

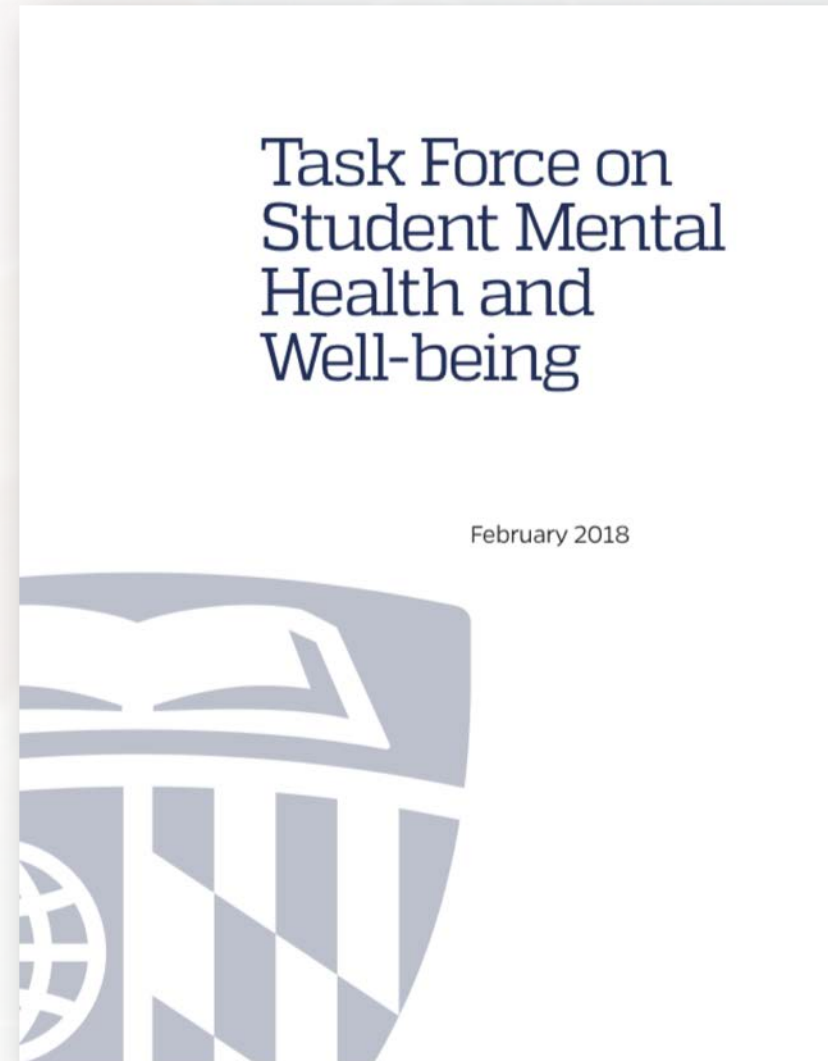
Hot Topic Discussion

# Mental Health in Graduate Education

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# Tackling a Difficult Conversation



# Evidence for a mental health crisis in graduate education

Teresa M Evans<sup>1</sup>, Lindsay Bira<sup>2</sup>, Jazmin Beltran Gastelum<sup>3</sup>, L Todd Weiss<sup>4</sup> & Nathan L Vanderford<sup>4,5</sup>

**With mental illness a growing concern within graduate education, data from a new survey should prompt both academia and policy makers to consider intervention strategies.**

**T**here is a growing cry for help from graduate students across the globe who struggle with significant mental health concerns<sup>1</sup>. Despite increased discussion of the topic, there remains a dire need to resolve our understanding of the mental health issues in the trainee population.

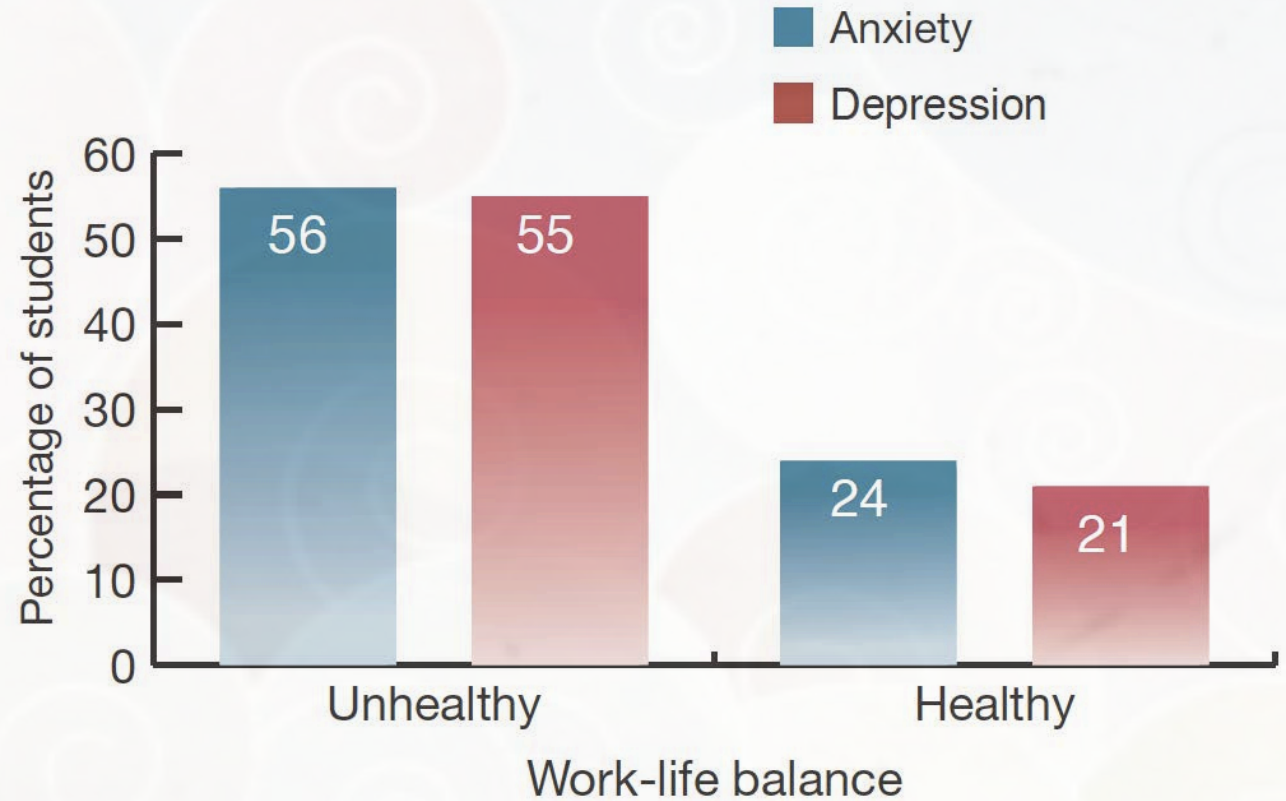
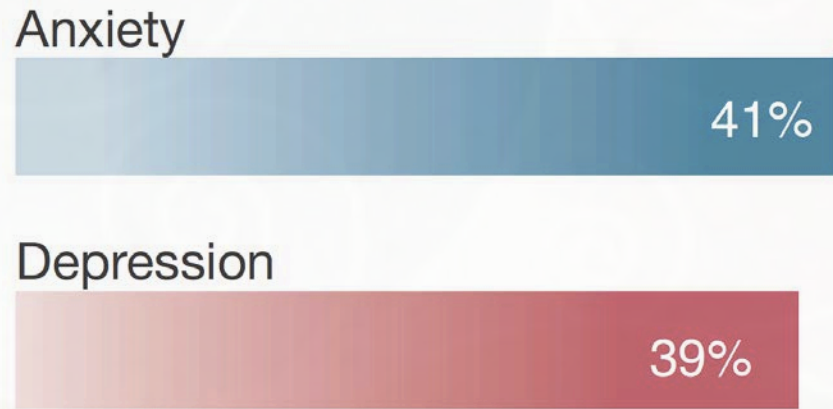
Recent research on mental health in the trainee population has focused on within-institution cohorts, such as the 2014 UC Berkeley report<sup>2</sup>, which found that 43–46% of graduate students in the biosciences were depressed, and the 2015 University of Arizona report<sup>3</sup>, which found that a majority of doctoral students reported “more than average” current stress or “tremendous” stress and endorsed school and education-related issues as the most significant contributors to their stress. Although these studies demonstrate the mental health concerns in this population, more research is needed to better define the prevalence of men-

trainee population, we deployed a comprehensive survey that included clinically validated scales for anxiety (GAD07) and depression (PHQ09) via social media and direct email. We surveyed a total of 2,279 individuals (90% PhD students and 10% Master’s students). Respondents were from 26 countries and 234 institutions (Supplementary Tables 1 and 2) and represented diverse fields of study including, biological/physical science (38%), engineering (2%), humanities/social sciences (56%) and “other” (4%). The data presented here demonstrate that the graduate trainee community has a considerable prevalence of individuals with anxiety and depression. Although this is a convenience sample in which respondents who have had a history of anxiety or depression may have been more apt to respond to the survey, the data should prompt both academia and policy makers to consider

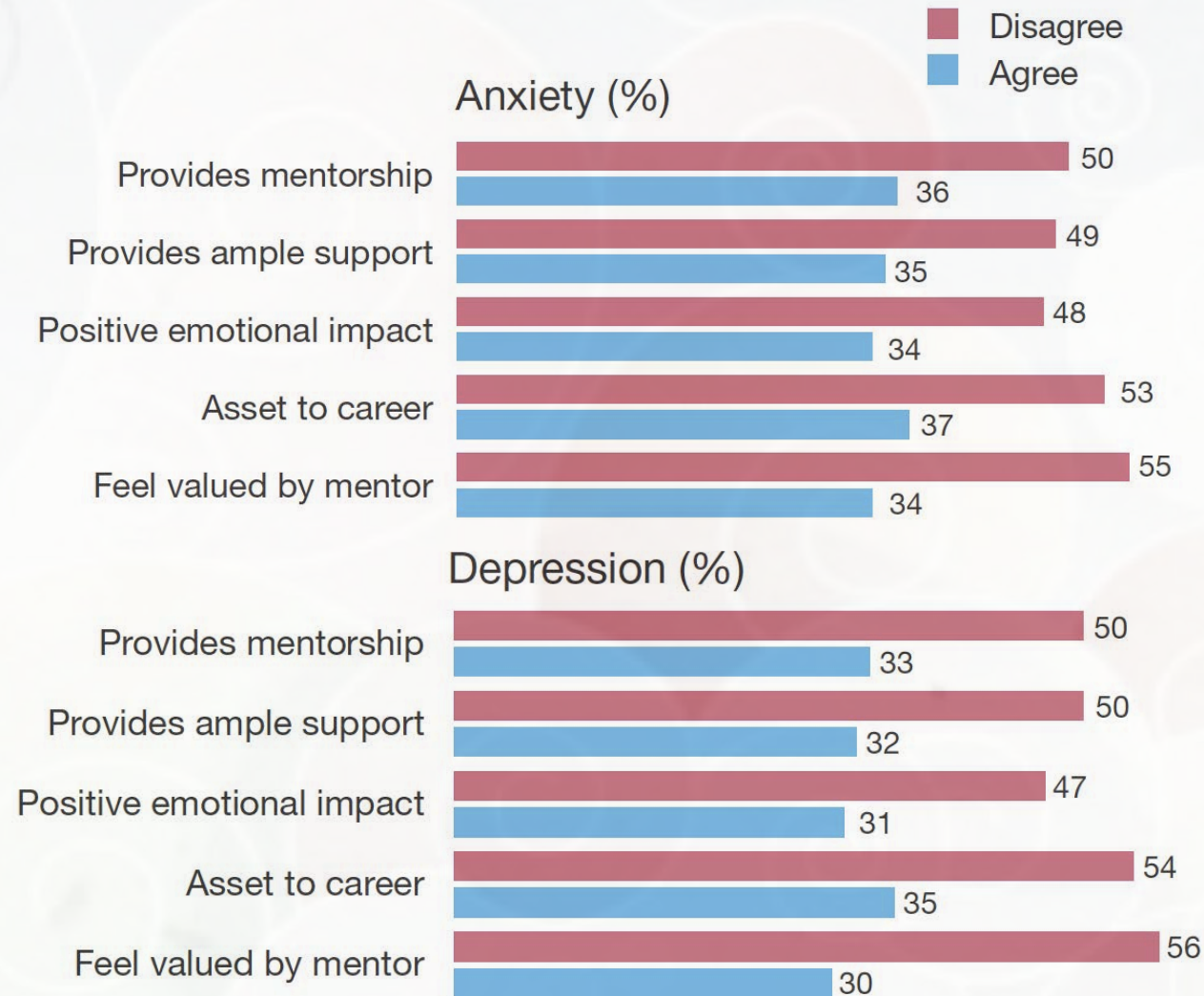
with perceived work–life balance and mentorship quality.

The transgender and/or gender-nonconforming population faces an increased risk of depression and anxiety<sup>6</sup>. Further, women consistently are more likely to suffer from mental health disorders than men<sup>7</sup>. Our results corroborate these findings within the graduate trainee population; both transgender/gender-nonconforming and female graduate students are significantly more likely to experience anxiety and depression than their male graduate student counterparts (Fig. 1b). Our study found that the prevalence of anxiety and depression in transgender/gender-nonconforming graduate students was 55% and 57%, respectively, compared with their nongender minority counterparts (43% and 41% in females and 34% and 35% in males, respectively).

# Work-Life Balance



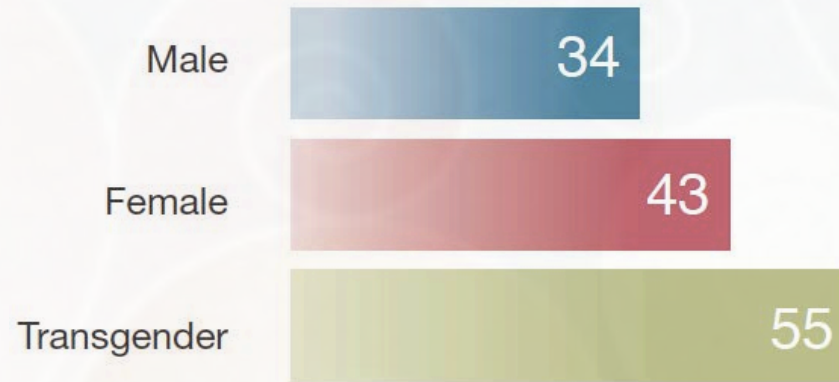
# Mentorship Relationship



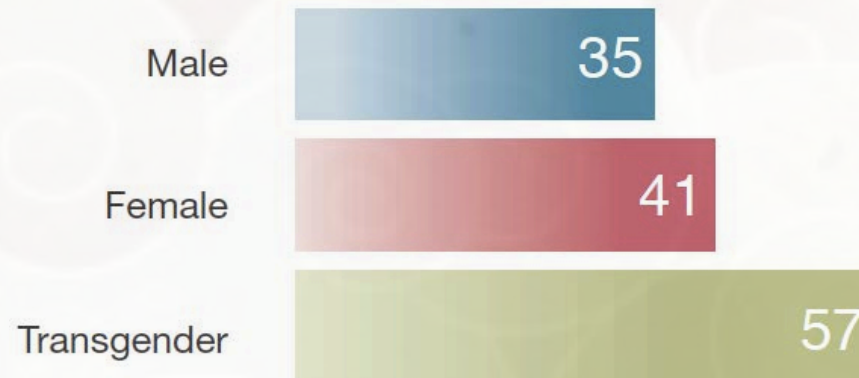
# Variation by Gender



Anxiety (%)



Depression (%)



# Conclusions from the Study

- Graduate students are **more than 6 times** as likely to experience depression / anxiety as compared to the general population.
- Both **transgender/gender-nonconforming** and **female** graduate students are at higher risk.
- **Positive mentoring relationships** correlate significantly with less anxiety and depression.

# Intervention Strategies

- Enhanced access to and awareness of mental health support.
- Culture shift in academia.
- Work-life balance.



# Discussion Questions

- Question 1: What are examples of support services provided at MIT?

# Resources at MIT

## MIT REFS (Resources for Easing Friction & Stress)

- Institute-wide (iREFS), departmental (dREFS), MIT medical staff (medREFS), pilot for postdoctoral fellows in progress
- Trained by Conflict Management@MIT

## Mental Health and Counseling Service (27 staff)

- Free individual evaluations "Let's Chat"
- Group Counseling (Graduate Co-Ed/Men/Women, Imposter Syndrome, Food, Sexual Assault, Thesis Coaching, Women of Color, etc.)
- Referrals to non-MIT Medical clinicians

## MindHandHeart Initiative

- Student-, faculty-, and staff-driven effort to positively shape MIT culture
- Funds "Innovation Projects" like Random Acts of Kindness Week, Puppy Lab

## Peer2Peer

- anonymous web-based peer support platform (similar to LeanOnMe)

## Undergraduate-specific

- Student Support Services (S<sup>3</sup>)
- "Peer Ears" in MIT residence halls

# Discussion Questions

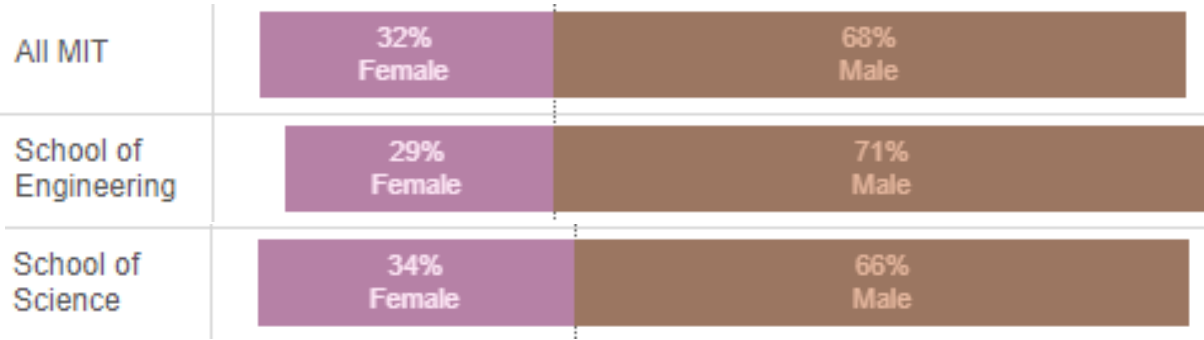
- Question 2: What are the implications of mental health in academia?

# Discussion Questions

- Question 3: How can we be pro-active in 'nurturing' mental health?



2017



Doctoral Cohort Analysis

