

CURRICULUM VITAE

Biraj Bhattarai

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Research Interest:

My research interests center on understanding the neuroplasticity and recovery patterns of the damaged brain, particularly focusing on cognitive and language behavior in persons with aphasia (PWA). I am especially interested in examining how neuroplastic changes facilitate discourse production and cognitive processing in PWA, using functional near-infrared spectroscopy. Currently, my doctoral research focuses on mapping the neural and behavioral substrates of discourse production in PWA, with the goal of improving our understanding of how cortical activation and functional connectivity influence communication abilities. Additionally, I am committed to examining the impact of social determinants of health on long-term aphasia outcomes, particularly within the African American population, as part of my broader effort to address disparities in aphasia care.

Education:

2022-	Enrolled in the Ph.D. program Department of Communication Sciences and Disorders Louisiana State University
2019 – 2021	M.S. Speech Language Pathology All India Institute of Speech & Hearing University of Mysore, India.
2013 – 2018	Bachelor in Audiology and Speech-Language Pathology Institute of Medicine, Tribhuvan University, Nepal

Employment:

08/2022-	Graduate Teaching assistant Department of Communication Sciences and Disorders College of Humanities and Social Science Louisiana State University
02/2022-06/2022	Speech Language Pathologist- Grade I, DHLS Mysore Center All India Institute of Speech and Hearing, Mysore, India
06/2018 –06/2019	Speech Language Pathologist Awaaj Speech and Hearing Center, Lalitpur, Nepal

Publications:

Bhattarai, B., Mohapatra, B. (2025). Projected Post-Stroke Aphasia Prevalence by 2050: Demographic Differences in a Changing Population. (Under review, Journal of Speech Language Hearing Research)

- Mohapatra, B., & **Bhattarai, B.** (2025). Prefrontal Cortex Activation and Hemispheric Lateralization During Working Memory Load Processing in Individuals with Aphasia: A fNIRS Study. (Under review, *American Journal of Speech Language Pathology*)
- Bhattarai, A., **Bhattarai, B.** & Rana, S (2024). Prevalence of Occupational Voice Disorder Among Teachers of Kathmandu District, Nepal. *Indian J Otolaryngol Head Neck Surg* **76**, 1874–1881. <https://doi.org/10.1007/s12070-023-04434-5>
- Vijayan, S.K., **Bhattarai, B.** & Narayanan, S. (2024). Awareness, Knowledge and Practice Patterns of Oral Health and Hygiene among Speech-Language Pathologists in India. *Indian J Otolaryngol Head Neck Surg* **76**, 1862–1873. <https://doi.org/10.1007/s12070-023-04432-7>
- Mohapatra, B., & **Bhattarai, B.** (2023). Navigating recovery: exploring the potential of telerehabilitation via mobile tablets for poststroke communication deficits. *Evidence-Based Communication Assessment and Intervention*, *17*(3-4), 179-184.
- Bhattarai, B.**, & Panchakshari, A. B. (2022). Lexical access in brain-damaged individuals: Evidence from anomia. *Neuroscience Research Notes*, *5*(3), 150-150. <https://doi.org/10.31117/neuroscirn.v5i3.150>.
- Bhattarai, B.** (2022). Speech –language Pathologist: A Team Member for Management of Head and Neck Cancer Patients .Nepal Medical Journal. <https://doi.org/10.3126/nmj.v5i1.37741>.
- Bhattarai, B.**, Sanghavi, T., & Panchakshari, A. B. (2022a). Experience Delivering Tele-Practice Services among Upcoming and Working Professionals of Speech Language Pathology. *Journal of Health and Allied Sciences NU*.
- Bhattarai, B.**, Sanghavi, T. & Abhishek, B.P (2022b). Challenges in Delivering Tele-Practice Services for Communication Disorders Among Audiologists and Speech-Language Pathologists. *Indian J Otolaryngol Head Neck Surg* <https://doi.org/10.1007/s12070-021-03032-7>.
- Bhattarai B**, Joanna KB, Niranjana P., & Abhishek BP (2021). Speech, Language and Cognitive Profile of Mild Cognitive Impairment: A Single Case Study. *NMJ*;4(2):499-501. DOI 10.3126/NMJ.
- Bhatarai, P., **Bhattarai, B.**, & Karna, S. L. (2020). Audiology and Speech-Language Pathology Services in Pediatric Population during COVID pandemic in Nepal. *Nepalese Medical Journal*, *3*(2), 398-401.
- Aryal, S., **Bhattarai, B.**, & Prabhu, P. (2022a). Development and Standardization of Hearing Handicap Inventory for Adults (Screening Version) in Nepali Language. *Indian Journal of Otolaryngology and Head & Neck Surgery*, *74*(Suppl 3), 4409-4414.
- Aryal, S., **Bhattarai, B.**, & Prabhu, P. (2022b). Development and standardization of Morningness- Eveningness questionnaire (MEQ) in the Nepali language. *Biological Rhythm Research*, *53*(11), 1692-1701.
- Aryal, S., **Bhattarai, B.**, Prabhu, P., & Bhattarai, B. (2022). Impact of hearing loss on the quality of life in adults with hearing impairment. *Nepalese Medical Journal*, *5*(2), 597-601.

Fameen, R., Rinsha, P. K., Pooja, S., Rashmi, V., **Bhattarai, B.**, & Abhishek, B. P. (2022). Acquired childhood aphasia as a consequence of COVID-19 and its differential diagnosis from speech–language pathologist perspective: A case study. *Clinical Case Reports*, 10(11).

Presentations:

1. Mohapatra, B., **Bhattarai, B.** (2025). Integrating Social Determinants of Health to Advance Aphasia Care for African Americans. Clinical Aphasiology Conference. May 30th, 2025.
2. **Bhattarai, B.**, Mohapatra, B. (2025). Role of Prefrontal Cortex in Verbal Fluency and Confrontation Naming in Persons with Aphasia: Insights from fNIRS Investigation. Symposium of Neuroscience (Baton Rouge chapter). April 11th, 2025.
3. **Bhattarai, B.**, Mohapatra, B. (2024). Analysis of Prefrontal Cortex Activation During Cognitive Tasks in Aphasia: An fNIRS Investigation. ASHA convention. December 5th - 7th, 2024.
4. Mohapatra, B., **Bhattarai, B.** (2024). Prefrontal Cortical Activation and Hemispheric Lateralization During Cognitive Processing in Aphasia: An Exploratory fNIRS Investigation. Academy of Aphasiology. October 18th-20th, 2024.
5. **Bhattarai, B.**, Mohapatra, B. (2024). Exploring Cognitive Control in Persons with Aphasia: A Functional Near-Infrared Spectroscopy (fNIRS) Study. 54th Applied Psychophysiology and Biofeedback conference. May 8th -11th, 2024.
6. **Bhattarai, B.**, Mohapatra, B. (2024). Prefrontal Cortex Activation in Post-Stroke Persons with Aphasia: A Functional Near-Infrared Spectroscopy (fNIRS) Study. Graduate Research Conference, LSU. April 30th, 2024. **Best Oral Presentation Award.**
7. **Bhattarai, B.**, Mohapatra, B. (2024). Differences in Prefrontal Cortical Activation During Working Memory Load Variations in Persons with Aphasia: An fNIRS Case Series Investigation. LSU Mind. February 28th, 2024.
8. **Bhattarai, B.**, Mohapatra, B. (2023). Measuring cognitive workload variations using fNIRS: A scoping review. Graduate Research Conference, LSU. April 26th, 2023
9. **Bhattarai, B.**, Krishna, S., Swapna, N. (2022). Comparison of oral efficiency between two popular brands of Marie Biscuits. IALP Audiology Conference. August 25th-27th, 2022
10. Krishna, S., **Bhattarai, B.**, Swapna, N. (2022). Awareness regarding oral hygiene among Speech-Language Pathologists. IALP Audiology Conference. August 25th-27th, 2022
11. **Bhattarai B.**, Sanghavi, T, B.P, Abhishek. (2021). Challenges in Tele rehabilitation of Communication Disorders among Upcoming and Working Professionals of Speech and Hearing. National web conference on delivering tele therapy services. October 9th-10th, 2021.
12. **Bhattarai B.**, Janardhan K, Nagaraj P, (2020). Predicting Early Post-Stroke Aphasia from Initial Aphasia Severity. Journal club. All India Institute of Speech and Hearing under the guidance of Dr. SP Goswami.
13. **Bhattarai B** & Bhattarai B. (2018) Awareness regarding Auditory Processing Disorder among school teachers of Nepal. 2nd National conference of Speech and Hearing Association of Nepal (SHAN).

Teaching Experience:

Spring 2025	Instructor, COMD 2050
Fall 2024	Instructor, COMD 2081
Fall 2024	Invited guest lecture on supported conversation for adults with aphasia, COMD 7281
Spring 2024	Instructor, COMD 2081
Fall 2023	Instructor, COMD 2081
Spring 2023	Teaching Assistant, COMD 2081
Fall 2022	Teaching Assistant, COMD 2081

Awards:

1. FERB Student Travel Scholarship, May 2024
2. LSU GSA Travel Award, 2024
3. LSU COMD Travel Fund, 2024
4. LSU College of Humanities and Social Science Travel Award, 2024
5. LSU GSA Travel Award, 2025
6. Best Oral Presentation Award at 2024 Graduate Research Conference at LSU
7. LSU COMD Travel Fund, 2025
8. LSU College of Humanities and Social Science Travel Award, 2025

Certification & Membership

2024-	Member, National Student Speech Language Hearing Association (NSSLHA)
2018-	Registered Audiologist and Speech Language Pathologist Nepal Health Professional Council Professional (NHPC)

Reference:

Available on request