

BACKGROUND

• Emotion regulation is important for maintaining mental health^{1,2}

cognitive reappraisal → deliberately reframing an event to render it less emotionally negative

Prior work demonstrates a reduction in negative affect while employing cognitive reappraisal...

...during an event³ ... and while remembering the event^{4,5} (retrospective reappraisal) But does it have a **lasting effect** on memory quality?



- Reactivation may be necessary to modify or update memories^{6,7,8}
- Reappraisal employs memory reactivation, whereas other strategies like memory suppression avoid reactivation
- **Does reappraisal affect memory differently than memory suppression?**

We predict that retrospective reappraisal...

→ reduces negative affect

→ maintains memory accessibility

...compared to memory suppression, which doesn't utilize reactivation

METHODS

1. Watch video clips of real news broadcasts?
2. Rate **emotionality**

Retrieve memory of video, then...

- reappraise
- retrieve-only
- suppress

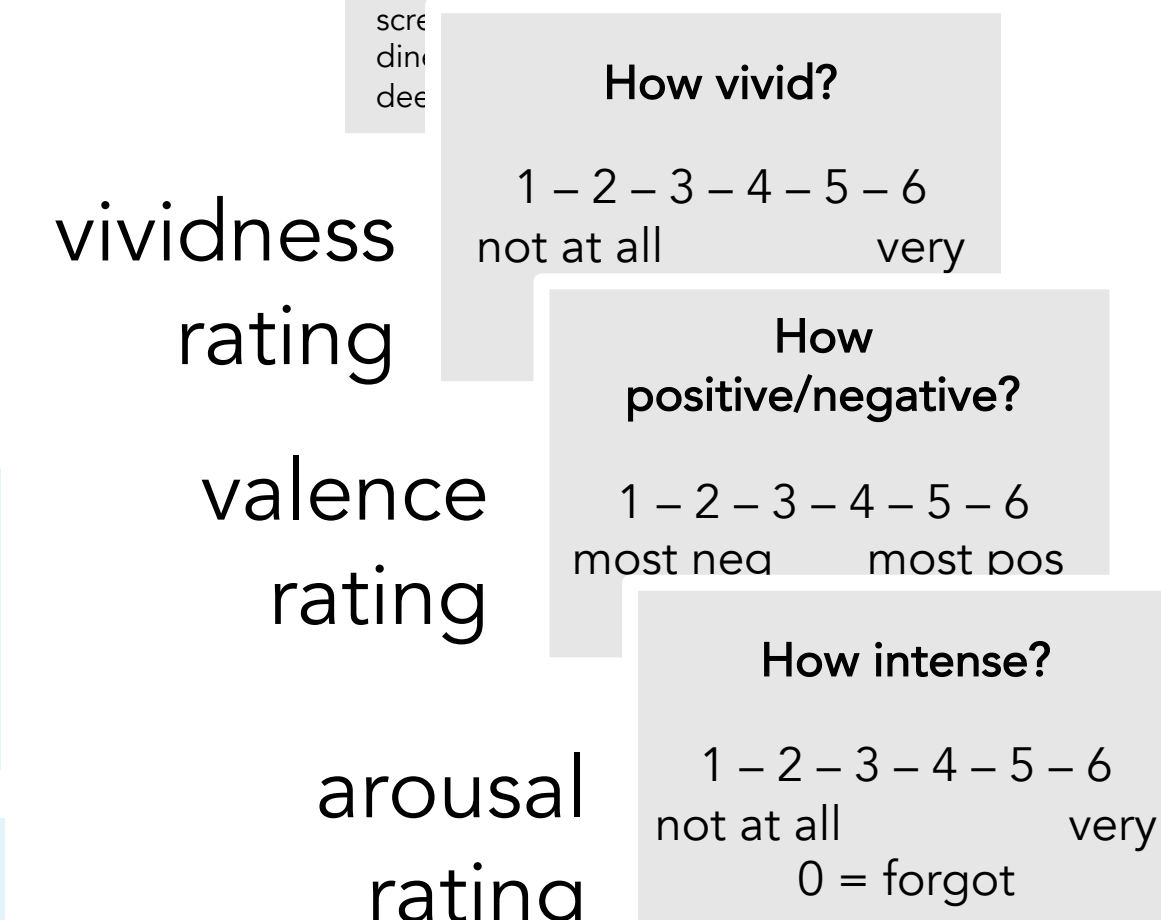
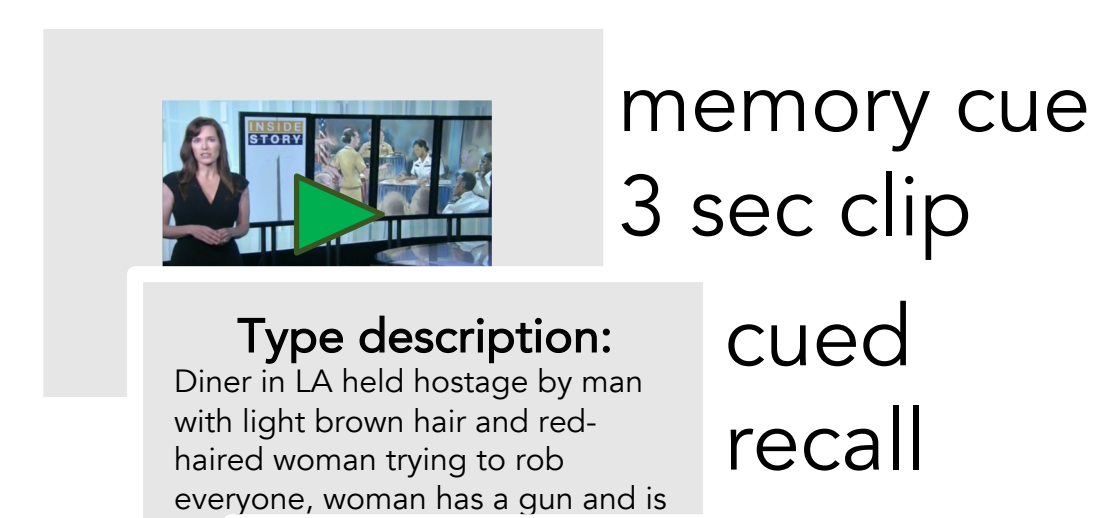
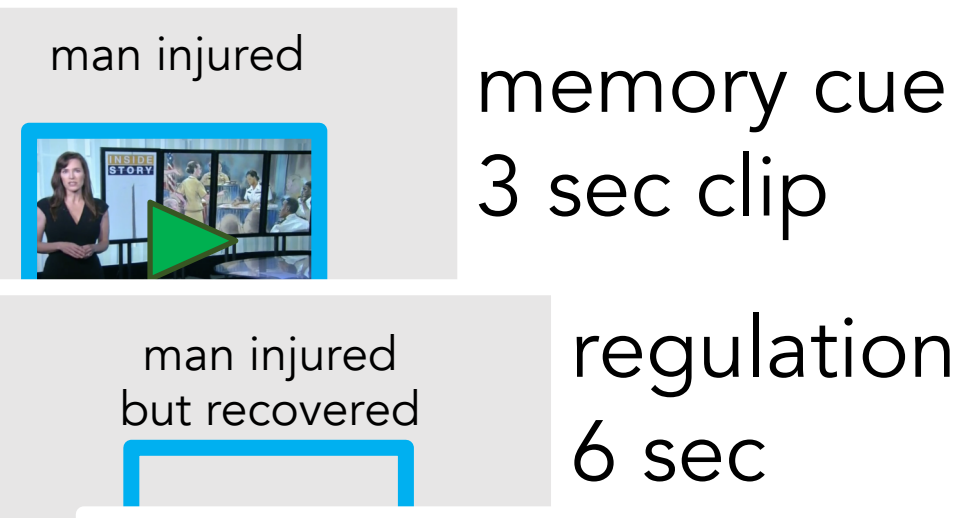
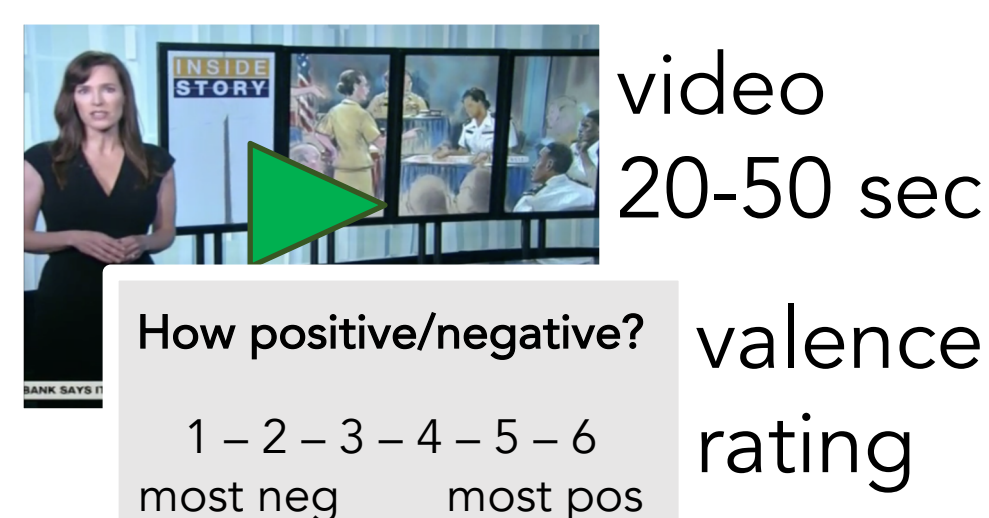
1. Describe event from memory
2. Rate memory **vividness**
3. Rate **emotionality**

24-hour delay

WATCH VIDEOS

REGULATION x 3

CUED RECALL



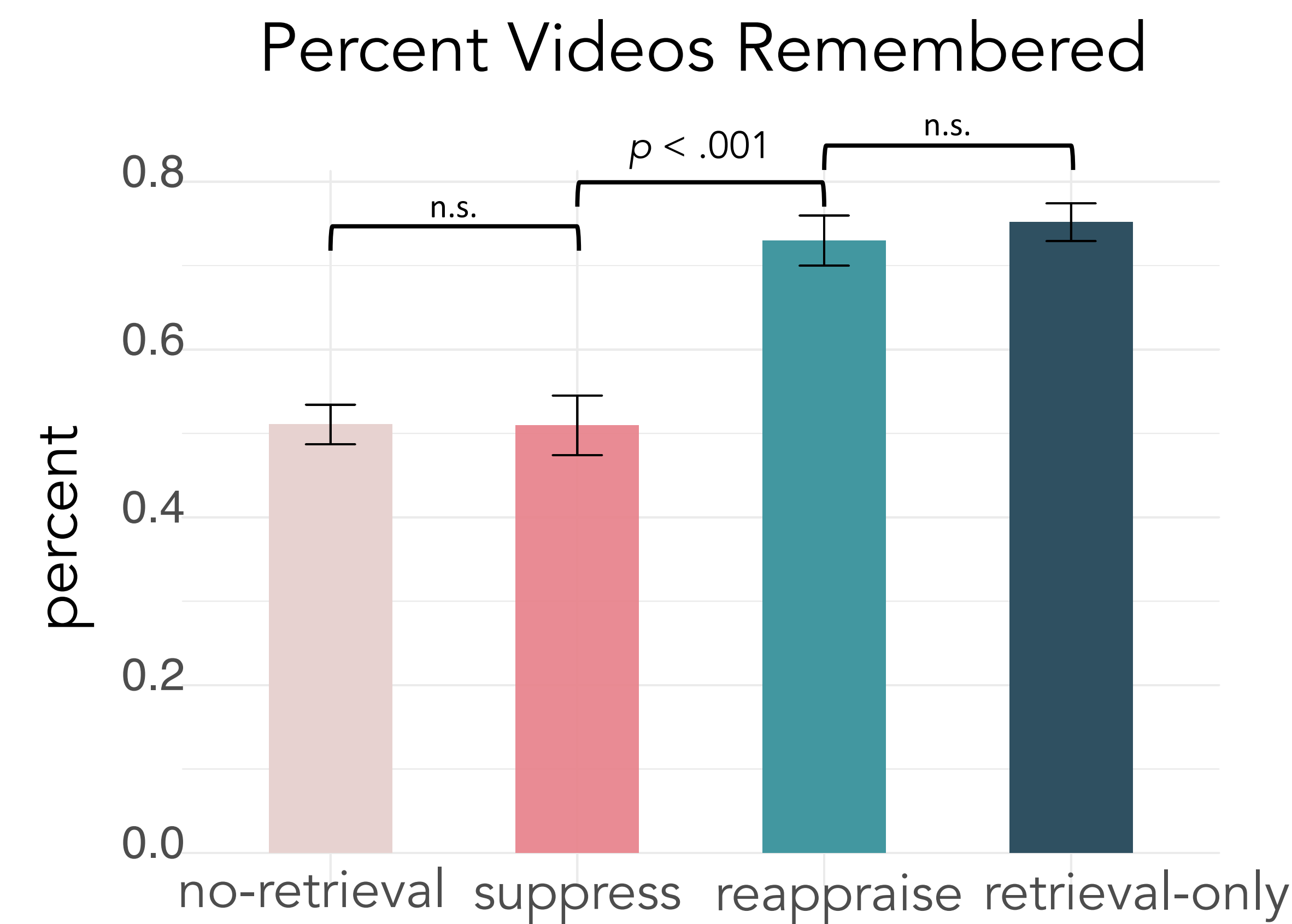
Items considered **successfully regulated** if 2/3 attempts rated as > 2 during regulation

Items considered **remembered** if at least 2 details reported during cued recall

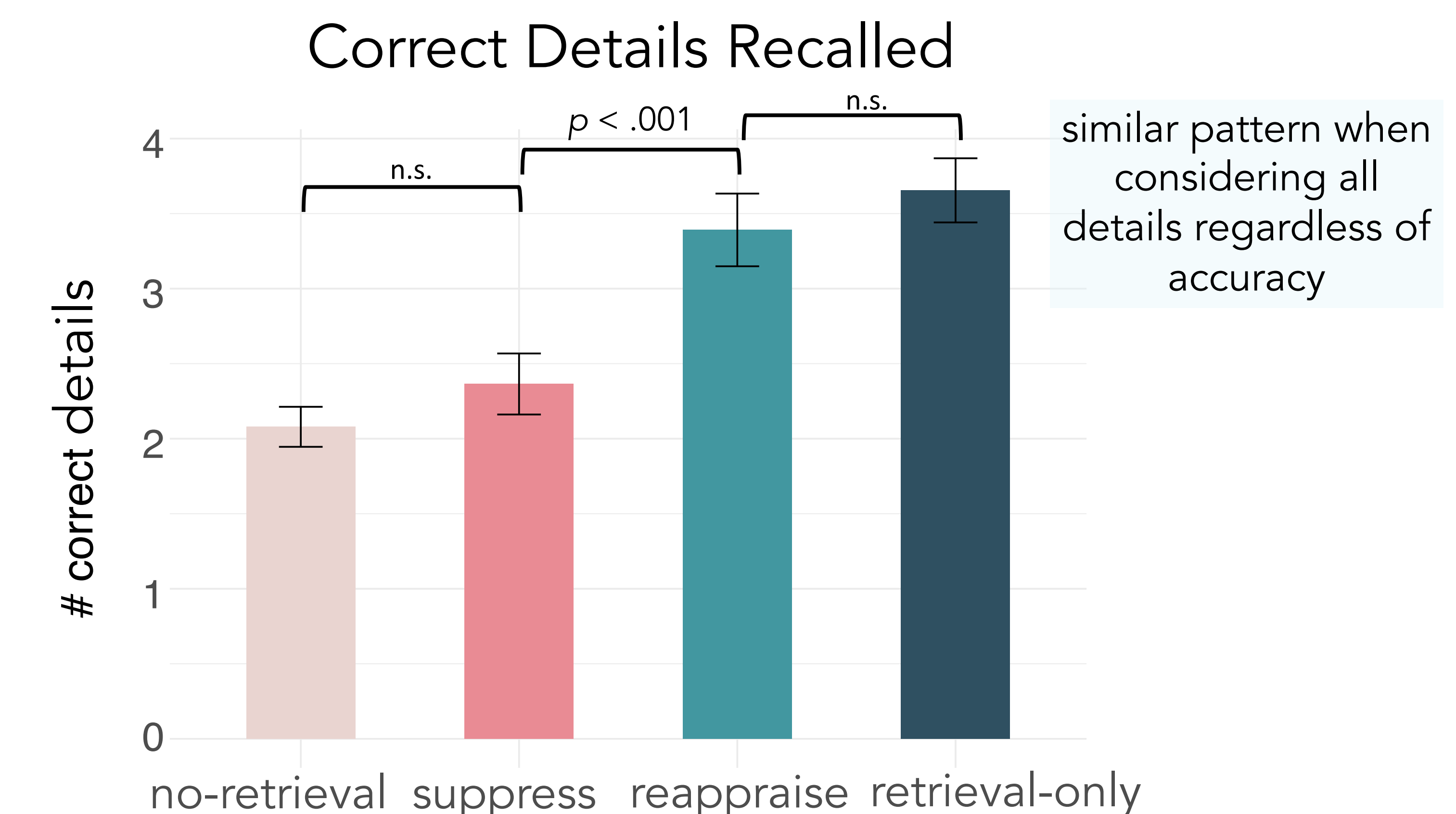
n = 46

RESULTS

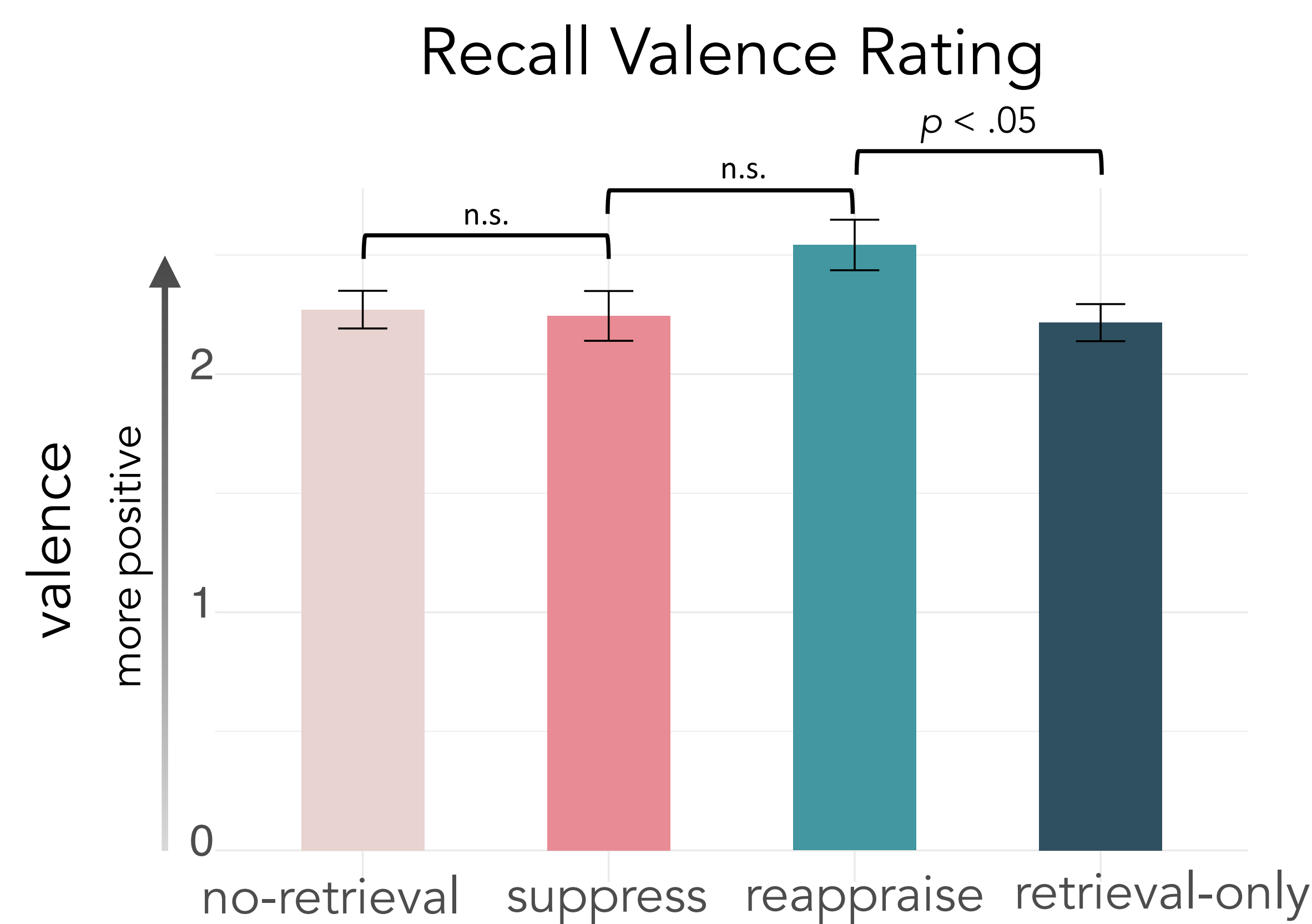
a Reappraised items remembered more frequently than suppressed items



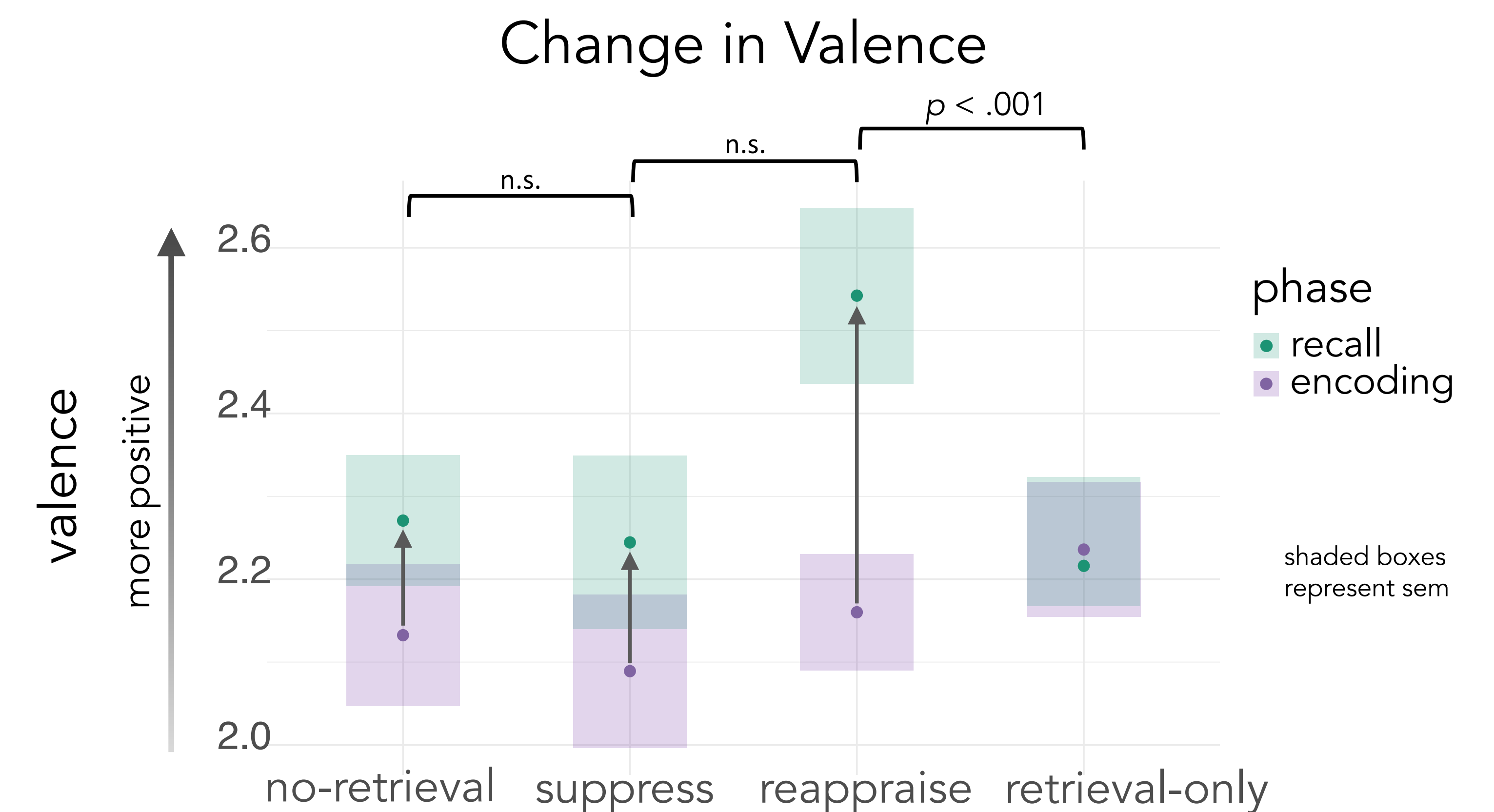
b Reappraised items remembered with more correct details than suppressed items



c Reappraised items recalled as less negative than retrieved-only items on average



d At an item level, reappraisal reduced negative valence from encoding to retrieval more than retrieval-only



CONCLUSIONS

Retrospective reappraisal...

→ Reduces negative affect associated with unpleasant memories while maintaining memory accessibility and detail

Memory suppression...

→ Has no effect on negative affect despite reducing memory accessibility and detail

mediated by memory reactivation?

Future Directions

How is memory reactivation related to retrospective reappraisal success?
How do memory representations change across regulation attempts?

1 Gross, J. J., & Muñoz, R. F. (1995). *Clinical Psych: Science & Prac*; 2 Ehrling, T., Tuschen-Caffier, B., Schnülle, J., Fischer, S., & Gross, J. J. (2010). *Emotion*; 3 Gross, J. J. (1998). *J Pers Soc Psychol*; 4 Holland, A. C., & Kensinger, E. A. (2013a). *J Cogn Neurosci*; 5 Holland, A. C., & Kensinger, E. A. (2013b). *Neuropsychologia*; 6 Schiller, D., Monfils, M.-H., Raio, C. M., Johnson, D. C., Ledoux, J. E., & Phelps, E. A. (2010). *Nature*; 7 Hupbach, A., Gomez, R., Hardt, O., & Nadel, L. (2007). *Learn Mem*; 8 Nader, K., Schafe, G. E., & Le Doux, J. E. (2000). *Nature*; 9 Samide, R., Cooper, R. A., & Ritchey, M. (2019). *Behav Res Methods*.