



Belgium's **Got Talent**



# Common and distinct behavioral and neurophysiological mechanisms in experiential and cognitive emotion regulation

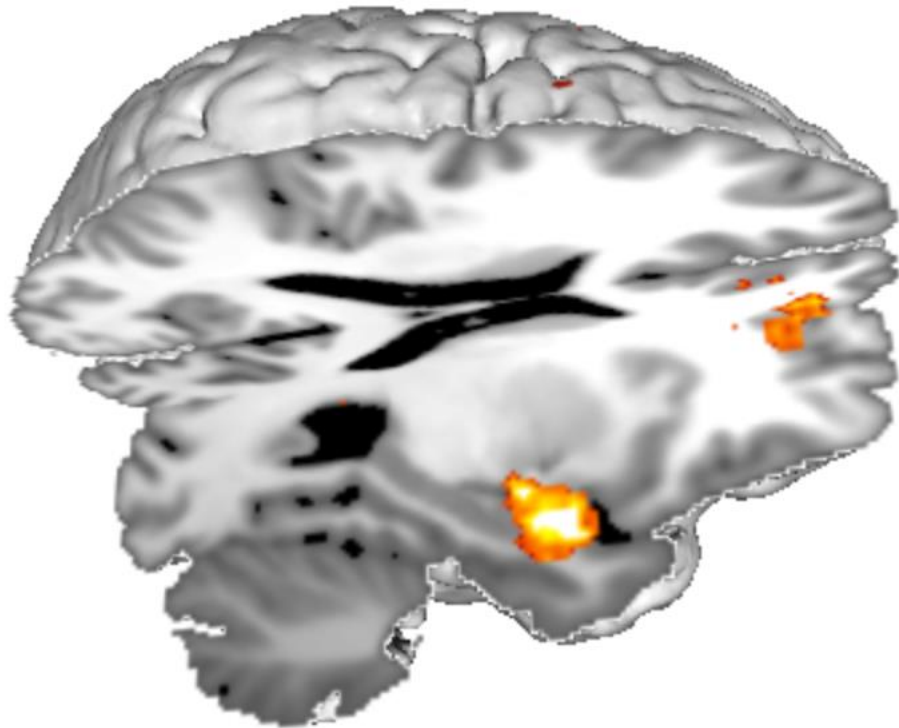
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Promotors: Prof. Dr. Marie Vandekerckhove, Prof. Dr. Daniele Marinazzo

2022-December 8<sup>th</sup>

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# Emotion Regulation



Emotion Regulation Brain Network created with NeuroSynth([www.neurosynth.org](http://www.neurosynth.org))

- Definition: Emotion regulation (ER) refers to attempts to influence emotions in ourselves or others (McRae & Gross, 2020).

	Decrease	Increase
Negative Emotion	Trying to calm oneself down when angry(Int)	Firing oneself up before a big game(Int)
	Helping a tearful child untangle his kite(Ext)	Reframing a friend's "little fight" with a spouse as serious(Ext)
Positive Emotion	Wiping a smile off one's face at a funeral(Int)	Sharing great news with close friends(Int)
	Helping giggling girls calm down at bedtime(Ext)	Telling someone a joke to cheer them up(Ext)

Gross, 2015

# Daily-life Examples

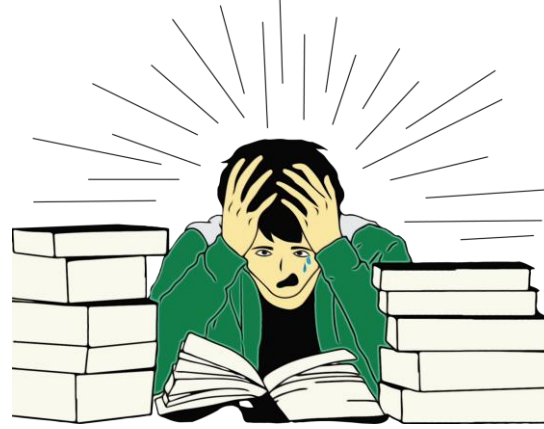
**Fight**



**Pain**



**Stress**



**Covid-19**



**Emotion Regulation**

# A Crucial Scientific Question:

- Whether a better way to recover from the stressful events is ‘through’ the emotion *(Hunt, 1998; Pascual-Leone & Greenberg, 2007; Greenberg & Vandekerckhove, 2008) ?*



“Emotional Focused Coping”

- Or whether it is more helpful to think differently ‘about’ it *(Gross, 1998a; Gross, 1998b; Gross et al., 2019) ?*



“Cognitive Reappraisal”

# Experiential and Cognitive Emotion Regulation

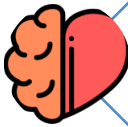



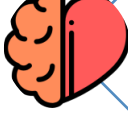

- ***Cognitive emotion regulation***

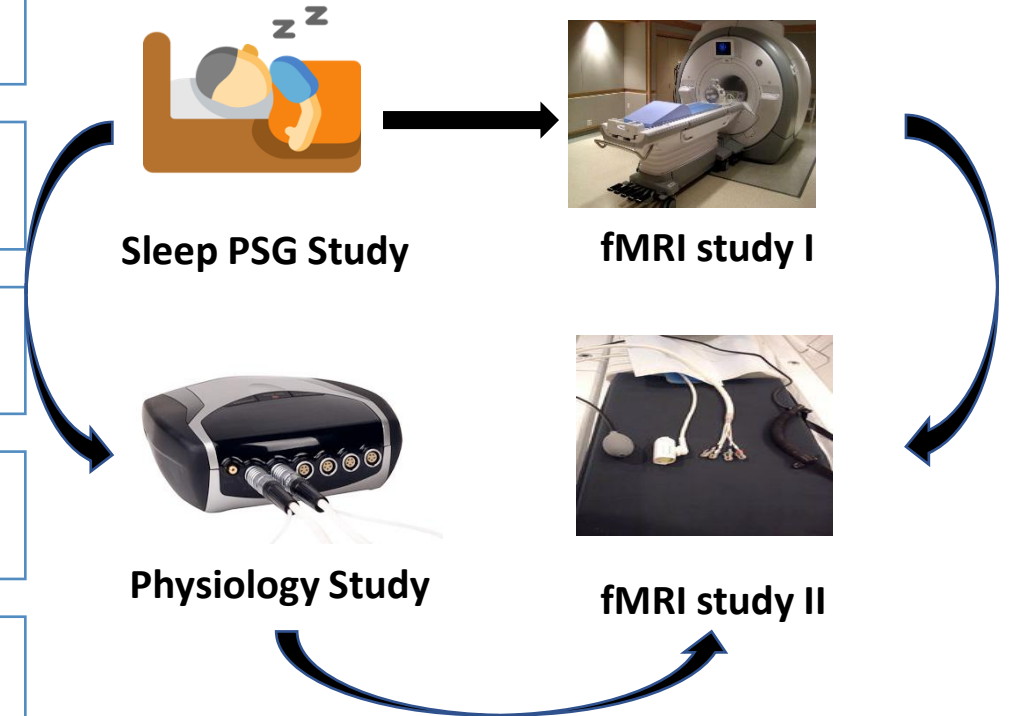
- A process involving top-down cognitive control to alter emotional response (*Ochsner & Gross, 2008; Morawetz et al., 2020*) such as ‘cognitive reappraisal’, ‘cognitive defusion’, accessing the cool system (Ayduk, Mischel & Downey, 2002).

- ***Experiential emotion regulation***

- As a complementary approach, experiential ER involves an active, non-intervening, accepting, open and welcoming approach towards raw sensory affective experiences or ‘**experiential awareness**’ in a first phase, and its verbalization or ‘**experiential expression**’ in a second phase (*Vandekerckhove et al., 2012*), accessing the hot system (Ayduk, Mischel & Downey, 2002).
- The focus of experiential ER lies on the “here and now” of affective processing as an adaptive signaling mechanism itself (*Stanton et al., 2000; Vandekerckhove, 2020* ).

# The empirical studies

-  General Introduction
-  Study I: Sleep and Emotion Regulation
-  Study II: Behaviour and Physiological Effects of Repeated Emotion Regulation
-  Study III: Approaching or Decentering? Experiential ER versus cognitive defusion
-  Study IV: Behavioural and Neurophysiological Effects of Repeated Emotion Regulation
-  General Discussion

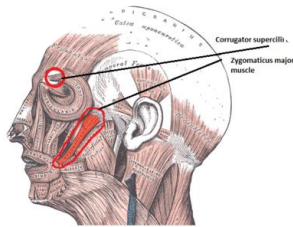


# Core Experimental design

4 seconds (s)	0.2-3.2 s	8.5 s	0.5 s	6.5 s	2 s
Short instruction	Fixation	Online Regulation	Fixation	Rating	Fixation
Experiential/ Defusion/Reappraisal Watch	+	Negative or Neutral IAPS photos	+	How Positive or Negative do you feel? 1 2 3 4 5 6 7 Very negative                  very positive	+



PSG



(EMG)



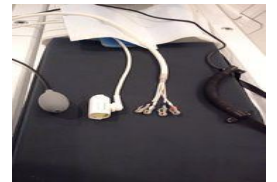
(Heart Rate)



(Skin Conductance)



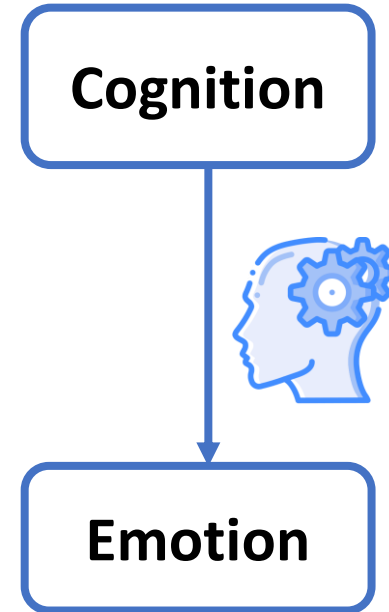
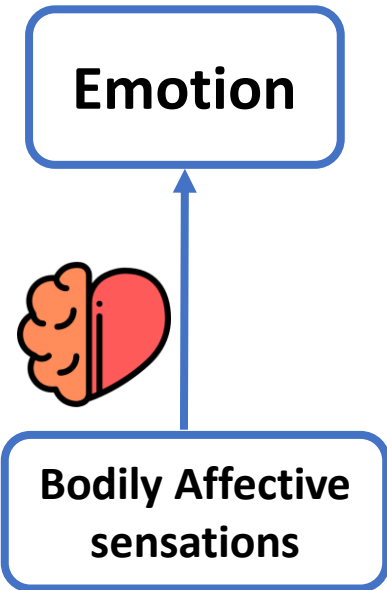
(Brain activation)



(Respiration)

# Results and Conclusions

- ❖ Experiential emotion regulation does not act immediately but may possibly require repeated processing of emotions to yield in-depth effects and become progressively effective.
- ❖ With regards to repeated processing, experiential emotion regulation resulted in 1) a steeper relative decrease of negative emotional experience; 2) an enhanced activation of the anterior insular cortex – a central area in affective and interoceptive awareness.
- ❖ Experiential emotion regulation also appeared to slow down respiratory activity, indicating a dampening effect on the autonomic system.





# Implications for psychotherapy

- Depression
- Anxiety
- PTSD
- Borderline personality disorder
- Insomnia disorder
- Schizophrenia

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## Mental illness and well-being: an affect regulation perspective

James J. Gross, Helen Uusberg, Andero Uusberg

First published: 06 May 2019 | <https://doi.org/10.1002/wps.20618> | Citations: 56



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