CURRICULUM VITAE

PERSONAL DATA

Name:	Ying-Yi Liao, PT, PhD.
Current Position:	Professor, Department of Gerontological Health Care, National Taipei University of Nursing and Health Sciences
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EDUCATION

Institution & Location	Degree	Major Subject
National Yang-Ming University, Department of Physical Therapy and Assistive Technology, Taipei, Taiwan	Ph.D.	Physical Therapy and Assistive Technology
National Yang-Ming University, Institute of Biomedical Engineering, Taipei, Taiwan	M.S.	Biomedical Engineering
National Taiwan University, School of Physical Therapy, Taipei, Taiwan	B.S.	Physical Therapy

PROFESSIONAL EXPERIENCE

Institution & Department	Position
National Taipei University of Nursing and Health Sciences, Department of Gerontological Health Care	Professor
National Taipei University of Nursing and Health Sciences, Department of Gerontological Health Care	Associate Professor
National Taipei University of Nursing and Health Sciences, Department of Gerontological Health Care	Assistant Professor
Jen-Teh Junior College of Medicine, Nursing and Management, Department of Rehabilitation	Lecturer
Taipei County Assistive Technology Resource Center	Therapist, Home-Based Assistive Device and Accessibility Assessment
Taipei City Renai Hospital, Department of Rehabilitation / Southern District Long-Term Care Management Demonstration Center	Physical Therapist

SPECIALTIES & RESEARCH INTERESTS

1. Geriatric Rehabilitation
2. Assistive Technology for Older Adults
3. Physical Fitness for Older Adults
4. Interactive Smart Technology

LICENSES & CERTIFICATIONS

- Physical Therapist License (Taiwan)
- YMCA Fitness Instructor – Strength and Conditioning Trainer
- YMCA Healthy Lifestyle Principles

PUBLICATIONS

Journals

1. Lin, S. I., Chen, P. H., **Liao, Y. Y.***, Huang, J. Y., & Cheng, F. Y. (2025). Functional mobility and its relationship with cognition in older adults with normal cognition, motoric cognitive risk syndrome, and mild Alzheimer's disease. *Journal of Geriatric Physical Therapy*. (SCI)
2. **Liao, Y. Y.**, Hsu, W. C., Wang, K. C., Liu, C. L., Tseng, W. Y., & Lin, Y. J. (2025). Effects of interactive boxing-cycling on dual-task walking and prefrontal cortex activation in older adults with cognitive frailty: A randomized controlled trial. *Geriatric Nursing*. (SSCI, 33/193, Nursing, Q1)
3. Wong, P. L., Hung, C. W., Yang, Y. R., Yeh, N. C., Cheng, S. J., **Liao, Y. Y.**, & Wang, R. Y. (2024). Effects of motor and cognitive complex training on obstacle walking and brain activity in people with Parkinson's disease. *European Journal of Physical and Rehabilitation Medicine*. (SCI, 12/170, Rehabilitation, Q1)
4. Wu, S. F. V., Kuo, L. M., Tsai, J. M., Lin, L. J., Chu, C. H., & **Liao, Y. Y.*** (2024). Comparison of the effectiveness of assisted turning mattresses and conventional air mattresses in relieving body pressure in different lying positions. *Assistive Technology*. (SSCI, 19/170, Rehabilitation, Q1)
5. Lin, Y. J., Hsu, W. C., Wang, K. C., Tseng, W. Y., & **Liao, Y. Y.*** (2024). Interactive boxing–cycling on frailty and activity limitations in frail and prefrail older adults: A randomized controlled trial. *Annals of Physical and Rehabilitation Medicine*. (SCI, 6/170, Rehabilitation, Q1)
6. Lau, C. I., Liu, M. N., Cheng, F. Y., Wang, H. C., Walsh, V., & **Liao, Y. Y.*** (2024). Can transcranial direct current stimulation combined with interactive computerized cognitive training boost cognition and gait performance in older adults with mild cognitive impairment? A randomized controlled trial. *Journal of NeuroEngineering and Rehabilitation*. (SCI, 4/170, Rehabilitation, Q1)
7. Weng, W. H., Yang, Y. R., Yeh, N. C., Ku, P. H., Wang, P. S., **Liao, Y. Y.**, & Wang, R. Y. (2023). Gait performance and prefrontal cortex activation during single and dual task

walking in older adults with different cognitive levels. *Frontiers in Aging Neuroscience*, 15, 1177082.

1. Chen, P. H., Lin, S. Y., **Liao, Y. Y.**, Hsu, W. L., & Cheng, F. Y. (2022). Associations between blood-based biomarkers of Alzheimer's disease with cognition in motoric cognitive risk syndrome: A pilot study using plasma Aβ42 and total tau. *Frontiers in Aging Neuroscience*.
2. Chen, P. H., Yang, Y. Y., **Liao, Y. Y.**, Cheng, S. J., Wang, P. N., & Cheng, F. Y. (2022). Factors associated with fear of falling in individuals with different types of mild cognitive impairment. *Brain Sciences*, 12(8), 990.
3. Kuo, H. T., Yeh, N. C., Yang, Y. R., Hsu, W. C., **Liao, Y. Y.**, & Wang, R. Y. (2022). Effects of different dual task training on dual walking and responding brain activation in older adults with mild cognitive impairment. *Scientific Reports*, 12(1).
4. Liu, C. L., Cheng, F. Y., Wei, M. J., & **Liao, Y. Y.*** (2022). Effects of exergaming-based Tai Chi on cognitive function and dual-task gait performance in older adults with mild cognitive impairment: A randomized control trial. *Frontiers in Aging Neuroscience*. (SCI, 22/74, Geriatrics & Gerontology, Q2)
5. **Liao, Y. Y.**, Liu, M. N., Wang, H. C., Walsh, V., & Lau, C. I. (2021). Combining transcranial direct current stimulation with Tai Chi to improve dual-task gait performance in older adults with mild cognitive impairment: A randomized controlled trial. *Frontiers in Aging Neuroscience*. (SCI, 22/74, Geriatrics & Gerontology, Q2)
6. **Liao, Y. Y.**, Chen, I. H., Hsu, W. C., Tseng, H. Y., & Wang, R. Y. (2021). Effects of exergaming versus combined exercise on cognitive function and brain activation in frail older adults: A randomized controlled trial. *Annals of Physical and Rehabilitation Medicine*. (SCI, 6/170, Rehabilitation, Q1)
7. **Liao, Y. Y.**, Tseng, H. Y., Lin, Y. J., Wang, C. J., & Hsu, W. C. (2020). Using virtual reality-based training to improve cognitive function, instrumental activities of daily living and neural efficiency in older adults with mild cognitive impairment. *European Journal of Physical and Rehabilitation Medicine*. (SCI, 12/170, Rehabilitation, Q1)
8. **Liao, Y. Y.**, Chen, I. H., Lin, Y. J., Chen, Y., & Hsu, W. C. (2019). Effects of virtual reality-based physical and cognitive training on executive function and dual-task gait performance in older adults with mild cognitive impairment: A randomized control trial. *Frontiers in Aging Neuroscience*, 11, 162. (SCI, 22/74, Geriatrics & Gerontology, Q2)
9. **Liao, Y. Y.**, Chen, I. H., & Wang, R. Y. (2019). Effects of Kinect-based exergaming on frailty status and physical performance in prefrail and frail elderly: A randomized controlled trial. *Scientific Reports*. (SCI, 25/134, Multidisciplinary Sciences, Q1)
10. **Liao, Y. Y.**, Yang, Y. R., Wu, Y. R., & Wang, R. Y. (2015). Virtual reality-based Wii Fit training in improving muscle strength, sensory integration ability and walking abilities in patients with Parkinson's disease: A randomized control trial. *International Journal of Gerontology*. (SCI)
11. **Liao, Y. Y.**, Yang, Y. R., Cheng, S. J., Wu, Y. R., Fuh, J. L., & Wang, R. Y. (2015). Virtual reality-based training to improve obstacle-crossing performance and dynamic

balance in patients with Parkinson's disease. *Neurorehabilitation and Neural Repair*, 29(7), 658–667. (SCI, 15/170, Rehabilitation, Q1)

12. **Liao, Y. Y.**, Yang, Y. R., Wu, Y. R., & Wang, R. Y. (2014). Factors influencing obstacle crossing performance in patients with Parkinson's disease. *PLoS ONE*, 9(1), e84245. (SCI, 32/134, Multidisciplinary Sciences, Q1)

** Corresponding author*

RESEARCH PROJECTS

National Science and Technology Council (NSTC), Taiwan

Project Title	**Role**	**Period**
Influencing factors of turning performance and the effects of augmented reality training in people with Parkinson's disease with normal cognition and with mild cognitive impairment	PI	2025/08–2026/07
Effects of kinesio taping on walking ability, balance, and neuromuscular function in subacute stroke patients with foot drop	Co-PI	2025/08–2026/07
Recovery trajectories of executive function, motor performance, and plasma biomarkers after stroke, and the effects of transcranial direct current stimulation combined with interactive cognitive training	Co-PI	2025/08–2026/07
Effects of a 12-month peer-led intervention combined with mobile monitoring on metabolic syndrome in people living with HIV: A randomized trial and data mining study	Co-PI	2025/08–2026/07
Balance, gait, brain regulatory mechanisms, and the development and training effects of interactive games in different frailty populations: Frail and cognitively frail older adults	PI	2024/08–2025/12
Establishing the optimal montage of transcranial direct current stimulation and the effects of its combination with exergame training on cognition and brain activity in people with motoric cognitive risk syndrome and Alzheimer's disease	Co-PI	2024/08–2025/07
Predictors of cognitive decline in older adults with motoric cognitive risk syndrome and the effects of cognitive leisure activities on cognitive function	Co-PI	2021/08–2024/07
Development of interactive boxing-cycling and the effects of different training modes on frailty, physical performance, cognitive function, gait performance, and brain activation in frail older adults (II)	PI	2021/08–2024/07
Brain activity and motor performance during obstacle crossing and the effects of combined motor and cognitive complex training in people with Parkinson's disease with and without mild cognitive impairment	Co-PI	2020/08–2023/07
Development of interactive boxing-cycling and the effects of different training modes on frailty, physical performance, cognitive function, gait performance, and brain activation in frail older adults (I)	PI	2020/08–2021/07
Effects of simultaneous versus separate cognitive and motor training on dual-task gait performance and brain activity in older adults with motoric cognitive risk syndrome	Co-PI	2020/08–2021/07

Project Title	Role	Period
Development and evaluation of a virtual reality training system for older adults with mild cognitive impairment: Cognition and brain activation (106-2314-B-227-008-)	PI	2017/08–2019/07
Effects of virtual reality-based exercise on physical performance, cognitive function, and daily living function in frail and prefrail older adults	PI	2016/08–2017/07

Other Funding Sources

Project Title	Role	Period	Funding Source
Effects of transcranial direct current stimulation combined with interactive cognitive training: A pilot study in older adults with cognitive impairment	PI	2020/01–2021/12	Shin Kong Wu Ho-Su Memorial Hospital
Optimal protocol of transcranial direct current stimulation combined with Tai Chi training and its effects on cognition: A pilot study	PI	2019/01–2020/04	Shin Kong Wu Ho-Su Memorial Hospital
Exergame-based Tai Chi versus traditional Tai Chi: A randomized controlled trial in older adults with mild cognitive impairment	PI	2019/01–2019/12	Cheng Hsin General Hospital