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Testing the validity of the metacognitive hub model of craving for bulimia and binge eating: A study protocol

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Craving is recognized as a key factor involved in the prognosis of addictions and eating disorders according to the recent literature and the fifth edition of the Diagnostic and Statistical Manual of Mental Disorders. Despite a large body of research, theories fail to present the different aspects of craving and to link them together, because they consider it as a unitary process. The metacognitive hub model of craving is a recent theory based on the triadic model and neuroimaging evidence. It considers that craving is threefold: cognitive (reflective system; efficiency of cognitive abilities), automatic (affective system, related to cue reactivity and attentional biases), and physiological (interoceptive system, interpretation of body sensation). The metacognitive abilities act as a hub that makes the craving subtypes explicit, helping to understand, integrate, and manage them.

In this research, we aim to test the model by exploring the relationship between cue-induced craving and the reflective, affective, interoceptive, and metacognitive systems among women with bulimia or binge eating disorder. After a session of self-questionnaires (e.g., food craving, metacognitive abilities, reflexive systems...), participants will go through a food craving induction. A dot-probe task, the attentional network task, and a water load test will be used to respectively evaluate the automatic, reflective and interoceptive systems, while metacognitions will be assessed within each task. Eventually, an approach-avoidance task will help evaluate implicit craving, and questionnaires will be used for explicit craving.

Keywords: craving, food addiction, protocol, model, experimental