

Stress, Socializing, & Sanitizing: The Impact of Anxiety on COVID-19 Behaviors

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Background

The COVID-19 pandemic has significantly transformed global health and social behaviors, with college students experiencing unique challenges during this critical developmental period.

Research has been done on the impacts of COVID-19 on the mental health, development, and social habits of young children, specifically those 6-14 years old.¹²

Little research has been done about the impacts to social and health behaviors among young adults of college age, specifically those 18-25.¹³

This research seeks to address these gaps by examining how the pandemic has influenced students' social and health behaviors, providing valuable insights to guide future public health and mental health initiatives.

Objective

To determine the overall impact of anxiety among college students aged 18-25 on social behaviors and continued preventive health behaviors developed during the COVID-19 pandemic.

Methods

- Representative cross-sectional study (n=206) over a four-week collection period (Jan-Feb 2025)
- Qualtrics XM was used to gather online survey results limited to only the current UCSD undergraduate population.
- Exposure: Generalized Anxiety Disorder (GAD7) scores among the UCSD population and the change in observed social and health behaviors.
- **Primary Outcome: Change in Social Behaviors**
 - Frequency
 - Engagement
- **Secondary Outcome: Social Engagement**
- Data Analysis: SPSS v29.0 and R

Results

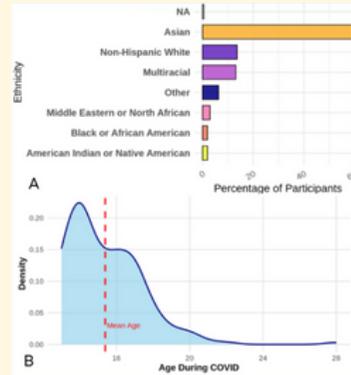


Figure 1 - Ethnicity and Age Composition of the Study Population a. Our study comprises of a representative sample of the current undergraduate demographic reported by UCSD. The largest reported ethnicity among students who have taken the survey is Asian, with the second highest being non-Hispanic-white and students of multi-ethnic backgrounds. b. The mean age of students who took part in our study was reported to be 18.75 years. Plotting age yielded a bimodal distribution with a positive skew.

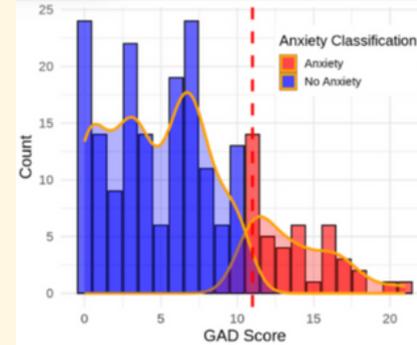


Figure 2 - Distribution of Computed GAD Scores With Anxiety Cutoff: For the purposes of statistical analysis, a binary variable using the median score, 11, as the anxiety cut-off point. Students who scored below 11 are classified with having no anxiety.

Figure 3 - Jitter Plots of GAD7 against Social Interaction Frequency and Engagement a-b. GAD7 was plotted against pre- and post-COVID social interaction frequency to determine if a statistically significant change in social interaction occurred among students following the pandemic lockdown. Chi square analysis with a $df = 1$ yielded a $\chi^2 = .326$ and a 2-sided $p = 0.630$. No significance was found. c-d. GAD7 was plotted against pre- and post-COVID social engagement levels to determine if a statistically significant interaction occurred among students following the pandemic lockdown. Chi square analysis with a $df = 1$ yielded $\chi^2 = 0.161$ and a 2-sided $p = 0.837$.

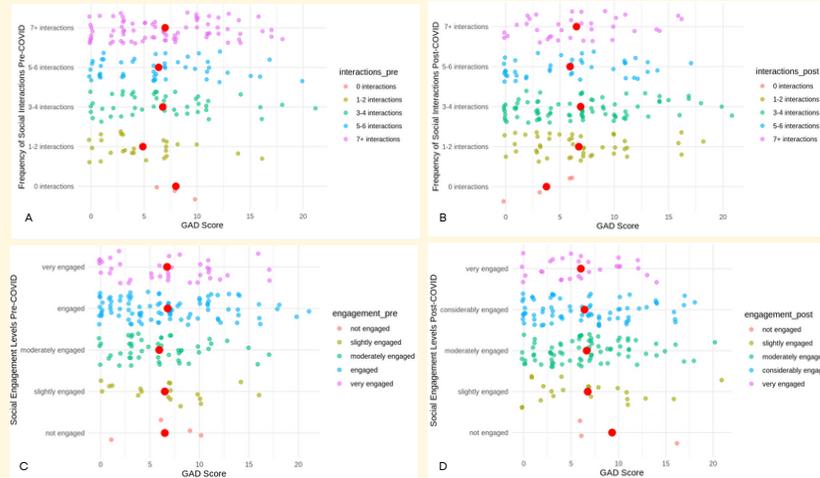


Figure 4 - Distribution of GAD7 Scores by the Change in Handwashing Behavior GAD7 was plotted against individuals displaying either a change, or no change, in handwashing habits. Overall variation between two conditions also did not significantly vary.

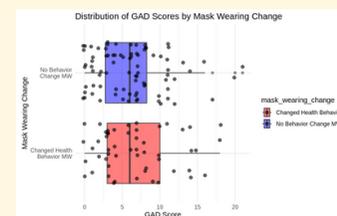
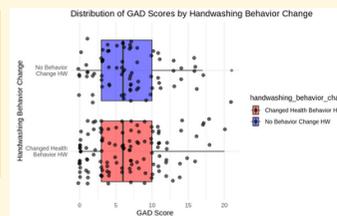


Figure 5 - Distribution of GAD7 Scores by the Change in Mask-wearing GAD7 was plotted against individuals displaying either a change, or no change, in mask wearing habits. Overall variation between two conditions also did not significantly vary.

Conclusion

Measured social behaviors remained comparable pre- and post-pandemic independent of anxiety levels, suggesting mild to no influence. This trend was repeated as well when analyzing anxiety's impact on health behaviors post COVID-19. Thus, current student anxiety does not significantly influence changes in social or health behaviors observed post-pandemic.

Limitations

- Uneven distribution of participants by ethnicity (69% of respondents: Asian)
- Uneven distribution of participants by school year (43% of respondents: Freshman)
- Ability to skip questions (8 inadmissible survey responses)
- Subjective self-reported data: inaccuracies and recall bias on anxiety levels, social interaction frequency, and engagement.
- Time sensitivity: Health behaviors may decline over time, making it hard to attribute changes solely to anxiety.

Policy Implications

Further research on college students is necessary to examine the individual factors associated with health and social behavior development. This suggests that COVID-19 was not a primary driver of social and health behavior change, looking at other health determinants such as social support systems and geographic location may offer a different solution.

Acknowledgements

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References

1. Hagger, M. S., & Hamilton, K. (2022). Social cognition theories a behavior change in COVID-19: A conceptual review. *Behaviour research and Therapy*, 154, 104095. <https://doi.org/10.1016/j.brat.2022.104095>
2. Meier, B. P., Cook, C. L., & Faasse, K. (2021). Social psychology a COVID-19: What the field can tell us about behavior in a pandemic. *The Journal of social psychology*, 161(4), 403-407. <https://doi.org/10.1080/00224545.2021.1935830>
3. Labrague, L. J., De Los Santos, J. A. A., & Falguera, C. C. (2021). Social and emotional loneliness among college students during the COVID-19 pandemic: The predictive role of coping behaviors, social support, and personal resilience. *Perspectives in psychiatric care*, 57(4), 1578-1584. <https://doi.org/10.1111/ppc.12721>