

Involvement of cold and hot executive functioning in emotion regulation following moderate to severe traumatic brain injury

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Emotional difficulties are frequently encountered following traumatic brain injury (TBI). These troubles include a plethora of symptoms, such as apathy, depression or, specifically, irritability, which can be connected to deficits in emotion regulation. This ability has been shown to rely on executive functioning in general population, and those cognitive functions are altered following TBI. However, little is known concerning which executive functions underly emotion regulation, and whether a distinction exists between the implication of “hot” and “cold” executive functions. Therefore, this study aims to investigate the connection between executive (both hot and cold) and emotion regulation deficits in a moderate to severe TBI sample, in comparison to healthy subjects. More precisely, two general regulation strategies are considered, the reappraisal and the response suppression (through the ERQ), as well as the anger regulation (using the ARG1). Four executive tasks are subsequently proposed; two (TMT and a classic Go / No Go) for the cold executive functions and two others (IGT and an emotional Go / No Go) are lastly conducted for the hot aspect. We hypothesized that flexibility, inhibition and decision making are associated with general emotion regulation, whereas only inhibition is linked to anger management. Furthermore, we expect that the hot executive functions are more implied in emotion regulation than the cold ones. Testing are currently in progress and results will be presented at the conference. Our results would allow to determine whether targeting executive deficits would allow an improvement in emotion, and specifically anger, management following a TBI.