

# Testing the Impact, Durability, and Underlying Mechanisms of a Brief Emotion Resilience Intervention Among Essential Workers

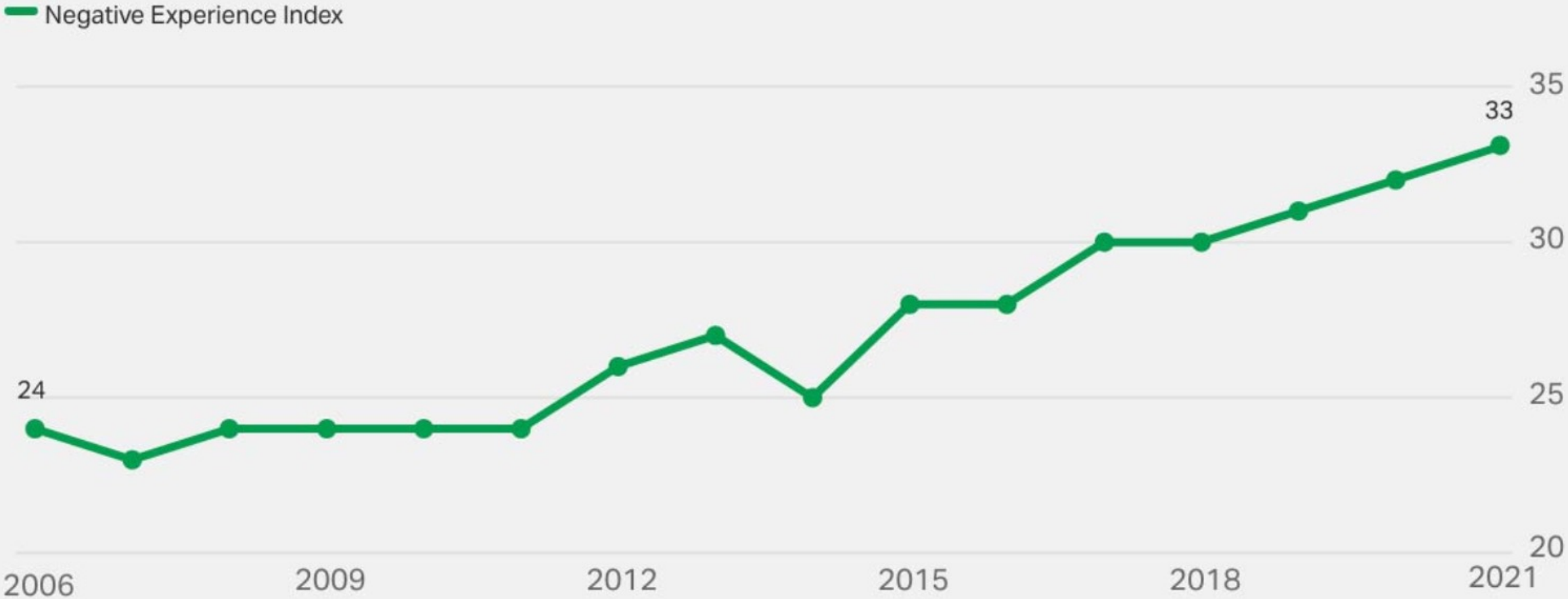
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& James Gross (Stanford University)



# Background

## The Global Rise of Unhappiness

Anger, stress, sadness, physical pain and worry reach new global high.

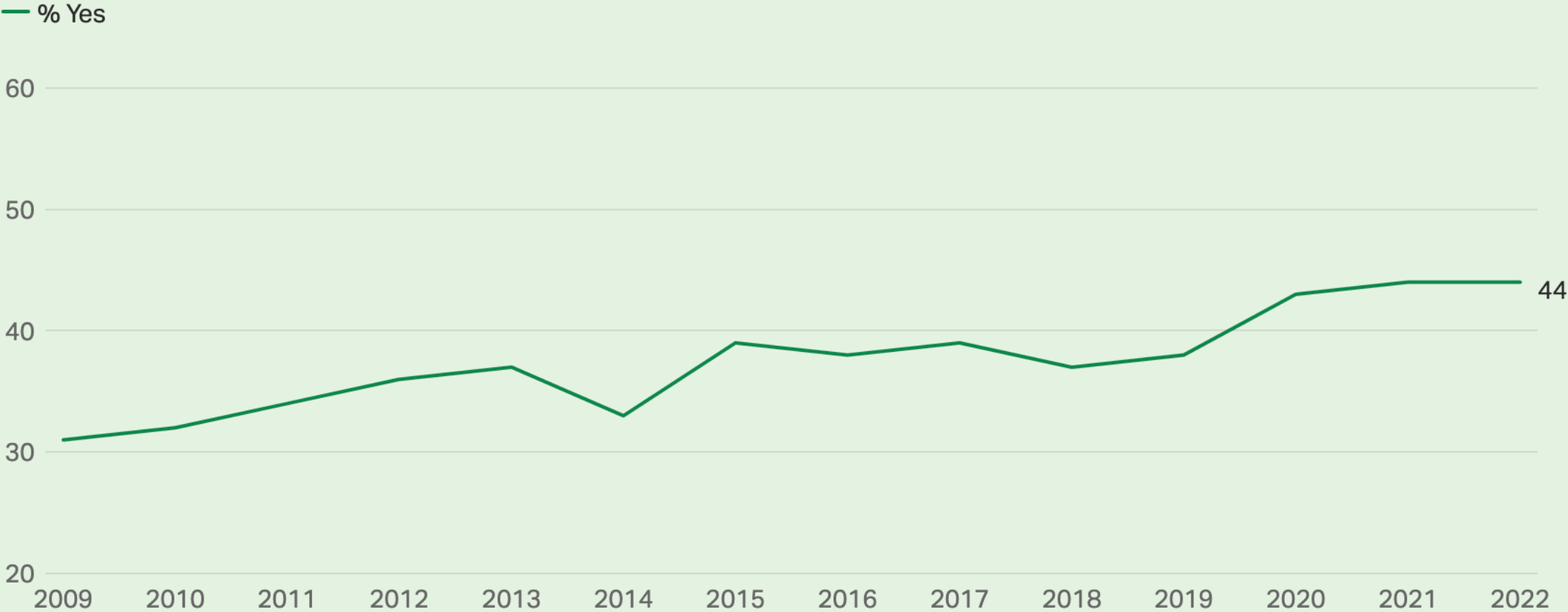


(Gallup, 2022)

# Background

## The Rise of Employee Stress

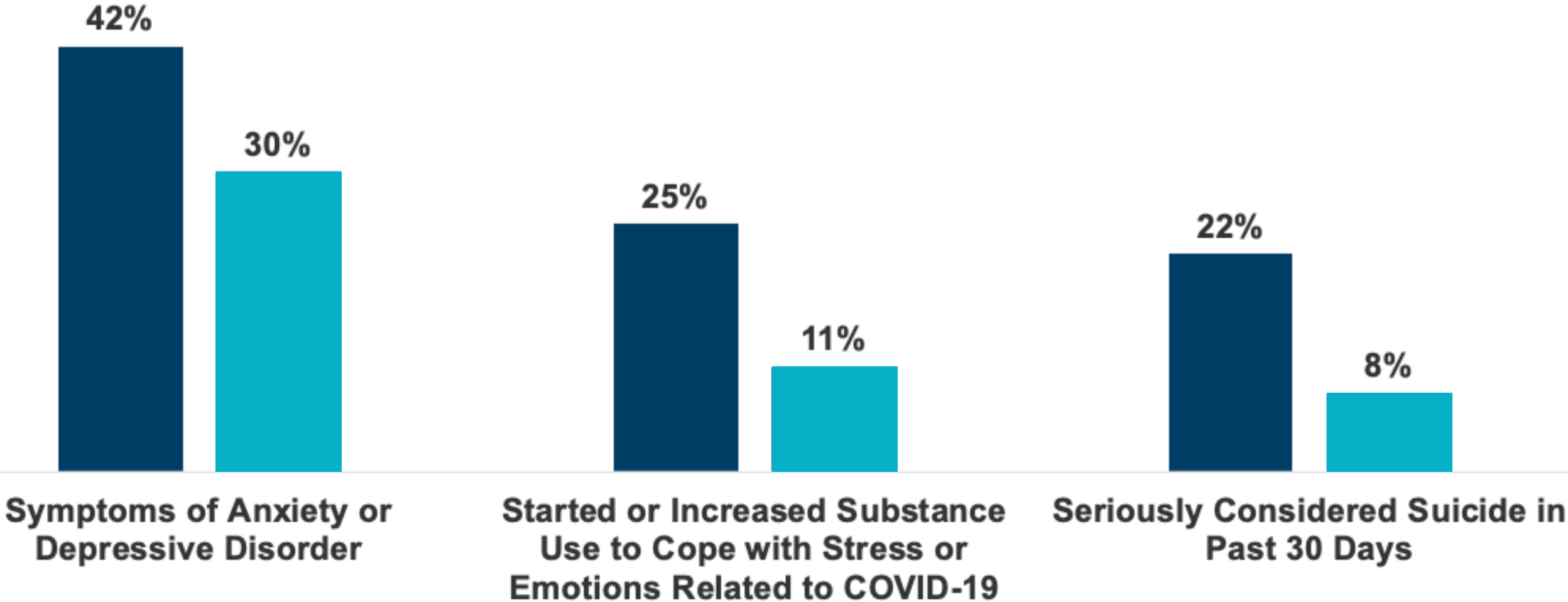
Did you experience the following feelings during A LOT OF THE DAY yesterday? How about stress?



(Gallup, 2023)

# Background

■ Essential Worker   ■ Nonessential Worker



(Czeisler et al., 2020)

# Background

- **Many negative consequences:**
  - Worse physical health (e.g., Madison et al., 2021; Ferrer et al., 2020)
  - Worse job performance (e.g., Diener et al., 2020; Lyubomirsky et al., 2005)
  
- **Traditional interventions:**
  - Significant time, effort, and resources
  - Challenges of feasibility, acceptability, uptake, and scalability (Beames et al., 2022).

# Background

- **Reappraisal: Changing how one thinks about a situation** (Gross, 1998)
- **Meta-analysis:  $d = 0.45$  in changing emotion experience** (Webb et al., 2012)
- **Short term: self-reported emotions and physiological responses**
- **Long term association:**
  - ↑ academic achievement
  - ↑ psychological well-being
  - ↑ cardiovascular health
  - ↑ resilience & mental health during the COVID-19 pandemic
- **Most people do not reappraise consistently**

(Denny & Ochsner, 2016; Gross, 1998; Jackson et al., 2000; Denson et al., 2011; Dillon & LaBar, 2005; Ray et al., 2010; Change et al., 2015; Dörfel et al., 2014; Hajcak & Nieuwenhuis, 2006; Kalisch, et al., 2005; Lohani & Isaacowitz, 2014; Ochsner et al., 2002; Schaefer, et al., 2002; Shahane et al., 2019; English et al., 2012; Davis & Levine, 2013; Ivcevic & Brackett, 2014; Gross & John, 2013; Aldao et al., 2010; Cludius et al., 2020; Appleton et al., 2013, 2014; Veer et al., 2020; Suri et al., 2015; Milyavsky, et al., 2019)

# Background

- **Teaching reappraisal in a brief online session (vs. passive and active control conditions) decreased negative and increased positive emotional responses (N = 21,644 from 87 countries):**
  - about photos from news regarding COVID-19 (ds = .39-.59)
  - about the COVID-19 situation (ds = .24-.27)
  - current emotional wellbeing (ds = .31-.33)
  - anticipated emotional wellbeing next week (ds = .21-.23)

(Wang et al., 2021)

# Background

- **Gaps**

- Longitudinal effects?

- 2 months later (Arbel et al., 2022)

- Benefits became statistically insignificant

- 3-week 8-session

- vs. measurement-only control

- Our study:

- 6 months later

- Larger sample size

- One intervention session + a booster reminder

- vs. active control



# Background

- **Reflection:** Bring awareness and understanding of one's feelings, thoughts, and physical reactions
- **Enhanced emotional awareness, affect labeling, and expressive writing** (Boden & Thompson, 2015; Torre & Lieberman, 2018; Pennebaker & Smyth, 2016).

# Background

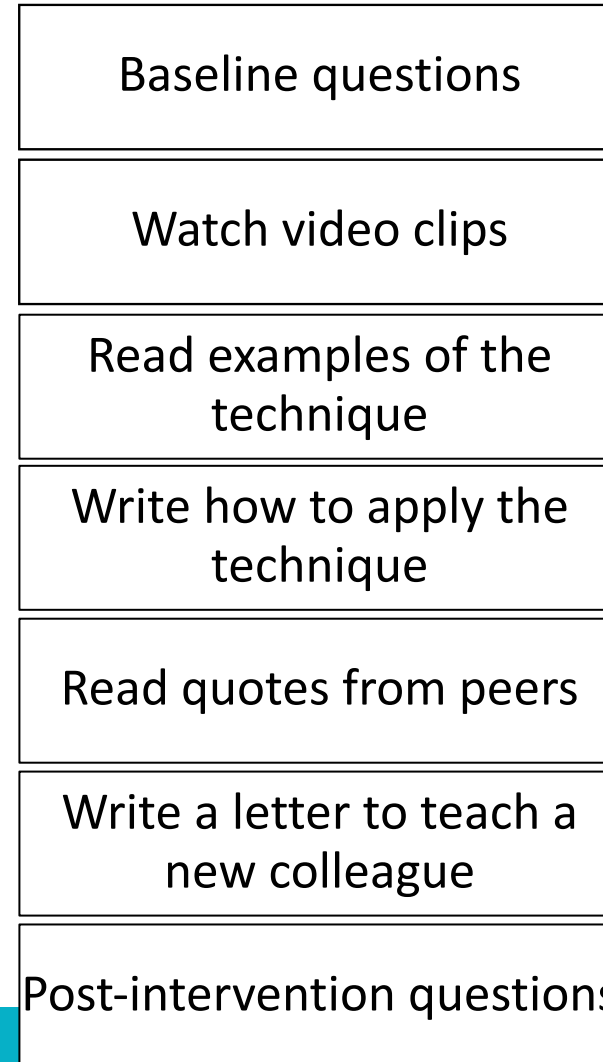
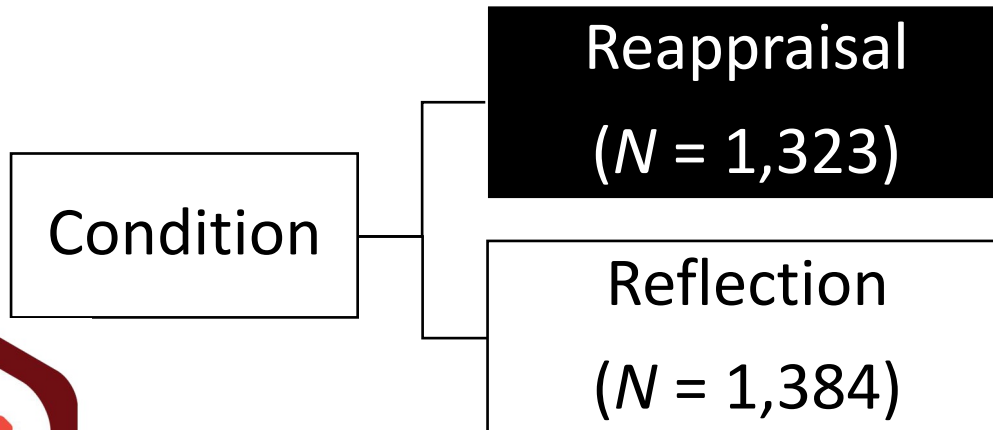
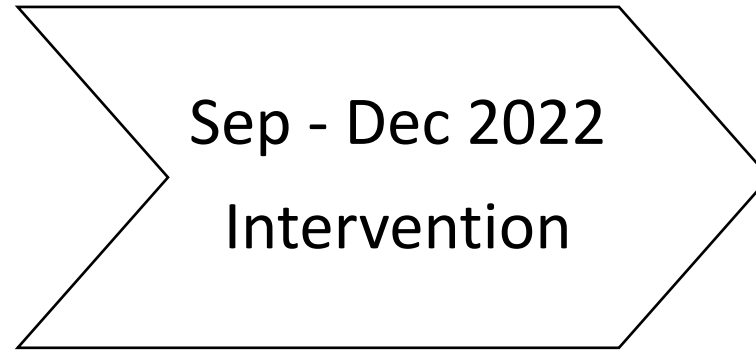
- **Gaps**

- Workplace contexts and workplace outcomes?
  - Pre-existing beliefs and habits
  - Reappraisal is more difficult (Milyavsky et al., 2019) and is associated with more mental fatigue (Alabak et al., 2020; Wenzel et al., 2023)
  - Reappraisal is associated with more inactions (Ford et al., 2019, 2023)



# Method

- **Participants: Partnering with a large public service providing organization, we recruited a nationwide sample of U.S. essential workers.**

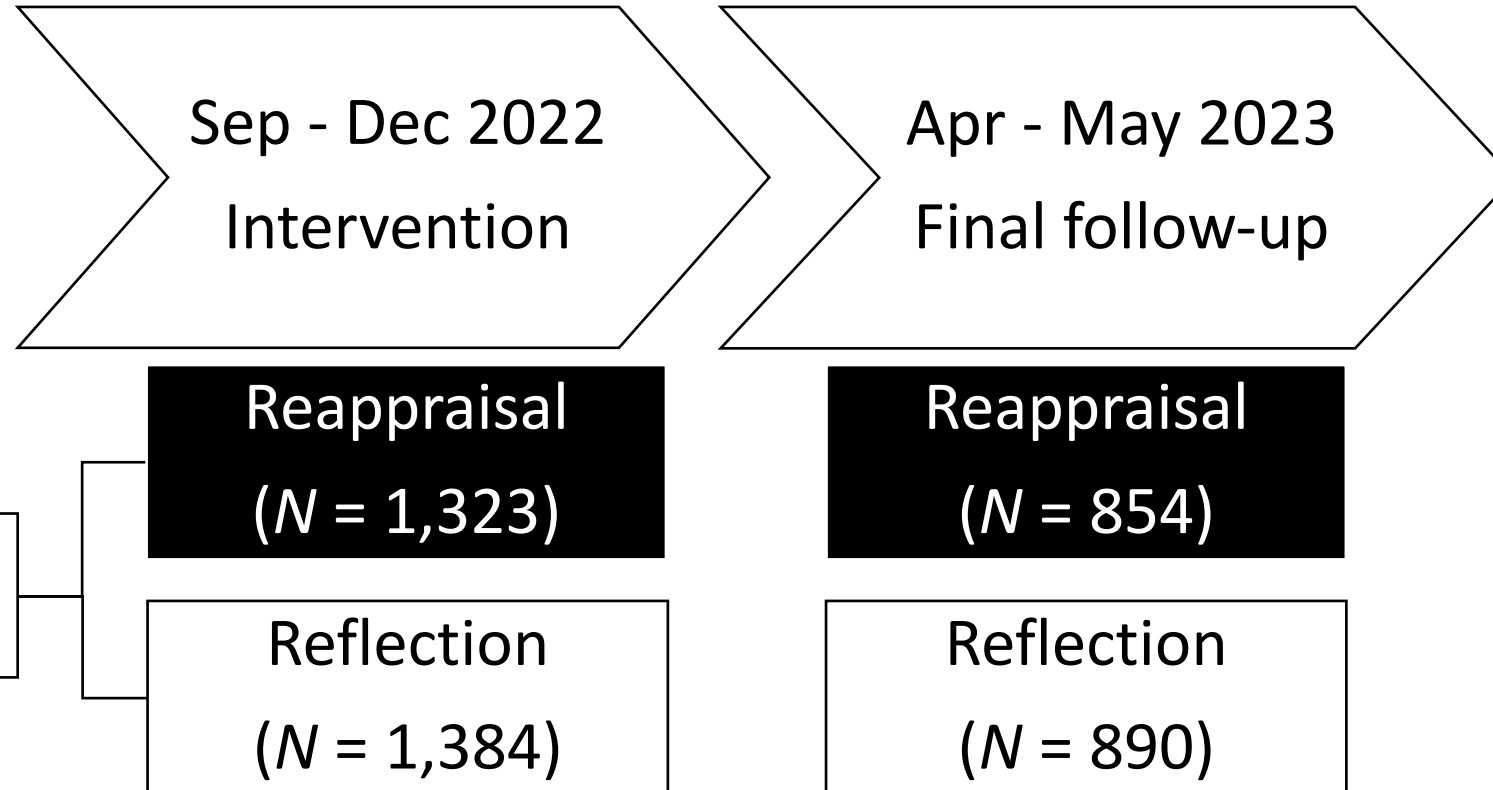


Median completion time: 36 minutes



# Method

- **Participants: Partnering with a large public service providing organization, we recruited a nationwide sample of U.S. essential workers.**



Days passed:  
Median = 183  
Mean = 180  
SD = 28



# Results

- The reappraisal (vs. reflection) intervention led to significantly better wellbeing six months later.

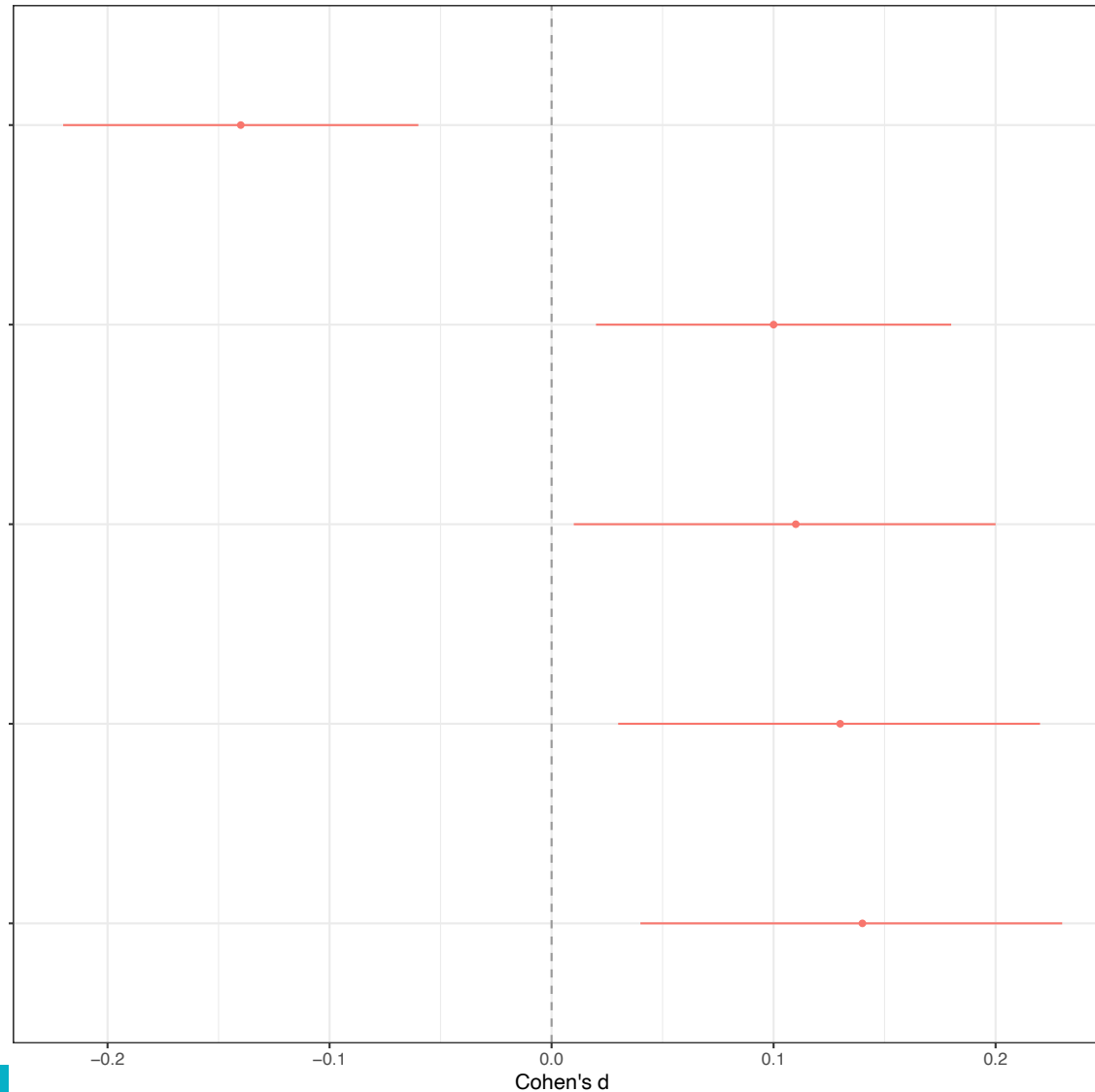
Negative affect (e.g., anxiety)

Positive affect (e.g., hope)

Sense of control

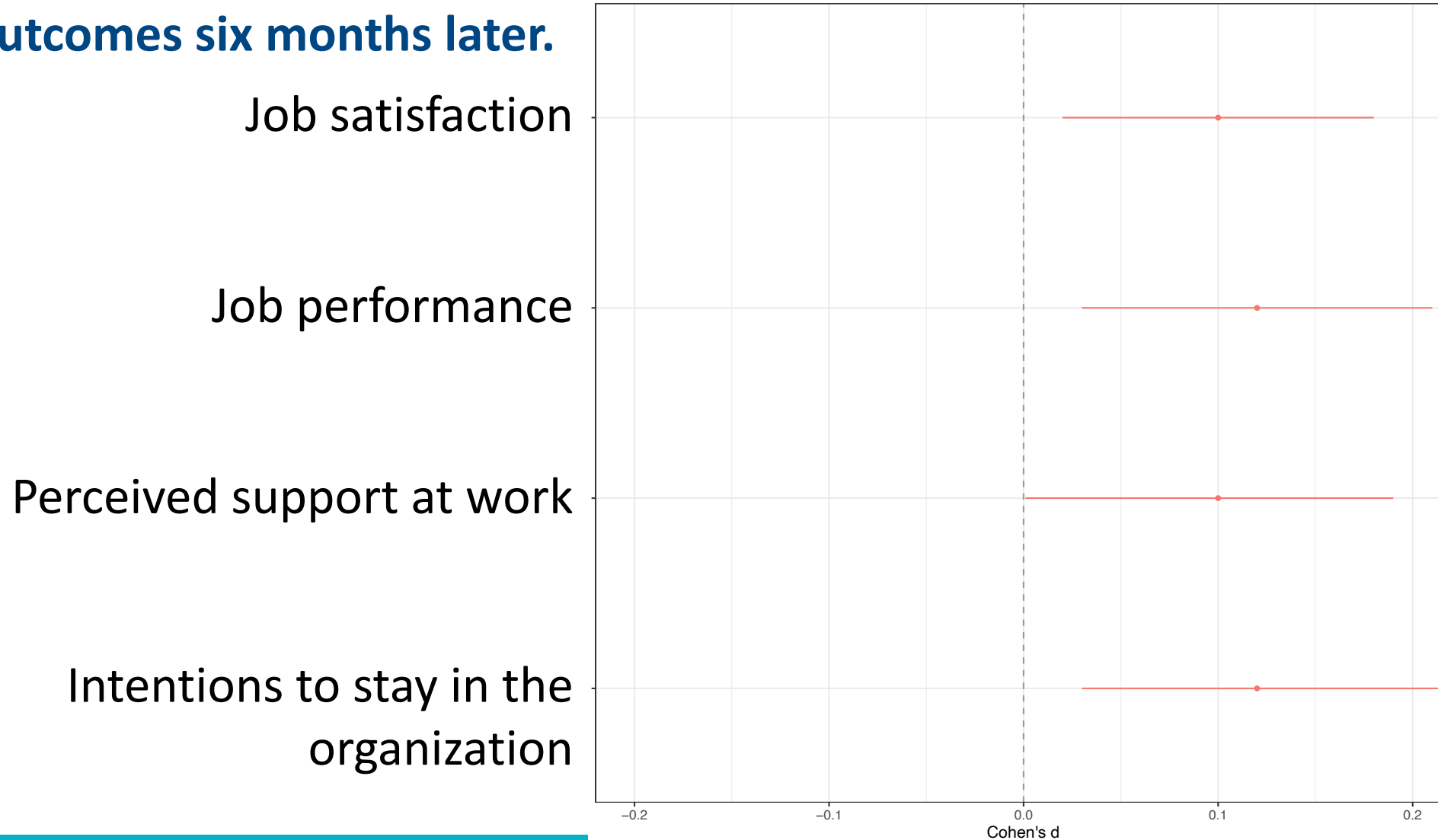
Physical health

Taking action to solve problems



# Results

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# Results

- **Was reflection bad?**
  - In both conditions: Significant improvements post-intervention from baseline
  - In both conditions: Most participants rated the intervention as engaging and would recommend it to other colleagues
- **Were the effects heterogeneous?**
  - No reliable moderators emerged, including demographics, baseline measures, and the time between the initial intervention and the final survey.

# Results

- **Which processes account for the difference?**
  - Reappraisal engagement
    - Reappraisal beliefs
    - Reappraisal intentions
    - Proportion of writing on reappraisal in the initial intervention (via topic modeling)



# Results

- **Example reappraisal writing**

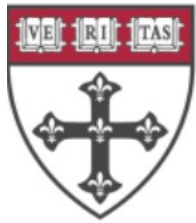
- When I ask kids to do something or come to me, they take off running. I find myself chasing a toddler around the room. **Using reappraisal, I get a new perspective to make it a fun game** and find something about the situation that invites them into doing what it is I need to be done.
- My co-teacher called in sick, and now I might feel stuck with a sub who doesn't know what to do. Instead of being frustrated, though, **I used reappraisal and looked at the fact that I did have help and the extra set of hands was better than none.**
- I often feel upset when the families I serve cancel meetings last minute or just don't show up. But I've started to say to myself, **"This family has lots of things going on in their life. It's not personal."** I also ask myself, "What can I do to make our time more enjoyable so that they want to come and see me."

# Discussion

- **Among a nationwide sample of essential workers, a brief online reappraisal intervention (vs. active control) exerted beneficial effects on wellbeing and workplace outcomes six months later.**
- **Reappraisal engagement played a mediating role.**
- **The findings demonstrate the viability of creating scalable, low-cost wellbeing interventions to help essential workers and beyond.**

# Thank you!

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- Funders:



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