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Dynamics of spontaneous thoughts and its link to the attentional profile

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Abstract

Attention-Deficit / Hyperactivity Disorder (ADHD) is known to be associated with racing thoughts. Christoff et al. (2016) posit that the main determinant of the dynamics of spontaneous thoughts is the presence of constraints on cognition, be it automatic or deliberate. In the present project, we operationalized the unfolding of spontaneous thoughts with a word generation paradigm (Andrews-Hanna et al., 2021; Benedek et al., 2012; Jung, 1910): participants had to generate series of 10-30 words aloud, following a metronome. We set out to contrast two levels of constraint on associations (strong and weak) to test their impact on the dynamics of thoughts, and to relate it to sub-clinical ADHD-like symptomatology. Using reaction times and semantic metrics, we show that the participants who scored higher on an ADHD diagnostic questionnaire produced words that were less related, but only in the "weak constraint" condition - akin to free thoughts.