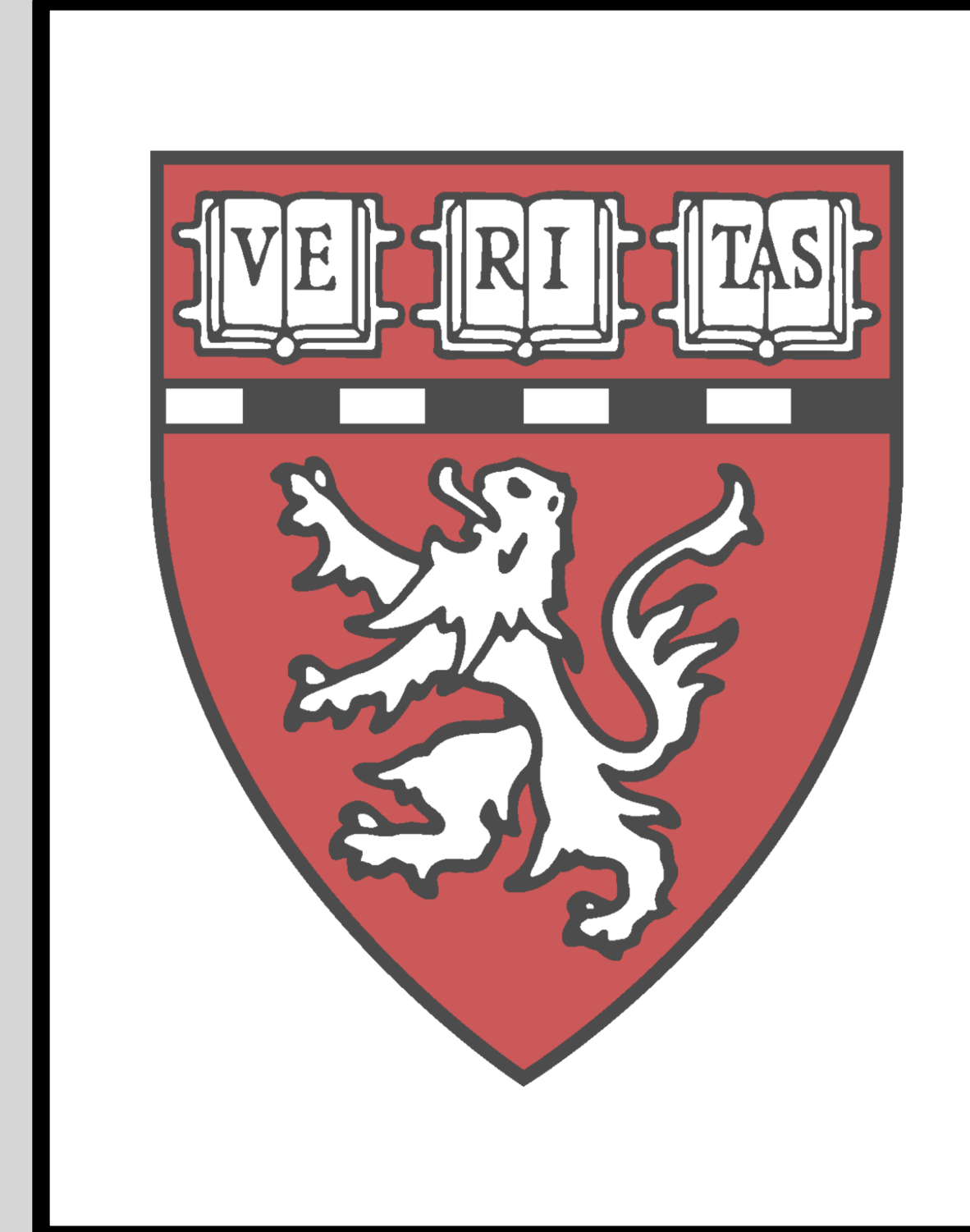




Promoting resilience in healthcare workers during the COVID-19 pandemic: A pragmatic, non-randomized study of a brief online intervention



Nicole R. DeTore^{1,2}, Elyse R. Park^{1,2}, Louisa Sylvia^{1,2}, Anne Burke^{1,2}, Julie H. Levinson^{2,3}, Alec Shannon¹, Karmel W. Choi^{1,2}, Felipe A. Jain^{1,2}, Drew C. Coman^{1,2}, John Herman^{1,2}, Roy Perlis^{1,2}, Maurizio Fava^{1,2}, Daphne J. Holt^{1,2}

¹Department of Psychiatry, Massachusetts General Hospital, Boston, MA; ²Harvard Medical School, Boston, MA;

³Department of Medicine, Massachusetts General Hospital

Introduction

- Research has shown that healthcare workers have been vulnerable to adverse mental health consequences of the COVID-19 pandemic, such as depression, anxiety, and acute stress reactions (Sanghera et al., 2020).
- Resilience, defined as the ability to “bounce back” after challenging, highly stressful life events (Rutter, 1985), is thought to be a modifiable capacity and process linked to adaptive outcomes (Choi & Smoller, 2019).
- Brief, low-burden interventions aiming to support the mental health of this population are greatly needed.
- This study examined whether a brief online course focused on teaching resilience-enhancing skills (Resilience Training (RT)) increases resilience and decreases emotional distress in healthcare workers during the COVID-19 pandemic.

Method

- This non-randomized study was offered to employees of the MGB System beginning April 14th, 2020.
- Three brief, virtual, resilience-enhancing courses tailored to healthcare workers were created and offered via HealthStream.
- One of the courses was RT, which consists of: three 12-20 minute videos focused on evidence-based skills that support aspects of emotional resilience: mindfulness, mentalization, and self-compassion.
- Eligibility criteria: over 18 and currently employed within the MGB System.
- Baseline, one month and two months surveys were sent out via email that included the following measures:
 - 1) the PHQ-4 (Kroenke et al., 2009), a commonly used, brief assessment of symptoms of anxiety and depression
 - 3) four items assessing resilience factors such as the ability to cope with hardships, derived from the Brief Resilience Scale (Smith et al., 2008), and
 - 4) one item assessing worry about the COVID-19 pandemic.

Results

Baseline Sample Characteristics

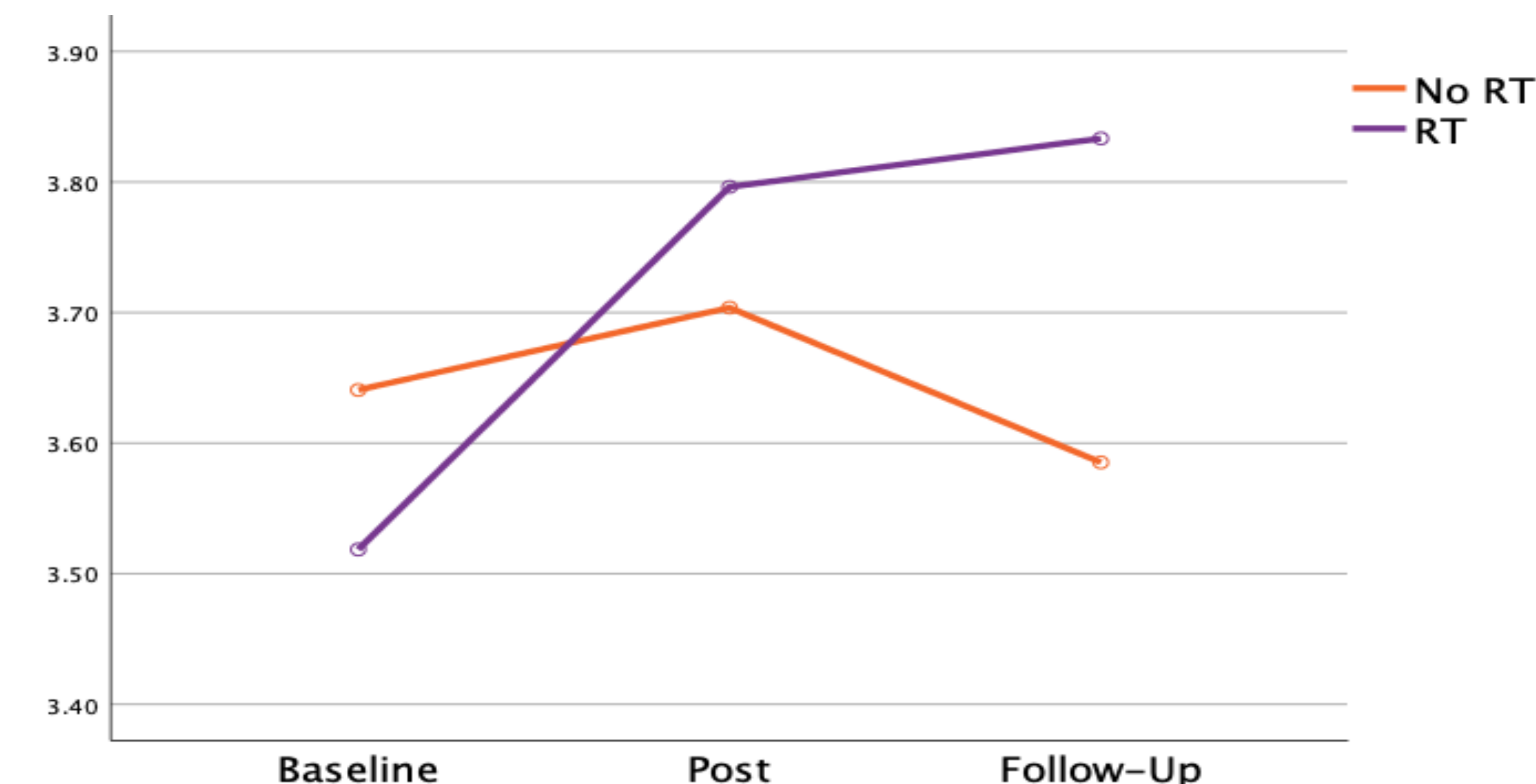
- 554 completed the baseline survey
- Mean age: 43.32 (SD = 13.1) years
- 90.5% Female, 8.5% Male, 1% Other
- 87.8% White, 7.4% Asian, 1.4% Black, 2.7% Other, .7% Native American
- 86% reported current patient contact
- 44.6% reported contact with a COVID-19-infected individual
- 31.1% nurses, 15.5% physicians, 10.1% administrator, 6.8% therapists, 5.4% research, 4.1% technician, 2.7% pharmacists, 2% medical assistant and 22.3% other clinical role.

Resilience Training Course

- A total of 231 participants viewed a portion of RT, with 115 viewing all three sessions.
- Among those who viewed RT and completed all assessments (n = 38), emotional distress significantly decreased from baseline to two months ($t = 2.97, p = .009$)
- Resilience significantly increased from baseline to two months ($t = 2.88, p = .01$).

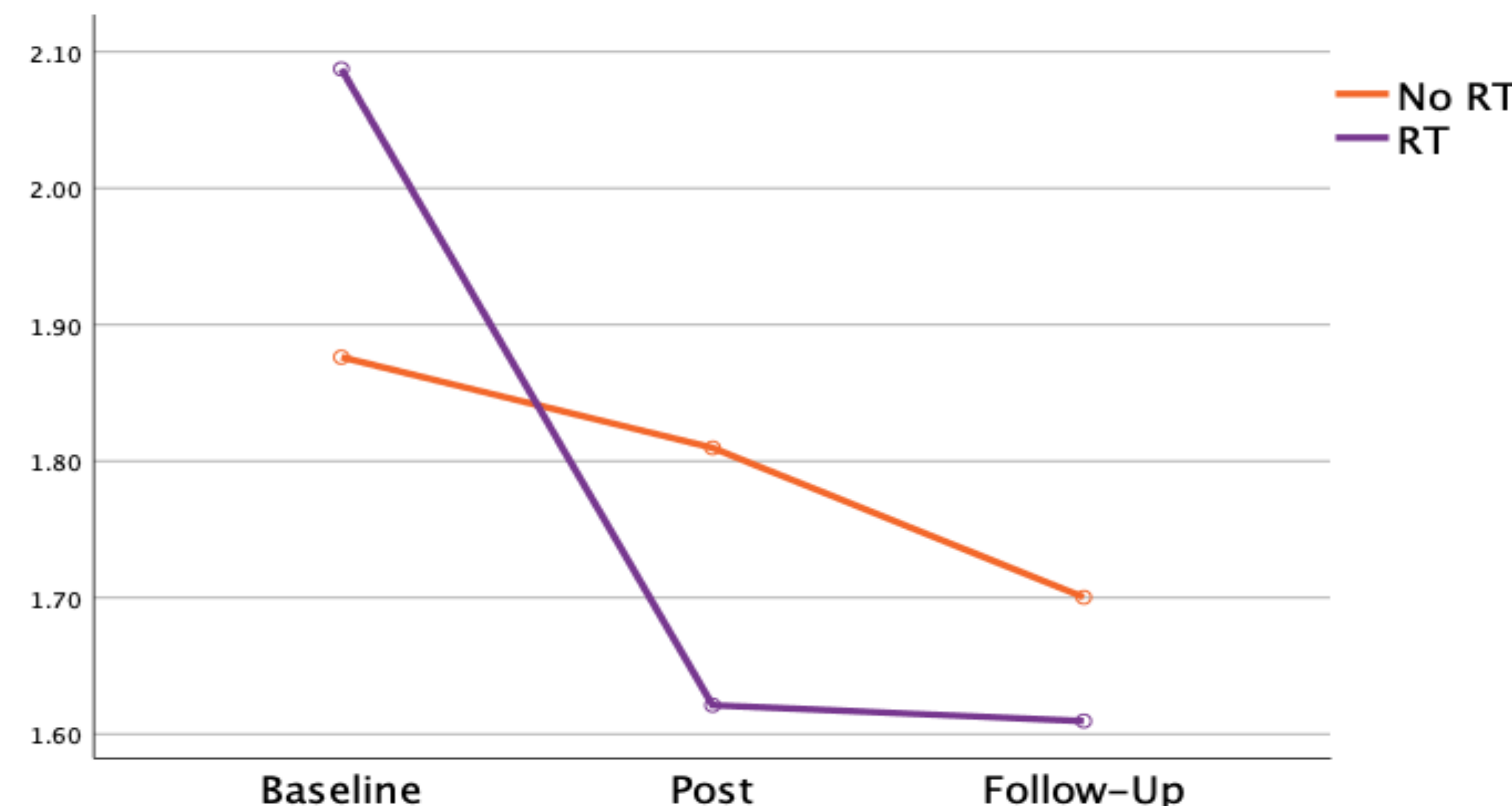
Results

Resilience Levels of Those Who Participated in the Resilience Training (RT) Course (n = 38) and Those Who Did Not Participate in RT (n = 110).



Significant group by time interaction = $F(2, 122) = 3.562, p = .031$

Emotional Distress Levels in Those Who Participated in the Resilience Training (RT) Course (n = 38) versus Those Who Did Not Participate in RT (n = 110).



Significant group by time interaction $F(2,116) = 3.145, p = .047$, with COVID-19 worry included as a covariate.

Conclusions

- These findings suggest that a brief, online intervention can improve the mental health of healthcare workers during a crisis such as the COVID-19 pandemic, potentially mitigating the immediate adverse psychological effects of the pandemic on this vulnerable population.
- In light of these data, interventions to support healthcare providers during and following the COVID-19 pandemic are indicated.
- Future work will determine whether interventions such as this course can impact any enduring psychological effects of the pandemic.

Contact information: Ndetore@mgh.harvard.edu