

# Curriculum Vitae - María Peña González

## Personal Information

Name: Maria Pena Gonzalez

Date of Birth: 28/01/1996

Email: maria.pena.gonzalez@gmail.com

Date of CV: December 2024

ORCID: 0009-0007-3457-9726

## Academic Background

Bachelor's Degree in Occupational Therapy. Centro Superior de Estudios Universitarios La Salle, Universidad Autonoma de Madrid. June 2018. GPA: 8.17.

Master's Degree in Evidence-Based Occupational Therapy. Study of Upper Limb Functionality. La Salle, Universidad Autonoma de Madrid. July 2019. GPA: 8.72.

## Skills and Experience

I enjoy my daily work with patients and consider evidence-based clinical practice a cornerstone in patient assessment and treatment. Research has accompanied me throughout my professional career. After publishing my Master's Thesis, I continued collaborating on book chapters in the fields of Neurology and functional hand assessment.

Throughout my career in various clinical settings (public hospitals and private clinics), I have gained experience in assessing upper limb functionality in patients with neurological conditions such as Multiple Sclerosis, Parkinson's Disease, Acquired Brain Injury, Spinal Cord Injury, and Fibromyalgia.

I have specialized training in standardized scales for evaluating upper limb functionality (NSA, 9HPT, FIM, GRASSP, Jebsen-Taylor Hand Function Test, Box and Block Test, Abilhand, Ashworth Scale, Fugl-Meyer, Minnesota Manual Dexterity Test, ASIA, among others).

During my research contracts, I gained clinical knowledge and experience with different non-invasive brain stimulation techniques (TMS, tSMS, tDCS) for the treatment and neurophysiological evaluation of patients with various neurological conditions, as well as proficiency with signal processing software such as SystemPlus, Signal, EEGLAB and statistical analysis tools like SPSS and JAPS.

## Curriculum Vitae - María Peña González

### Professional Experience

- Direct care in Residential Services. Head of the Occupational Therapy Department. Center belonging to the JCCM network. Aug 2018-Dec 2020.
- CDIAT under the Social Welfare Department of Guadalajara. Early intervention with families and children at risk of neurodevelopmental disorders. Jan-Sep 2021.
- IGUALA3. Natural setting therapy for adults with neurological conditions (e.g., stroke, Parkinson's). Mar 2020-Jun 2022.
- University Hospital of Guadalajara (SESCAM). Specialized care in neurological pathology. Apr-Sep 2022.
- Nanna Association for Child Development. Therapy for children with developmental disorders (e.g., CP, ASD, ADHD, genetic syndromes). Sep 2020-Jul 2023.
- Clinica Sanares. Individualized treatment for adults with neurological conditions. May 2019-Jul 2023.
- Aceops. CDIAT contracted by the Community of Madrid. Early intervention for children (06 years) with neurodevelopmental risks. Oct 2021-Jul 2023.

### Research Experience

R1 Researcher in the FENNSI Group (National Hospital for Paraplegics, Toledo, SESCAM) under Dr. Antonio Oliviero.

Conducted clinical trials with non-invasive brain stimulation for the following projects:

- Brain Stimulation participatory development of a code of conduct for the European Union. Project AC20/00074, funded by Instituto de Salud Carlos III (ISCIII). Jul-Dec 2023.
- Post COVID-19 Fatigue Syndrome: alterations in motor system excitability and use of Rimonabant as treatment (RIMOCOVID). Project PID2020-117617-RB funded by MCIN/AEI/10.13039/501100011033. Mar 2024-present.

### Publications

Pena Gonzalez, M., et al. (2020). Relationship between cognitive capacity, stereognosis, and manipulative dexterity in healthy older adults: pilot study. *Journal of MOVE and Therapeutic Science*, 2(2), 247-257. <https://doi.org/10.37382/jomts.v2i2.32>

Main researcher in the article's design, assessment process, data analysis and interpretation, and manuscript writing.

Co-author of the book "VIII Manual de Abordaje Multidisciplinar Sanitario" (April 2023), ISBN 978-84-19280-69-5, and author of 15 chapters.

## Curriculum Vitae - María Peña González

### Contributions to National and International Conferences

- Brain Stimulation Meeting 2024: Future Is Now. Poster: "New methodology proposal of paired associative stimulation combined with passive movement in spinal cord injury".
- II IDISCAM Health Research Conference 2023. Poster: "Treatment of drug-resistant chronic pain with transcranial direct current stimulation in spinal cord injury patients".
- Soto-Leon, V., Pena-Gonzalez, M., et al. Pilot study: Modulating cortical excitability of lower limbs using static magnetic field stimulation (tSMS).
- Soto-Leon, V., Pena-Gonzalez, M., et al. Development of a low-cost device for clinical trials in neurorehabilitation. ICNR 2024.

### Postgraduate Training

- Course: "Managing Frailty in the Elderly: Occupational Therapy Intervention". 30h. University of Burgos. June 2017.
- Course: "Professional Development in Hand Therapy". 80h. La Salle, Universidad Autonoma de Madrid. June 2018.
- Full training in Sensory Integration. 112h. University of Southern California (USC). May 2022.
- Design and fabrication of hand and upper limb orthoses. 11h. SESCAM. Oct 2022.
- 404 hours of training in various courses accredited by the National Health System Continuing Education Commission.