DANIEL RUIVO MARQUES

THE HYPERAROUSAL HYPOTHESIS IN PSYCHOPHYSIOLOGICAL INSOMNIA. STUDY OF DEFAULT-MODE NETWORK AND ITS MODIFICATION AFTER CBT

Field: Psychology

Advisor name: Ana Cardoso Allen Gomes, Assistant Professor, University of Aveiro

Co-advisor name: Miguel de Sá e Sousa de Castelo-Branco , Associate Professor, University of Coimbra and Gina Maria Costa Caetano, Researcher at IBILI, University of Coimbra

Department: Education and Psychology

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Abstract:

Psychophysiological insomnia (PI) is a prevalent sleep disorder. In our research, we studied the neural correlates of insomnia during daytime. We compared patterns of brain activity between insomnia patients and healthy controls, in particular, within the “Default-Mode Network (DMN)”. We performed our studies using functional magnetic resonance imaging (fMRI). Several dysfunctional neuronal patterns were observed in insomnia patients, namely the failure in DMN deactivation. Additionally, we investigated whether the dysfunctional neural patterns could be reversed by cognitive and behavioural therapy for insomnia (CBT-I). Our results suggest that CBT-I may normalize brain activity in insomnia patients.

How my research is having impact:

Our studies have contributed to a better understanding of neurobiology of insomnia and suggest that it might be possible to identify neuronal mechanisms underlying modifications accounted by CBT-I. Several journal papers and book chapters resulted from this research. Besides, international universities expressed interest in our work and in our new and tentative hypotheses concerning insomnia research. The Portuguese media were also interested in our investigation.