

Vitkova^{1,2}, V., Thieffry^{2,3}, L., Bruxelmane³, J., Van de Vijver⁴, G., Vandekerckhove^{4,5}, M.,
Cheron¹, G., Cebolla, A¹., Bazan^{2,3}, A.

1. Université Libre de Bruxelles, Laboratory of Neurophysiology and Movement Biomechanics (LNMB) 2. Université de Lorraine, InterPsy Laboratory 3. Université Libre de Bruxelles, Faculty of Psychology and Education Sciences 4. Ghent University, department of Philosophy and Moral Sciences 5. Vrije Universiteit Brussel, Faculty of Psychology and Educational Sciences

ThinkNoThink: a linguistic inhibition task to evaluate psychotic vulnerability

Early detection of psychosis is crucial for positive clinical outcomes. To detect first symptoms, it is important to be able to identify preexisting, sub-clinical, individual risk factors. The purpose of the current study is to better understand and characterize the behavioral and neurophysiological patterns that might point to a preexisting vulnerable structure in psychotic disorder. Clinical experience, as well as scientific studies, demonstrate that psychotic disorders are characterized by recognizable linguistic features (Bazan, 2012), as well as by difficulties in cognitive inhibition (Schneider et al., 1982). Therefore, we used a linguistic inhibition task to contrast participants with low psychotic traits and participants with high psychotic traits (measured by the Schizotypal personality questionnaire, Raine, 1991). Fifty-one non-clinical participants took part in a modified version of the ThinkNoThink paradigm (Anderson & Green, 2001). Behavioral response patterns assessed by the number of correctly recalled word pairs after an inhibition task, and neurophysiological (EEG) response patterns will be analyzed. We expect to observe that participants with high psychotic traits will show better recall as a sign of less efficient inhibition and weaker alpha brain wave synchronization (a neurophysiological mechanism of active inhibition), compared to participants with low psychotic traits. These findings can serve as a basis for future development of a non-invasive, objective, and easy to administer linguistic tool that can be used in clinical practice to detect psychotic vulnerability.

References

- Anderson, M. C., & Green, C. (2001). Suppressing unwanted memories by executive control. *Nature*, 410 (6826), 366–369. <https://doi.org/10.1038/35066572>
- Bazan, A. (2012). From sensorimotor inhibition to freudian repression: insights from psychosis applied to neurosis. *Frontiers in Psychology*, 3, 452. <https://doi.org/10.3389/fpsyg.2012.00452>
- Raine, A. (1991). The SPQ: A Scale for the Assessment of Schizotypal Personality Based on DSM-III-R Criteria. *Schizophrenia Bulletin*, 17(4), 555–564. <https://doi.org/10.1093/SCHBUL/17.4.555>
- Schneider, W., Dumais, S. T., & Shiffrin, R. M. (1982). *Automatic/Control Processing and Attention*. <https://apps.dtic.mil/sti/citations/ADA115078>