Yatong WEN

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EDUCATION

Postdoc in Neuroscience

Department of Neuroscience, Karolinska Institute 11/2024 -

Ph.D. in Health Psychology 09/2019-06/2024

Institute of Psychology, Chinese Academy of Sciences, Beijing GPA: 3.76/4.0

Core courses: *Introduction of Neuropathophysiology, Physiological Psychology, Functional Neuroanatomy, Multivariate Statistical Analysis, Computational Programming in Psychological Studies, Fundamentals of Python Programming.*

Bachelor of Science in Basic Psychology 09/2015-07/2019

Department of Psychology, Southwest University, China GPA: 3.78/4.0 (**Rank: 1/53**)

Core courses: *Biological Base of Behavior, Cognitive Psychology, Cognitive Neuroscience, Health Psychology, Experimental Psychology, Advanced Research Methods, Psychological Statistics, Advanced Mathematics, etc.*

PUBLICATIONS

- **Wen, Y.**, Li, Y., Jiang, F., et al. (2022). TBS combined with virtual-reality reconsolidation intervention for methamphetamine use disorder: A pilot study. *Brain stimulation*, *15*(4), 996–998. https://doi.org/10.1016/j.brs.2022.07.001 **(JCR: Q1, IF= 9.18)**
- **Wen, Y.**, Hao, X., Chen, X., et al. (2022). Theta-Burst Stimulation Combined With Virtual-Reality Reconsolidation Intervention for Methamphetamine Use Disorder: Study Protocol for a Randomized-Controlled Trial. *Frontiers in psychiatry*, *13*, 903242. https://doi.org/10.3389/fpsyt.2022.903242 **(JCR: Q2, IF= 5.42)**
- **Wen, Y.**, Turel, O., Peng, Y.,et al. (2019). Cathodal stimulating the left DLPFC changes risk disposition toward common risky behaviors in daily-life. *Neuroscience letters*,*709*, 134400. https://doi.org/10.1016/j.neulet.2019.134400 **(JCR: Q2 , IF= 3.19)**
- **Wen YT**, He QH. Focus on Children's Attentional Capacity: an Integration of education, psychology and neuroscience (2018). *Res Educ Dev*, 38(24):54–63. 10.14121/j.cnki.1008-3855.2018.24.011. **(JCR: Q1 , IF= 5.58)**
- Turel, O., Qinghua He, & **Yatong Wen**. (2021). Examining the Neural Basis of Information Security Policy Violations: A Noninvasive Brain Stimulation Approach. *MIS Quarterly*, 45(4), 1715–1744. https://doi.org/10.25300/MISQ/2021/15717 **(JCR: Q1 , IF= 8.51)**
- Liu, W., Chen, X. J., **Wen, Y. T.**, Winkler, M. H., Paul, P., He, Y. L., Wang, L., Chen, H. X., & Li, Y. H. (2020). Memory Retrieval-Extinction Combined With Virtual Reality Reducing Drug Craving for Methamphetamine: Study Protocol for a Randomized Controlled Trial. *Frontiers in psychiatry*, *11*, 322. https://doi.org/10.3389/fpsyt.2020.00322 **(JCR: Q2 , IF= 5.42)**
- ZHOU Xin-Yu, **WEN Ya-Tong**, QIAO Si-Yue, LI Yong-Hui. (2022). The Neural Mechanism of Reward Processing Deficits in Individual With Internet Gaming Disorder. *Progress in Biochemistry and Biophysics*, 49(10):1901-1909. https://doi.org/10.16476/j.pibb.2021.0368 **(JCR: Q4 , IF= 0.74)**

THESIS EXPERIENCE

The Core of "Whole" > The Sum of Its Parts is Spatial Structure (Postdoctoral thesis)

11/2024-Present

- Investigating how spatial structure affects full-body ownership, with more structured body layouts (whole) leading to stronger ownership, and less structured (scrambled) layouts leading to weaker ownership.
- Exploring how variations in “body plan holism” across different body parts influence the perception of the body as a unified whole.
- Aiming to understand how the brain constructs body ownership, with potential applications in rehabilitation and neuroprosthetics.

The underlying mechanism of the anterior cingulate cortex involved in the food reward processing of food addiction (*PhD thesis*) - Funded by the *National Natural Science Foundation of China* 09/2022-06/2024

- Aimed to demonstrate the abnormal prediction error (PE) in reward processing of food addiction (vs healthy people) using electroencephalography signals.
- Aimed to apply Noninvasive Brain Stimulation technology to identify the function role of specific brain areas (e.g. dorsal anterior cingulate cortex, dACC) in detecting and monitoring PE signals thereby providing an opportunity to change abnormal signals.
- Preliminary results: the key feature of food addiction is that they demonstrated aberrant feedback-related negativity in response to food rewards in satiety.

TBS combined with virtual-reality reconsolidation intervention for methamphetamine use disorder *(Master thesis)*

02/2019-06/2022

- We proposed a protocol for a randomized controlled trial study to investigate the effectiveness of theta-burst stimulation (TBS) treatment based on memory reconsolidation theory, focusing on the reduction of cue reactivity and craving of methamphetamine associated with drug-related memory.
- Our results, for the first time, validated the role of dlPFC in memory reconsolidation for MA user and examined the effect of TBS modulation after VR retrieval on reducing methamphetamine craving and methamphetamine-related cue reactivity.
- The related protocol and pilot have been published, respectively, in *Frontiers in Psychiatry,* and *Brain Stimulation.*

OTHER RESEARCH EXPERIENCE

Towards an Integrative Model of Reward Prediction Error in Substance and Behavioral Addictions 01/2021-06/2024

- Main writer for the project application "Towards an Integrative Model of Reward Prediction Error in Substance and Behavioral Addictions: ERP Study".
- This project, supported by the *National Natural Science Foundation of China*, focuses on neural regulation mechanisms and brain circuits in addiction behaviors.

TMS Combined With Virtual Reality Reconsolidation Intervention 01/2019 – 06/2022

- Lead designer and organizer of a project involving the clinical application of Transcranial Magnetic Stimulation (TMS).
- Developed specific TMS manuals, wrote ethical applications and protocols, and conducted clinical registration.
- Assisted the clinical team in implementing the TMS protocol, analyzing data, and writing the manuscript for publication.
- This project highlights the use of neural modulation techniques in clinical settings.

Addiction Memory Modification by Virtual Reality 01/2019 –

03/2019

- Main writer for the Chinese version of the project application for the Sino-German Mobility Programme, "Addiction Memory Modification by Virtual Reality: From Basic Research to the Clinic".
- This project emphasized the role of VR in modifying neural circuits related to addiction memory.

Memory Retrieval-Extinction Combined With Virtual Reality Reconsolidation Intervention 09/2018 – 12/2018

- Participated in data collection and analysis at the Changsha Drug Rehabilitation Center, Changsha, Hunan, China.
- This study, supported by *The National Key Research and Development Program of China*, focused on neural mechanisms and brain circuits in substance addictions.

SKILLS

Experimental Skills:

- Expertise in experimental design and neuroimaging data collection.
- Proficient in EEG and brain stimulation technologies, including HD-tDCS and TMS.
- Skilled in integrating neural modulation techniques, such as TMS, HD-tDCS, and TI for a more comprehensive decoding of neural network activities.
- Experienced in operating Temporal Interference Stimulation, eye-tracker, functional Near-Infrared Spectroscopy, and Virtual Reality technologies.
- Proficient in using multimodal brain imaging methods for accurate localization of brain activity and understanding interactions between different neural networks.

Data Analysis Skills:

- Proficient in physiological and fMRI data analysis.
- Skilled in traditional ERP and EEG analysis, using Wavelet Transform to extract relevant brainwave spectral features, Time-frequency analysis, etc.
- Experienced in advanced EEG functional connectivity analysis, utilizing sLORETA and PLI/PLV algorithms to compute whole-brain connections and specific frequency phase synchrony.

Software Skills:

- Proficient in Python, MATLAB, E-prime, Presentation, and SPSS.

HONORS & AWARDS

- Outstanding academic awards (Second Prize) at Neurotechnology Innovation Forum: Brain, Mind and Neurotechnology, 2024 (**top 2%**)
- Chinese Academy of Sciences President's Award, 2024 (**top 1%**)
- Outstanding graduates in Beijing, 2024 (**top 1%**)
- Outstanding graduates at Chinese Academy of Sciences, 2024 (**top 1%**)
- Merit Student at Chinese Academy of Sciences, 2023 & 2024 (**top 1%**)
- Outstanding Oral Presentation at 7th National Symposium on Emotional and Health Psychology, 2023 (**top 2%**)
- Selected poster at 2020 Fudan Science and Innovation Forum, 2022 (**top 3%**)
- First Prize Scholarship at Chinese Academy of Sciences, twice, 2019 & 2020 (**top 2 %**)
- Outstanding graduates at Southwest University, 2019 (**top 1%**)
- Selected poster at the 21st National Psychology Academic Conference, 2018 (**top 3%**)
- Whale Philanthropy Award from Whale and Chongqing Southwest University Education Foundation, 2018 (**top 2 %**)
- Outstanding Student in the exchange visiting program at Illinois State University, Illinois, US, 2017 (**top 2 %**)

- Excellent Paper at the academic annual meeting of Chongqing Psychological Society, 2017 (**top 2 %**)
- Merit Student at Southwest University, 2016 (**top 1 %**)
- First Prize Scholarship at Southwest University, twice, 2015 & 2016 (**top 2 %**)