

# Decision-making vs mood: Can implicit confidence markers be related to mood states in healthy adults?

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Study assessed for the first time whether daily fluctuations in mood and related variables (such as stress or sleep) are coupled to fluctuations in

metacognitive states (such as confidence or response vigor) and concluded that in the healthy adult population, fluctuations of mood do not interfere with confidence in decision-making.

In the famous book "Descartes' Error" (2008), Portuguese neuroscientist António Damásio analyzes emotions and their fundamental role in human rational behavior, confirming a long-standing interconnection between emotions and cognition. In this sense, if it is true that emotions and [mood](#) alternate episodes are part of human nature, there are still few studies on how these mood fluctuations interact with metacognition and, particularly, with confidence in decision-making.

Considering this state of the art, researchers María da Fonseca, Giovanni Maffei, Rubén Moreno-Bote and Alexandre Hyafil from the University of Pompeu Fabra (Spain), Koa Health B.V. (Spain), Center de Recerca Matemàtica (Spain) and University of Buenos Aires (Argentina) started a [longitudinal study](#) based on two online experiments to assess whether implicit confidence markers can be related to mood states in healthy adults.

In the article "Mood and implicit confidence independently fluctuate at different time scales," published in October 2022 in *Cognitive, Affective, & Behavioral Neuroscience*, the researchers explain that they used a sample of 50 participants, mainly among students from University of Pompeu Fabra, to track subjects' moods and decision-making over a period of 10 consecutive days in everyday life settings.

The results showed that there is no significant correlation between daily fluctuations of mood and session-confidence markers, that is, mood and associated variables, such as sleep quality, food enjoyment and stress level, are not consistently coupled with implicit confidence markers. However, mood-related states and confidence level have been found to fluctuate at different time scales, with mood-related states displaying

faster fluctuations (over one day or half-a-day) than confidence level (two-and-a-half-days).

Rubén Moreno Bote finds it surprising to see that "spontaneous fluctuations in mood and [confidence](#) were not coupled, as expected in the original hypothesis of this study, but evolved on different time scales." For the researcher from the University of Pompeu Fabra, "findings in this area are important as they could contribute to a better understanding of affective states disorders."

**More information:** María da Fonseca et al, Mood and implicit confidence independently fluctuate at different time scales, *Cognitive, Affective, & Behavioral Neuroscience* (2022). [DOI: 10.3758/s13415-022-01038-4](#)

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