High-Intensity, Dynamic Stimuli Complicate Emotion Regulation Strategy Usage

William Mitchell, Steven Martinez, Katelyn Cliver, Joanne Stasiak, David Gregory, Helen Schmidt, Vishnu Murty, & Chelsea Helion

Billy.Mitchell@temple.edu *@wjmitchell_*

PROJECT MOTIVATION

- Situations eliciting emotion regulation in our daily lives are often **dynamic**, **multimodal**, and sometimes **intense**. Our responses are often **unprompted** and **unprepared**. [1]
- For these reasons, the strategies someone may **choose** to regulate their emotions in many studies may not reflect the strategies they **use** in daily life. [2]
- This series of studies used a variety of settings to study the effect emotional intensity has upon regulation strategy usage in high-intensity, dynamic situations using untrained participants. [3]

HYPOTHESES

- As **emotion intensity increases**, the probability of regulating via distraction **increases**, while reappraisal **decreases**. [4]
- Meta-analysis suggests this effect size is "very large" (r+ = 0.46 – 0.61) and consistent. [5]

ANALYTIC APPROACH

- Across all studies, Hierarchical Binary Logistic Regression was used to assess the hypothesized association between the intensity of negative emotion and which strategy was reportedly used or forecasted for each event.
- Employed model testing using the information criterion method (i.e., BIC comparison), though model covariates differed across studies.

CONCLUSIONS

- Within high-intensity dynamic situations, Distraction, but not Reappraisal, was *used* less often and effectively than people *thought* it would be.
- This contradicts conventional notions as to the strengths and weaknesses of some Process Model strategies.
- This is likely a reflection of environmental [6] and action affordances [7], which demand greater attention within future research.
- This project contributes to a pre-existing chorus emphasizing the need for greater ecological validity in the emotion regulation literature. [8]

REFERENCES

1. Opitz, P. C., Cavanagh, S. R., & Urry, H. L. (2015). Uninstructed emotion regulation choice in four studies of cognitive reappraisal. *Pers Ind Diff*, 86, 455–464.
2. Sheppes, G. (2020). Transcending the "good & bad" and "here & now" in emotion regulation: Costs and benefits of strategies across regulatory stages. *Adv in Exp Soc Psych*, 61, 185-236.
3. Mitchell, W. J., Stasiak, J., … & Helion, C. (In Print). Emotion regulation strategy use and forecasting in response to dynamic, multimodal stimuli. *J of Exp Psych: Gen.*
4. Sheppes, G., Scheibe, S., Suri, G., & Gross, J. J. (2011). Emotion-Regulation Choice. *Psych Sci*, 22(11), 1391–1396.
5. Matthews, M., Webb, T. L., … & Sheppes, G. (2021). Identifying the determinants of emotion regulation choice: A systematic review with meta-analysis. *Cog and Emo*, 35(6), 1056–1084.
6. Uusberg, A., Taxer, J. L., … & Gross, J. J. (2019). Reappraising Reappraisal. Emotion Review, 11(4), 267–282.
7. Bramson, B., Toni, I., & Roelofs, K. (2023). Emotion regulation from an action-control perspective. *Neurosci & Biobehav Rev*, 153, 105397.
8. Aldao, A. (2013). The Future of Emotion Regulation Research: Capturing Context. *Perspect on Psychol Sci*, 8(2), 155–172.

SCAN TO VIEW THIS MANUSCRIPT

Made Possible By UNION WAGES

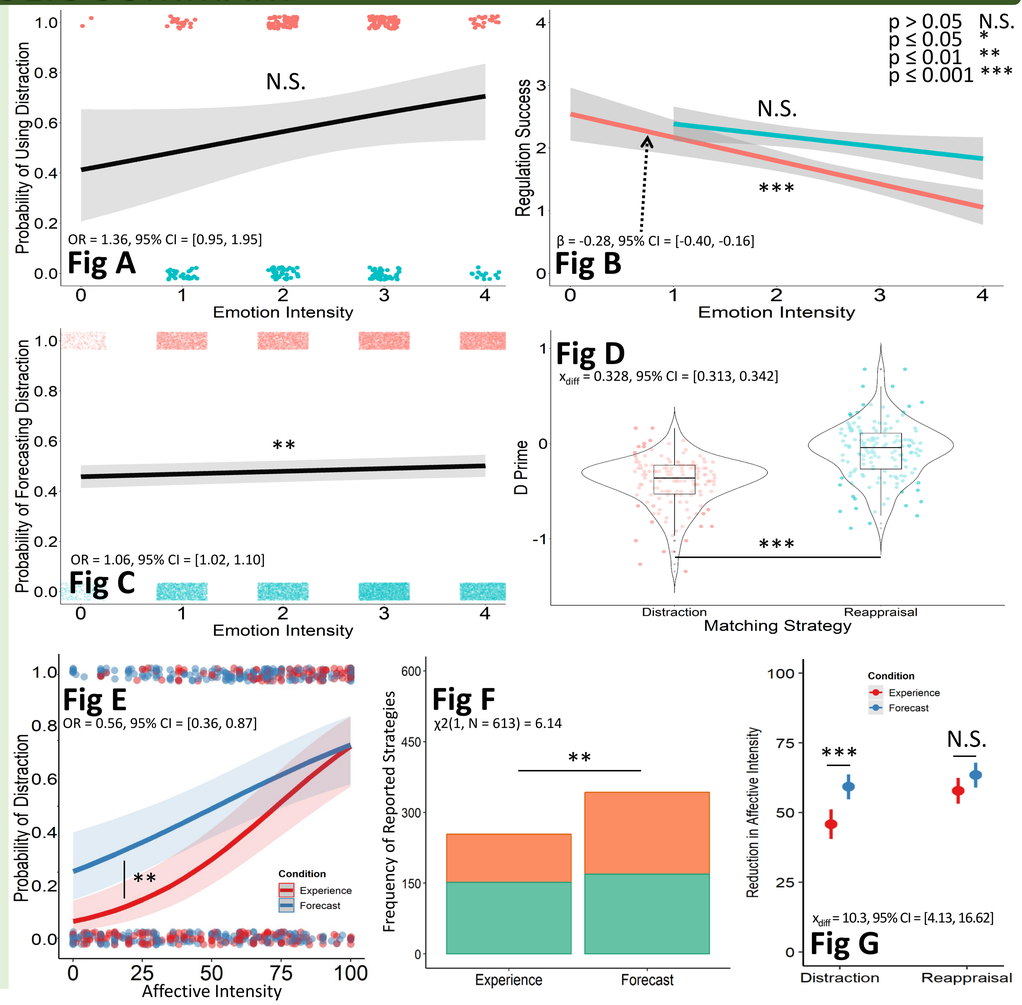
TEMPLE UNIVERSITY GRADUATE STUDENTS' ASSOCIATION TUGSA AFT 6290 EST. 1997 AFL-CIO

RESULTS SUMMARY

STUDY 1: Participants who *experienced* a haunted house demonstrated no association between emotional intensity and strategy usage, even after applying a multiverse analysis approach (*Fig A*). Distraction was self-reported to be less effective as intensity increased, contrary to previous work (*Fig B*).

STUDY 2: Participants tasked with *forecasting* how they would regulate in haunted house situations demonstrated the hypothesized association between intensity and regulation strategy (*Fig C*). *Forecasters* matched *experiencers* in strategy selection less than chance for Distraction, but not Reappraisal (*Fig D*).

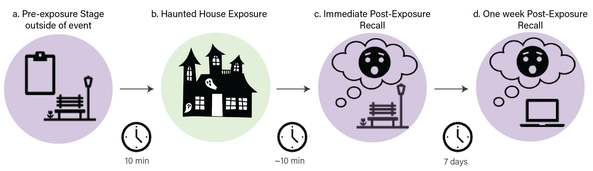
STUDY 3: While watching horror movie clips, emotional intensity demonstrated the hypothesized association with both strategy *use* and *forecasting* (*Fig E*). However, Distraction was used less often than Reappraisal by *experiencers* (*Fig F*), who reported it to be less effective than *forecasters* thought it would be (*Fig G*).



METHODS SUMMARY

STUDY 1: HAUNTED HOUSE EXPERIENCE

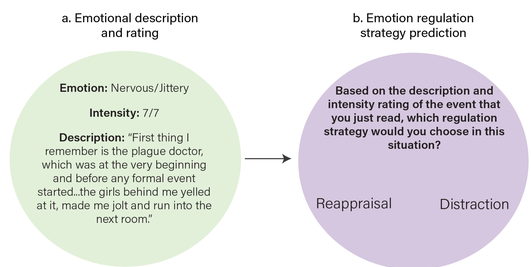
118 Participants traversed Eastern State Penitentiary in October 2021



- Participants were placed in groups (n = 31) of two to five people and led by researcher.
- Groups progressed single file, instructed to experience the event as naturally as possible.
- Participants were untrained and emotion regulation was not prompted.
- Exposure lasted approximately 37 minutes on average.
- After exposure, participants identified 3 emotionally salient events:
  - Descriptions of the events (Free response)
  - Emotions felt (Free response)
  - Emotion intensity (Likert Scale, 0-4)
  - Regulation strategy, if any (Free Response)
  - Regulation success (Likert Scale, 0-4)
- Hypotheses-blind raters classified regulation according to Process Model (IRR = 0.877).

STUDY 2: REGULATION FORECASTING

170 Participants read haunted house descriptions in July 2021



- Participants were recruited via Prolific
- They reviewed 78 events described by people who experienced our pilot haunted house study in 2019, which included:
  - A description of each event
  - the emotions experienced in that event
  - the intensity of those emotions
- Participants were then asked to forecast what strategy they would have used if they experienced the event.

STUDY 3: HORROR MOVIE CLIPS

253 Participants completed a video regulation task in October 2023

- Participants were recruited via Prolific
- They watched four randomly sorted video clips (120s each) sourced from lesser known horror films.
- Participants watched the videos alone and reacted as they naturally would.
- After each video, negative affective intensity was captured on a sliding 100 point scale.
- After all videos were viewed, participants either reported the strategies they used or forecasted how they should regulate for each video. Options included Reappraisal, Distraction, or Neither.
- Participants also recorded how effective the strategy they chose was or would be at reducing their affective intensity on a sliding 100 point scale.