

**Abstract details**

Conference	EACLIPT 2022
Abstract number	0118
Last modified	4 October 2022
Abstract submission date	12 October 2022

**NEGATIVE AFFECT-INDUCED PHYSICAL SYMPTOM REPORTING IN PATIENTS WITH FUNCTIONAL SOMATIC SYNDROMES: WHAT HAPPENS IN THE BRAIN?**

Van Den Bergh O.<sup>1</sup>, Van Den Houte M.<sup>2</sup>, Bogaerts K.<sup>3</sup>, Van Oudenhove L.<sup>2</sup>

<sup>1</sup> University of Leuven, Belgium

<sup>2</sup> TARGID, University of Leuven, Belgium

<sup>3</sup> Rehabilitation Sciences, University of Hasselt, Belgium

**Abstract text**

Background<br>Functional somatic syndromes (FSS) include fibromyalgia, irritable bowel syndrome (IBS), and others. In FSS patients, merely viewing negative affective pictures can elicit increased physical symptoms. Our aim was to investigate the neural mechanisms underlying such negative affect-induced physical symptoms in FSS patients. <br>Methods<br>Thirty patients with fibromyalgia and/or IBS and 30 healthy controls (all women) watched neutral, positive and negative affective picture blocks during functional MRI scanning and rated negative affect and physical (respiratory, cardiovascular, gastrointestinal, cerebral, fatigue, and pain) symptoms after every block. We compared brain-wide activation during negative versus neutral picture viewing in FSS patients versus controls using robust general linear model analysis. Further, we compared neurologic pain signature (NPS), stimulus intensity-independent pain signature (SIIPS) and picture-induced negative emotion signature (PINES) responses to the negative versus neutral affect contrast and investigated whether they mediated between-group differences in affective picture-induced physical symptom reporting. <br>Results<br>More physical symptoms were reported after viewing negative compared to neutral pictures, and this effect was larger in patients than controls ( $p=0.025$ ). Accordingly, patients showed stronger activation in somatosensory regions during negative versus neutral pictures. NPS, but not SIIPS nor PINES, responses were higher in patients than controls during negative versus neutral pictures ( $p=0.026$ ). These differential NPS responses partially mediated between-group differences in physical symptoms. <br>Conclusion<br>Picture-induced negative affect elicits physical symptoms in FSS patients as a result of activation of somatosensory and nociceptive brain patterns, supporting the idea that affect-driven alterations in interoceptive processing of somatic signals is a critical mechanism underlying FSS.

Abstract type Oral paper presentations

Keywords

Keyword 1 somatization

Keyword 2	functional somatic syndromes
Keyword 3	negative affect
Keyword 4	symptom perception
Keyword 5	brain processes