



## BACKGROUND

Healthcare students' wellness, health, and resilience is central to their success. Rutgers Biomedical and Health Sciences (RBHS) is a training ground for future healthcare workers and our mission is to graduate students who are clinically excellent and able to maintain their health and wellness under challenging conditions.

Mental health challenges are increasing among adults in the US. In a June 2020 CDC report, 31% of respondents endorsed symptoms of anxiety or depression, 13% started or increased substance use, 26% reported stress-related symptoms, and 11% reported having serious thoughts of suicide in the past 30 days.

In 2020, we administered the Health Minds Survey (HMS) to students at RBHS, which includes eight professional health sciences schools, as part of our Jed Campus mental health initiative. The results showed depression, anxiety, and social climate concerns. In 2022, prior to launching targeted health and wellness initiatives, we administered a follow-up pulse survey to understand if the state of mental health in our student body had changed from before the pandemic, so we could have an accurate baseline.

## MATERIALS AND METHODS

In January 2022, we disseminated a brief pulse survey to the RBHS student body via email after receiving Rutgers Institutional Review Board approval. We included medical, dental, graduate, health professions, public health, and nursing students.

Students completed surveys anonymously through REDCap, and self-identified their school affiliation and demographics. The first 500 students who completed the survey were offered a \$10 Amazon gift card, for which they voluntarily submitted their email addresses. Survey responses were not linked to email addresses.

The pulse survey included the following instruments: depression (PHQ-9), anxiety (GAD-7) and flourishing scale. These had all been measured in 2020.

We compared the GAD-7 results using chi-square analysis. We categorized anxiety as minimal (0-4), mild (5-9), moderate (10-14), and severe ( $\geq 15$ ). The data were analyzed across subpopulations related to race/ethnicity, gender identity/sexual orientation, and RBHS school. Participants self-reported gender identity and sexual orientation, which we pooled into 2 categories: cis-gendered/heterosexual and LGBTQ+ due to the small sample size in the individual subpopulations.

## RESULTS

	Survey demographics*		Moderate or severe anxiety**	
	2020	2022	2020	2022
<b>Race/Ethnicity</b>	n= 1109	n=1995	n= 253	n=442
African American/Black	10%	9%	21%	21%
American Indian or Alaskan Native	N/A	<1%	N/A	43%
Asian American/Asian	29%	34%	20%	22%
Hispanic/Latino/a	12%	13%	29%	24%
Native Hawaiian or Pacific Islander	N/A	0%	N/A	0%
Middle Eastern, Arab, or Arab American	4%	5%	19%	25%
White	44%	37%	21%	21%
Self-identify	2%	1%	22%	27%
<b>Gender Identify/Sexual Orientation</b>	n= 1099	n=1841	n= 229	n=405
Cis Heterosexual Male	25%	21%	15%	17%
Cis Heterosexual Female	62%	56%	20%	22%
LGBTQ+	13%	12%	38%	31%

\*Response rates across each demographic were not statistically different between 2020 and 2022  
 \*\*Rates of moderate/severe anxiety were not statistically different across each demographic between 2020 and 2022  
 Response rates: 19% (2020), 33% (2022)

Level of anxiety in participants		
	2020 n=1108	2022 n=1841
None or Mild Anxiety	79%	78%
Moderate or Severe Anxiety	21%	22%

Rates of anxiety were not statistically different between 2020 and 2022

Moderate or severe anxiety in students who identify as LGBTQ+		
	2020 n=229	2022 n=405
LGBTQ+	38%	31%
Cis-gendered or heterosexual	18%	21%

Rates of anxiety were higher in students who identified as LGBTQ+ (p-value <.01)

Moderate or severe anxiety in participants who identify as Latinx		
	2020 n=253	2022 n=442
Latinx	29%	24%
Non-Latinx	19%	19%

Rates of anxiety were higher in students who identified as Latinx in 2020 but not 2022 (p=.01, p=.07)

## DISCUSSION and NEXT STEPS

The 2022 survey results were consistent with 2020, confirmed the baseline rate of anxiety in healthcare students and the need for interventions and programming with special attention to ethnic and gender sub-populations. However, the results of the 2022 RBHS pulse survey did not mirror the national data which shows an increase in anxiety since the onset of the COVID-19 pandemic.

We plan to take several actions:

- **Further data collection:** Pursue additional quantitative and qualitative analysis to further understand the results and pursue strategies to capture students who were not motivated to complete the survey.
- **Strengthen RBHS prevention/mitigation services:** Evaluate opportunities to integrate mental health and resilience programs into our wellness initiatives.
- **Monitor service utilization:** Improve tracking of mental health service utilization and wellness program participation, specifically identifying utilization in populations with higher rates of anxiety and depression.
- **Regular survey collection:** The nature of institutes of higher education and our transient student population compel us to continue to regularly survey the student body.

## CONCLUSION

The 2022 SWS survey confirmed the rate of students with anxiety and the need for interventions at RBHS. The 2020 and 2022 surveys show disparities exist across ethnic and gender sub-populations. The data highlights the need for targeted interventions tailored to high-risk populations and ongoing monitoring. Additionally, RBHS will assess if there are additional metrics that can further inform these findings.

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