

School/Department:	Erasmus School of Social and Behavioural Sciences Department of Psychology, Education and Child Studies Clinical and Health Psychology
Project Title:	The cognitive and affective regulation of pain – Experimental approaches
Abstract:	<p>Chronic pain is one of the most debilitating health issues in our society. In the last decades it has become clearer and clearer, that psychological mechanisms play an important role in the development of chronic pain but also help in reducing pain. A lot of these underlying mechanisms are still poorly understood. This project aims to identify the cognitive and affective processes underlying pain modulation, using experimental pain paradigms together with multiple psychophysiological (heart rate, skin conductance) and brain measures (steady-state visual evoked potentials, ssVEPs; event-related potentials, ERPs). In this project, we will run experiments on healthy volunteers, which explore the central mechanisms involved in the change in pain perception due to the modulation of attention, expectations (placebo effect) and emotions. Moreover, the modulatory role of social processes on these processes will be clarified. This body of work, associated to the investigation of the dysfunction of this modulation in chronic pain patients, could lead to developing new therapies, which would complement current treatments. A better understanding of these dynamics may ultimately lead to better psychological treatment options of chronic pain. In short, the current project provides a unique opportunity to acquire a broad scientific basis by conducting research at the intersection of experimental psychology, cognitive neuroscience and clinical psychology.</p>
Requirements of candidate:	<p>Background: Experimental Psychology, Biological Psychology, Cognitive Neuroscience. Good knowledge of programming (experimental software) is a plus (e.g., Presentation, E-Prime), experience with EEG is helpful, but not necessary.</p> <p>Master's degree: Yes</p> <p>EUR requirement: IELTS: 7.5 (min. 6.0 for all subs.) or TOEFL: 100 (internet; min. 20 for all subs.) or TOEFL: 600 (paper); GMAT-test: min. 680 or GRE-test: min. 85%</p>

<p>Supervisor information:</p>	<p>Supervisor: Prof. Dr. MJ Wieser. Email address: wieser@essb.eur.nl Personal website: https://www.eur.nl/en/essb/people/matthias-wieser</p> <p>Selection of recent peer-reviewed articles (total publications = 72; h-index = 34; >3415 citations; according GoogleScholar, see profile https://scholar.google.de/citations?user=v7CuUtUAAAAJ&hl=nl).</p> <p>Recent publication list (last 5 years):</p> <ol style="list-style-type: none"> 1. Andreatta, M., Genheimer, H., Wieser, M. J., & Pauli, P. (2020). Context-dependent generalization of conditioned responses to threat and safety signals. <i>International Journal of Psychophysiology</i>, 155, 140-151. 2. Haspert, V., Wieser, M. J., Pauli, P., & Reicherts, P. (2020). Acceptance-based emotion regulation reduces subjective and physiological pain responses. <i>Frontiers in Psychology</i>, 11, 1514. 3. Stegmann, Y., Ahrens, L., Pauli, P., Keil, A., & Wieser, M. J. (2020). Social aversive generalization learning sharpens the tuning of visuocortical neurons to facial identity cues. <i>Elife</i>, 9, e55204. 4. Wieser, M. J., & Keil, A. (2020). Attentional threat biases and their role in anxiety: A neurophysiological perspective. <i>International Journal of Psychophysiology</i>, 153, 148-158. 5. Andreatta, M., Neueder, D., Herzog, K., Genheimer, H., Schiele, M. A., Deckert, J., ... Wieser, M. J., & Pauli, P. (2020). Generalization of Conditioned Contextual Anxiety and the Modulatory Effects of Anxiety Sensitivity. <i>Neurotherapeutics</i>, 1-14. 6. Bernoster, I., De Groot, K., Wieser, M.J., Thurik, R., & Franken, I.H.A. (2019). Birds of a feather flock together: Evidence of prominent correlations within but not between self-report, behavioral, and electrophysiological measures of impulsivity. <i>Biological Psychology</i>, 145, 112-123. 7. Roberts, K. H., Manaligod, M. G., Ross, C. J., Müller, D. J., Wieser, M. J., & Todd, R. M. (2019). Affectively biased competition: sustained attention is tuned to rewarding expressions and is not modulated by norepinephrine receptor gene variant. <i>Collabra: Psychology</i>, 5(1). 8. Reutter, M., Hewig, J., Wieser, M. J., & Osinsky, R. (2019). Attentional bias modification in social anxiety: Effects on the N2pc component. <i>Behaviour Research and Therapy</i>, 120, 103404. 9. Stegmann, Y., Reicherts, P., Andreatta, M., Pauli, P., & Wieser, M. J. (2019). The effect of trait anxiety on attentional mechanisms in combined context and cue
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	<p>conditioning and extinction learning. <i>Scientific Reports</i>, 9(1), 1-12.</p> <p>10. Andreatta, M, Neueder, D, Genheimer, H, ..., Wieser, M.J., & Pauli, P. (2019). Human BDNF rs6265 polymorphism as a mediator for the generalization of contextual anxiety. <i>Journal of Neuroscience Research</i>, 97, 300– 312.</p> <p>11. Campagnoli, R.R., Wieser, M.J., Gruss, L.F., Boylan, M.R., McTeague, L.M., & Keil, A. (2019). How the visual brain detects emotional changes in facial expressions: Evidence from driven and intrinsic brain oscillations, <i>Cortex</i>, 111, 35-50.</p> <p>12. Talmi, D., Sharapova, M., & Wieser, M.J. (2019). Testing the Possibility of Model-based Pavlovian Control of Attention to Threat. <i>Journal of Cognitive Neuroscience</i>, 31, 36-48.</p> <p>13. Reicherts, P., Pauli, P., Möslers, C., & Wieser, M. J. (2019). Placebo manipulations reverse pain potentiation by unpleasant affective stimuli. <i>Frontiers in Psychiatry</i>, 10, 663.</p> <p>14. Kastner-Dorn, A.K., Andreatta, M., Pauli, P., & Wieser, M.J. (2018). Hypervigilance during anxiety and selective attention during fear: Using steady-state visual evoked potentials (ssVEPs) to disentangle attention mechanisms during predictable and unpredictable threat, <i>Cortex</i>, 106, 120-131.</p> <p>15. Wieser, M. J., Hambach, A., & Weymar, M. (2018). Neurophysiological correlates of attentional bias for emotional faces in socially anxious individuals – Evidence from a visual search task and N2pc. <i>Biological Psychology</i>, 132, 192-201.</p> <p>16. Reutter, M., Hewig, J., Wieser, M. J. and Osinsky, R. (2017), The N2pc component reliably captures attentional bias in social anxiety. <i>Psychophysiology</i>, 54, 519–527. doi:10.1111/psyp.12809</p> <p>17. Reicherts, P., Wiemer, J., Gerdes, A.B.M. Schulz, S.M., Pauli, P., & Wieser, M. J. (2017). Anxious anticipation and pain: the influence of instructed vs conditioned threat on pain, <i>Social Cognitive and Affective Neuroscience</i>, 12, 544–554, https://doi.org/10.1093/scan/nsw181</p> <p>18. Juravle, G., Reicherts, P., Riechmann-Weinstein, M., Wieser, M. J., & von Leupoldt, A. (2017). Neural responses to affective pictures while anticipating and perceiving respiratory threat. <i>Psychophysiology</i>, 54, 182–192. doi:10.1111/psyp.12776</p> <p>19. Ahrens, L.M., Pauli, P., Reif, A., Mühlberger, A., Langs, G., Aalderink, T., & Wieser, M. J. (2016). Fear conditioning and stimulus generalization in patients with social anxiety disorder. <i>Journal of Anxiety Disorders</i>, 44, 36-46, doi.org/10.1016/j.janxdis.2016.10.003.</p> <p>20. Wieser, M. J., Miskovic, V., & Keil, A. (2016). Steady-state</p>
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	<p>visual evoked potentials as a research tool in social affective neuroscience. <i>Psychophysiology</i>, 53, 1763–1775. doi:10.1111/psyp.12768</p> <p>21. Wieser, M. J., Reicherts, P., Juravle, G., & Von Leupoldt, A. (2016). Attention mechanisms during predictable and unpredictable threat – A steady-state visual evoked potential approach. <i>Neuroimage</i>, 139, 167-175. IF = 5.463</p> <p>22. Wieser, M. J., & Moscovitch, D.A. (2016). The Effect of Affective Context on Visuocortical Processing of Neutral Faces in Social Anxiety. <i>Frontiers in Psychology</i>, 6, 1824. IF = 2.463</p> <p>23. Reicherts, P., Gerdes, A. B. M., Pauli, P., & Wieser, M. J. (2016). Psychological placebo and nocebo effects on pain rely on both experience and expectation. <i>The Journal of Pain</i>, 17, 203-214. IF = 4.010</p> <p>24. Kastner, A., Flohr, E. L., Pauli, P., & Wieser, M. J. (2016). A Scent of Anxiety: Olfactory Context Conditioning and its Influence on Social Cues. <i>Chemical Senses</i>, 41(2), 143-153. IF = 3.157.</p> <p>25. Wu, L., Winkler, M. H., Wieser, M. J., Andreatta, M., Li, Y., Pauli, P. (2015). Emotion regulation in heavy smokers: experiential, expressive and physiological consequences of cognitive reappraisal. <i>Frontiers in Psychology</i>, doi: 10.3389/fpsyg.2015.01555. [OA].</p>
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