

## **Psychophysiological markers of externalizing personality in non-clinical and criminal populations**

### **Results:**

This project aimed to identify the psychophysiological markers of externalizing personality within a non-clinical population, during performance on a range of executive, emotional and social tasks. Before psychophysiological data collection, the Externalizing Inventory (ESI) was translated and adapted to the Portuguese population. The validation studies of the ESI showed good psychometric qualities, consistent with the original structure of the instrument. A sample of 426 university students was initially assessed on several measures of personality, anxiety and depression, and based on their externalizing scores (high, average and low), a sample of 58 participants was tested in a number of laboratory tasks of executive, emotional and social processing, with the co-registration of EEG/ERP. Participants scoring high and average on the externalizing vulnerability performed significantly worse on the subscale “Loss of Set – Conceptual” of the Halstead Category Test than participants scoring low, and ERP differences were also observed in executive tasks. Results from a speeded emotion categorization task (emotional vs. neutral face) showed significantly slower RTs in the angry and happy conditions for the high externalizers than low externalizers, as well as differences in early and late ERPs. The present results indicate that a higher externalizing vulnerability is associated with an increased difficulty at the level of abstract concept formation and poor cognitive flexibility. Moreover, there is evidence of an emotion specific deficit for high externalizers, as well as alterations in the error processing mechanisms, as evidenced by electrophysiological markers of such processes.

### **Areas of interest:**

Psychophysiology; electroencephalography; neuropsychology; executive functions; anti-social behaviour; emotional processing.

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