & Qualifications:

- PhD** Neurorehabilitation & Brain Network Analysis
2023/08 – Current Capital Medical University, Beijing, China - 100069.
Thesis: "Functional and structural brain abnormalities of post-stroke cognitive impairment."
Supervisor: Professor Zhang Hao; MD, PhD
- MSc** Masters of Rehabilitation Medicine and Physical therapy | Marks: 92.83%
2020/09 – 2023/06 Shandong University, Jinan, Shandong, China -250012.
Thesis: "Cardiac rehabilitation after coronary artery bypass graft and Stroke."
Supervisor: Prof. Wang Young-Hui; MD, Ph.D.
Protocol Publication:
1. **Moneruzzaman Md**, Changwe GJ, Sun W, Wang. Y. Efficacy of multiple versus single exercise therapy on CABG patients: a systematic review and meta-analysis. [Internet]. Available from: https://www.crd.york.ac.uk/PROSPERO/display_record.php?RecordID=259327
2. **Moneruzzaman Md**, Xiao-He Li, Wei-Zhen Sun, Kellina Maduray, Mei-Ling Luo, Manzur Kader, and Yong hui Wang. 2023. "Hemodynamics Status of Post-Stroke Rehabilitative Patients: A Systematic Review and Meta-Analysis of Control Trials." doi: 10.17605/OSF.IO/WC4ZV.
These projects explored the comparative effectiveness of exercise therapy on functional and exercise capacity, hemodynamics and quality of life after coronary artery bypass graft and Stroke.
Academic achievement: Chinese government scholarship for the post-graduate program.
- BPT** Bachelor of Physiotherapy | CGPA: 3.40 out of 4.00
2012/08 – 2017/08 Gono Bishwabidyalay, Savar, Dhaka, Bangladesh -1341.
Thesis: "Effectiveness of myofascial release technique among neck pain garment workers in a selected area of Bangladesh."
Supervisor: Ropak Chandra Roy; MDM, MPH
Publication: Book of Abstract, 1st International Conference for Rehabilitation Professionals 2017; 22nd December 2017; Page No: 40(2).
Neck pain is considered a primary work-related complication among garment workers due to workload and time. This thesis focused on the reason behind their neck pain and the myofascial release treatment effect.
Academic achievement: Best organizer award, 2nd place in poster presentation competition.

Research and Publications:

- Title: A Right-Lateralized Action Mode Network as a Neural Substrate of Post-Stroke Visuospatial–Executive Impairment. | Author: **Moneruzzaman Md**, Wenlong Su, Kaiyue Han, Xin Zhang, Xiaonian Zhang, Hao Zhang
Under Review: Neurolmage: Clinical
- Title: Current Exercise-based Rehabilitation Impacts on Poststroke Exercise Capacity, Blood Pressure, and Lipid Control: A Meta-analysis.
Citation: **Moneruzzaman Md**, Tang Z, Li X, et al. Current exercise-based rehabilitation impacts on poststroke exercise capacity, blood pressure, and lipid control: a meta-analysis. Front Cardiovasc Med. 2025;12. doi:10.3389/fcvm.2025.1457899
- Title: Efficacy of multiple exercise therapy after coronary artery bypass graft: a systematic review of randomized control trials.
Citation: **Moneruzzaman Md**, Wei-Zhen Sun, Geoffrey J. Changwe, and Yong-Hui Wang. 2023. "Efficacy of Multiple Exercise Therapy after Coronary Artery Bypass Graft: A Systematic Review of Randomized Control Trials." Reviews in Cardiovascular Medicine 24(5):141. doi: 10.31083/j.rcm2405141.
- Title: Causal inferences behind patient preference to seek physical therapy: a cross-sectional study
Citation: **Moneruzzaman Md**, Reyad-ul-Ferdous Md, Roy RC, et al. Causal inferences behind patient preference to seek physical therapy: a cross-sectional study. Bulletin of Faculty of Physical Therapy. 2025;30(1):23.

doi:10.1186/s43161-025-00276-0.

5. Title: Acceptability and effectiveness of stationary bike intervention on health outcomes among older adults: a systematic review of intervention studies
Citation: Akter T, Moneruzzaman M, Maduray K, Kader M. *BMC Geriatr.* 2026;26(1):130. Published 2026 Jan 13. doi:10.1186/s12877-025-06757-0..
6. Title: Effectiveness of lower limb robotic rehabilitation on peak of oxygen uptake among patients with stroke: A systematic review and meta-analysis
Citation: Wu, Yu, Jian Liu, **Moneruzzaman Md**, Jun Zhao, and Shicai Wu, 'Effectiveness of Lower Limb Robotic Rehabilitation on Peak of Oxygen Uptake among Patients with Stroke: A Systematic Review and Meta Analysis', *BMJ Open*, 14.10 (2024), p. e082985, doi:10.1136/bmjopen-2023-082985.
7. Title: Prediction of Poststroke Independent Walking Using Machine Learning: A Retrospective Study
Citation: Tang Z., Su W., Liu T., Lu H., Li H., Han K., **Moneruzzaman, Md.**, Long, J., Liao X., Zhang X., Shan L., & Zhang, H. Prediction of Poststroke Independent Walking Using Machine Learning: A Retrospective Study. *BMC Neurology* 24, 332 (2024).
8. Title: Interactions between circulating inflammatory factors and autism spectrum disorder: a bidirectional Mendelian randomization study in European population.
Citation: Long, J., Dang, H., Su, W., **Moneruzzaman, Md.** & Zhang, H. Interactions between circulating inflammatory factors and autism spectrum disorder: a bidirectional Mendelian randomization study in European population. *Front. Immunol.* 15, 1370276 (2024).
9. Title: Optogenetic Neuromodulation in Inflammatory Pain
Citation: Liang, Y., Zhou, Y., **Moneruzzaman, M.** & Wang, Y. Optogenetic Neuromodulation in Inflammatory Pain. *Neuroscience* 530:4522(23)00504–3 (2023) doi:10.1016/j.neuroscience.2023.11.009.
10. Title: Stem Cell Therapy for Diabetic Foot Ulcers: Theory and Practice
Citation: Nalisa DL, **Moneruzzaman Md**, Changwe GJ, et al. Stem Cell Therapy for Diabetic Foot Ulcers: Theory and Practice. Calafiore R, ed. *Journal of Diabetes Research*. 2022;2022:6028743. doi:10.1155/2022/6028743
11. Title: Benefits and Risks Associated with Long-term Oral Anticoagulation after Successful Atrial Fibrillation Catheter Ablation: Systematic Review and Meta-analysis.
Citation: Maduray K, **Moneruzzaman Md**, Changwe GJ, Zhong J. Benefits and Risks Associated with Long-term Oral Anticoagulation after Successful Atrial Fibrillation Catheter Ablation: Systematic Review and Meta-analysis. *Clin Appl Thromb Hemost.* 2022;28:107602962211184. doi:10.1177/10760296221118480

Selected Research Projects & Collaborations:

- **International collaborative project:** Fully Immersive Virtual Reality-Based Motor Priming for Cognitive-Motor Rehabilitation in Sub-Acute Stroke Patients (Research Associate).

Academic Service & Peer Review Activities:

- **Peer Reviewer for International Scientific Journals (2026–Present):** BMC Cardiovascular Disorders (2 manuscripts) | BMC Musculoskeletal Disorders | BMC Health Services Research | BMC Pulmonary Medicine | Sport Sciences for Health | International Journal of Behavioral Medicine | Frontiers in Neurology | Frontier in Rehabilitation Sciences | Total: 9

Research Metrics:

- **Google Scholar Profile:** Citations: 115+ | h-index: 6+ | i10-index: 5+

Invited Talks & Conference Activities:

- **Conference Panel Speaker:** Theme: Digital Intelligent Medicine Empowers Medical-Engineering Integration and Cross-border Innovation | Round Table Discussion | Topic: Medical-Engineering Integration and Cross-Border Transformation: Driving the Future of Rehabilitation in Bangladesh | Date: 27 June 2026

Professional specialization courses: (total of 375 Credit hours)

1. Certificate on MoCA Cognitive Assessment | Certified by Z. Nasreddine | 22 August 2024 | www.mocacognition.com
2. Matlab Onramp | Matlab Academy | 11 March 2024 | [certificate.html?id=8cefb6ee-7ab6-439c-b5a9-93052d7190cb&](https://www.mathworks.com/certification/certificate.html?id=8cefb6ee-7ab6-439c-b5a9-93052d7190cb&)
3. Data Analytics and Visualization in Health Care | 3 Credits | Certified by RTIx | 28 May 2023 | Rochester Institute of Technology, USA
4. Writing in the Science | Certified by Coursera On-line Course | 15 December 2022 | Stanford University, USA

5. Certificate in Laboratory Animal Research and Care | Experimental Animal Center of Shandong University Qilu Hospital | Qilu Hospital Laboratory Animal Center, Jinan, Shandong, China.
6. Certificate in Sports Nutrition | **19** Credit hours | 19th to 21st April 2019 | Bangladesh Academy of Dietetics & Nutrition (BADN), Dhaka, Bangladesh.
7. Certificate in General Training in Manual therapy and Manipulation | **200** Credit hours | 4th January to 3rd July 2018 | Abida's Institute of Manual Therapy, Dhaka, Bangladesh.
8. Certificate in Radiology and Imaging | **32** Credit hours | 27th October and 3rd, 10th, and 17th November 2017 | Bangladesh Health Professions Institute (BHPI), Savar, Dhaka, Bangladesh.
9. Certificate in Positional Release Therapy & Integrated Management of Cervical & Lumbar Spines | **16** Credit hours | 23rd and 24th September 2016 | Bangladesh Physiotherapy Association, Savar, Dhaka, Bangladesh.
10. Certificate in Rajan's Eclectic Approach for stroke/ hemiplegic | **28** Credit hours | 25th to 28th August 2016 | Academy of Physiotherapy, Dhaka, Bangladesh.
11. Certificate in Myofascial trigger points and Myofascial Release | **16** Credit hours | 22nd and 23rd May 2016 | Bangladesh Physiotherapy Association, Savar, Dhaka, Bangladesh.
12. Certificate in Neuro-Rehabilitation | **24** Credit hours | 20th and 21st August 2015 | Academy of Physiotherapy, Dhaka, Bangladesh.
13. Certificate in Invasive Physiotherapy & Kinesio Taping | **24** Credit hours | 12th, 19th & 26th June 2015 | Academy of Physiotherapy, Dhaka, Bangladesh.
14. Certificate in Osteopathic Methods for Management of Lumbosacral Dysfunction | **16** Credit hours | 6th & 7th March 2015 | Movement solution India, Punjabi University, India.
15. Six-Month Diploma in Computer Office Application Program | Result: Grade A | Bangladesh Technical Education Board – December 2017 | Institute: Gonoshasthaya Vocational and Technical Training Institute, Savar, Dhaka, Bangladesh.

Research Methods & Technical Skills:

- **Neuroimaging:** Resting-state fMRI, functional connectivity analysis, brain network analysis, lesion network mapping
- **Computational:** MATLAB, SPSS, STATA, Linux environment
- **Research:** Systematic review, meta-analysis, clinical data analysis, scientific writing.

Professional Memberships:

- International Association of Rehabilitation Professionals (IARP)
- World Federation for Neurorehabilitation (WFNR).

Languages:

- Bengali (Native) | English (Professional) | Hindi/Urdu (Communicative) | Chinese (Intermediate Learner) | Arabic (Primary Learner).

References:

Prof. Zhang Hao, MD, Ph.D.

Vice-director, China Rehabilitation Research Center, Beijing, China.
Department of Neuro-rehabilitation,
Bo'ai Hospital of Capital Medical University, Beijing, China.

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Prof. Liu Hesheng, Ph.D.

Chief Scientist, Changping Laboratory, Beijing, China.
Professor, Biomedical Pioneering Innovation Center (BIOPIC),
Peking University, Beijing, China.

Email: hesheng@biopic.pku.edu.cn

Dated: 03 October, 2026