Regulation of sadness

temporal dynamics of suppression and distraction effects

Feruza Komilova

Theoretical background

Sadness

- occurs when something important is lost without a blameworthy target (Susan E.Rivers et al., 2006; Barr–Zisowitz, 2000; Ellsworth and Smith, 1988);
- slows the cognitive and physiological systems in attempts to regain energy and muster support to adjust to the loss (Ekman, 2003; Izard and Ackerman, 2000)
- may lead to psychological disorders, such as depression and anxiety (Kova´cs et al., 2016; Woody and Gibb, 2015)
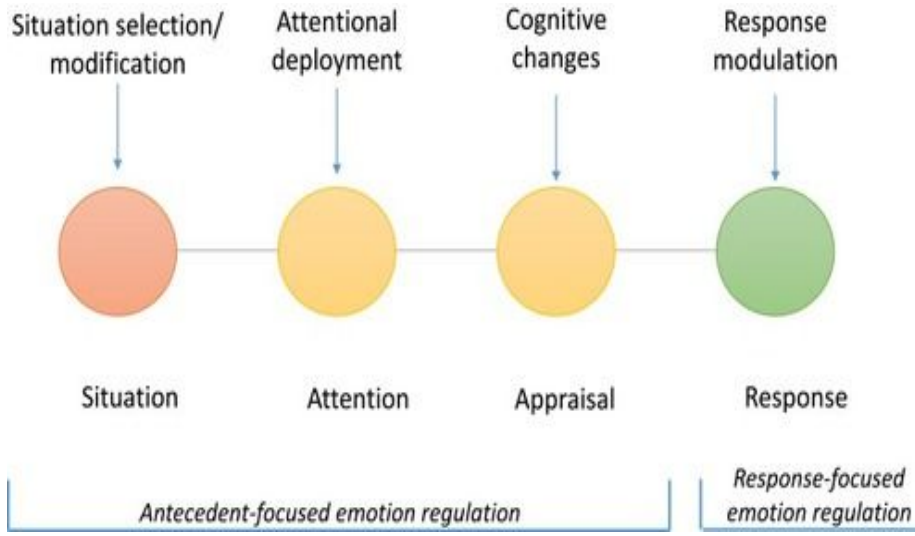
therefore, must be regulated

Theoretical background

Emotion Regulation refers both to positive and negative emotions, but due to higher functional significance, mostly *downregulation of negative emotions* is studied.

Process model of ER (Gross)	Adaptive/maladaptive ER strategies (Aldao)

Cognitve strategies	Description of the strategies
Adaptive strategies	
Putting into perspective	Decrease and relativize the severity of the event
Acceptance	To resign and accept the irreversibility of the negative experience
Positive reappraisal	Thoughts that highlight some positive aspect of the unpleasant event
Positive refocusing	Having pleasent and joyous thougths different from the negative event
Refocus on planning	Thinking about how to solve the problem
Maladaptive strategies	
Rumiation	State of excessive worry by negative thoughts and feelings
Catastrophizing	To think about the horrible thing of what happend and conclude that it is the worse experience lived, even compared with what other people have experienced
Self-blame	Thoughts that attribute the cause of the negative event and emotion to oneself
Other-blame	Make others responsible for the negative event that happened

Adapted from Dominguez-Sanchez et al. (2013).

From Lam et al., 2020

Theoretical background

How do we assess ER strategy efficiency?

– emotional arousal level (self–reported, reduced emotion = efficient ER)
– psychophysiological arousal level (HR, respiration, SC measures)

Temporal domain is important

– is the use of "adaptive" strategies always beneficial? (ex: reappraisal reduces both positive & negative emotions, is not efficient in fear regulation (Olatunji et al., 2017))
– can we fully estimate ER strategy efficiency without knowing long–distance consequences? (repeated rebound in sympathetic activation in suppression, Gross & Levenson, 1993; Zaehringer et al., 2020)

Theoretical background

Regulation of sadness

- – is scarcely studied, usually contrasted to anger regulation
- – is more efficient with the strategies like positive social relation (Riverst et al., 2007)
- – according to meta–analysis (Zaid et al., 2021) sadness is most commonly regulated by cognitive reappraisal. Another group of widely–used strategies called seeking social support, was shown to be more efficient among women

  No studies concerning temporal dynamics of emotion expression and related physiological arousal when using different regulation strategies.

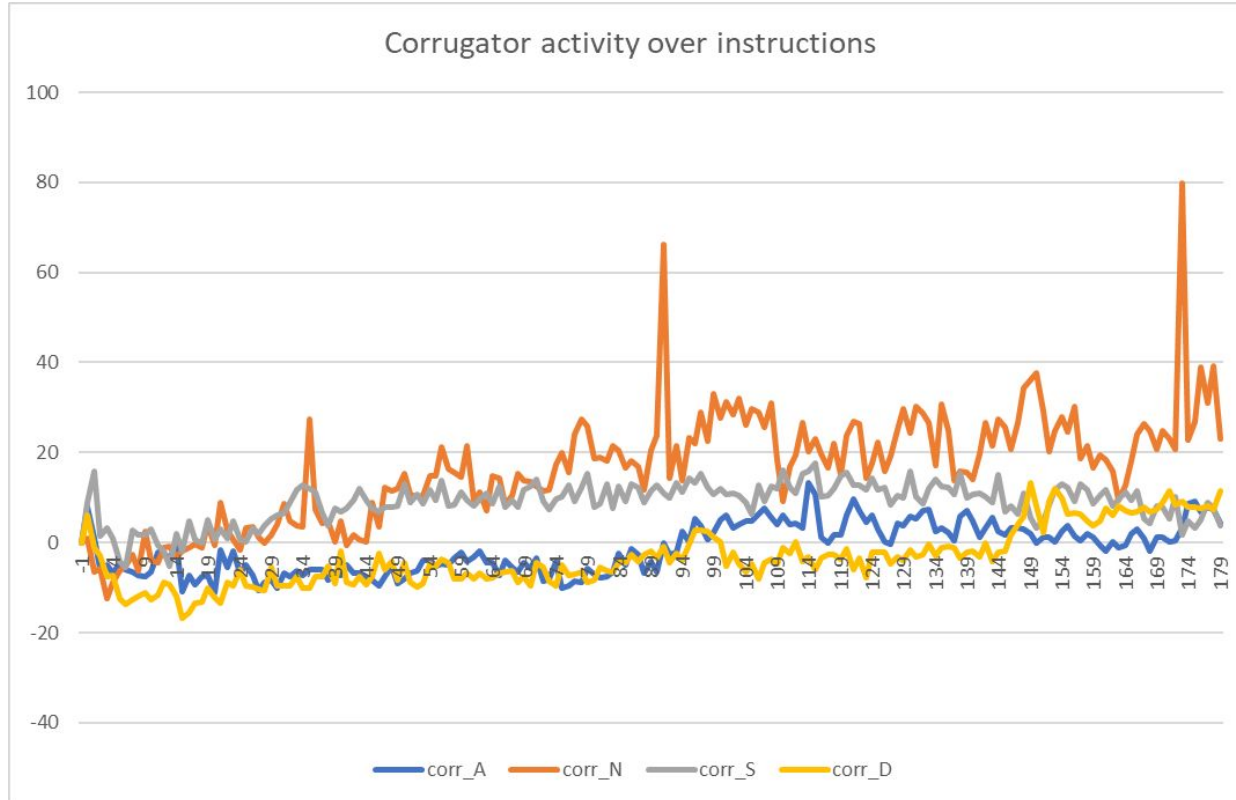# Our research

So we decided to conduct one:)

Three types of regulation instructions: suppression, distraction, no-regulation (listening naturally, like in everyday life), within-subject design

Stimuli: music pieces lasting 3 minutes chosen by participants themselves (procedure is taken from Mori & Iwanaga, 2017)

**Measures**: self-report (affect rating after each stimuli), HR, EDA, Zygomatic and Corrugator activity

Main hypothesis: when suppressing sadness, all the physiological measures will return to the baseline level in longer period of time, compared to distraction and no-regulation conditions

Our research. EMG dynamics

Corrugator activity over instructions

A – non–target stimuli
N – neutral instruction
S – suppression instruction
B – distraction instruction

Our research. EMG dynamics

Zygomaticus activity over instructions

A – non–target stimuli
N – neutral instruction
S – suppression instruction
B – distraction instruction

Our research. EMG dynamics

SCR

A – non–target stimuli
N – neutral instruction
S – suppression instruction
B – distraction instruction

Legend: EDA_N, EDA_A, EDA_S, EDA_D
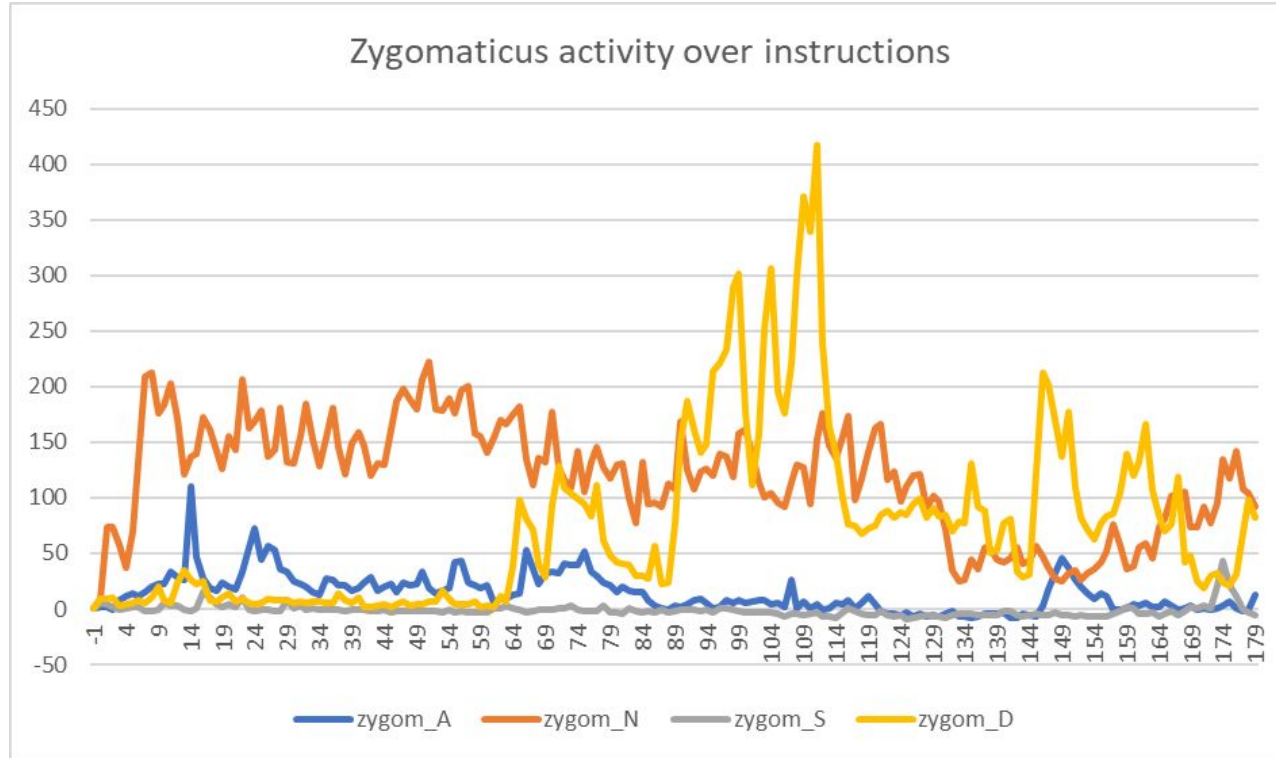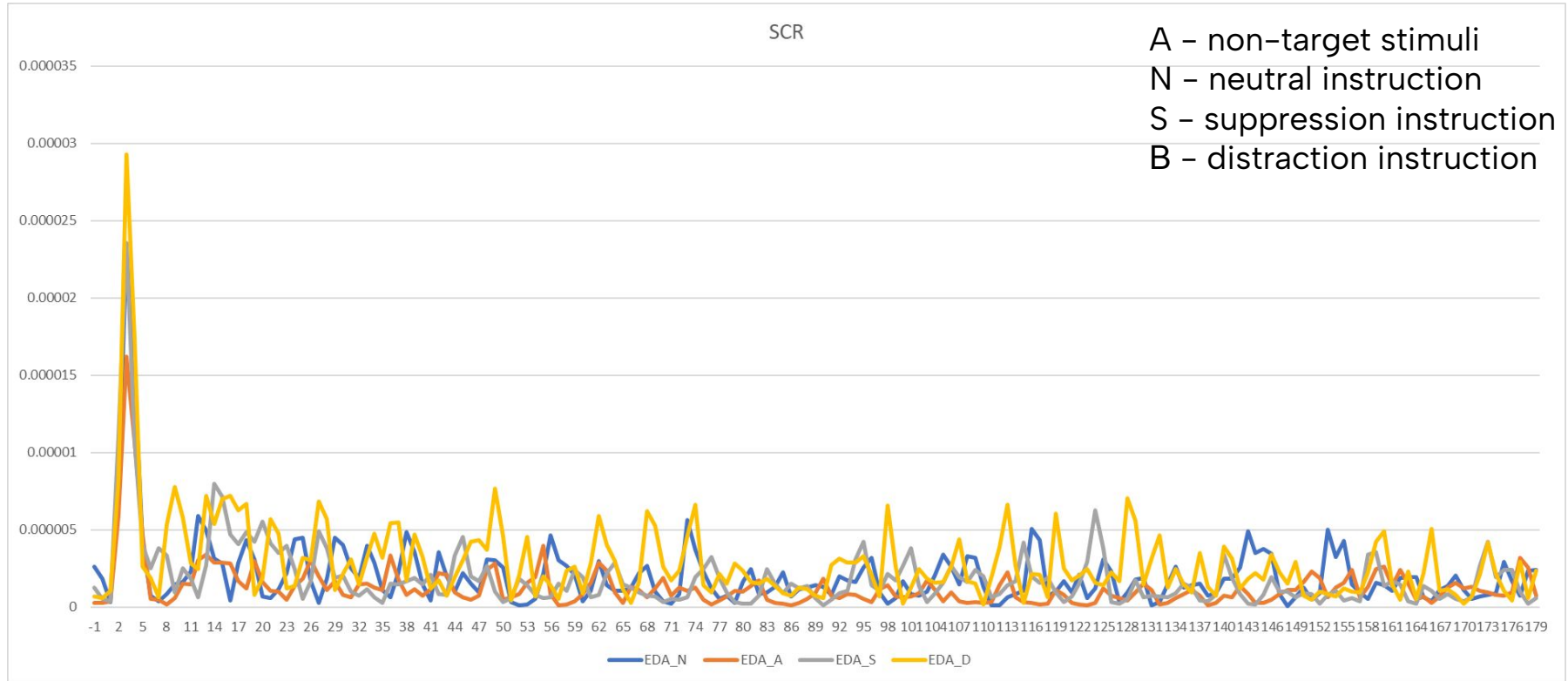
References

1. Barr-Zisowitz, C. (2000). Sadness. Is there such a thing, 607–622.
2. Rivers, S. E., Brackett, M. A., Katulak, N. A., & Salovey, P. (2007). Regulating anger and sadness: An exploration of discrete emotions in emotion regulation. Journal of Happiness Studies, 8, 393–427.
3. Zaid, S., & Patwayati, P. (2021). Impact of customer experience and customer engagement on satisfaction and loyalty: A case study in Indonesia. The Journal of Asian Finance, Economics and Business, 8(4), 983–992.
4. Woody, M. L., & Gibb, B. E. (2015). Integrating NIMH research domain criteria (RDoC) into depression research. Current opinion in psychology, 4, 6–12.