

## INTRODUCTION

An online confidential survey was distributed to undergraduate and graduate students to explore the influence of the COVID-19 pandemic on test anxiety. Cumulative GPA and coronavirus anxiety were found to influence student psychological and physiological anxiety. Such data can inform the infrastructure of student-centric support resources.

## PURPOSE OF STUDY

The purpose of our study is to investigate the influence of the COVID-19 pandemic on student test anxiety with an aim to identify if specified factors pose a risk for higher anxiety perceived by students. Using a data-driven approach, gaps in student support will be identified to inform further actions to enhance student success.

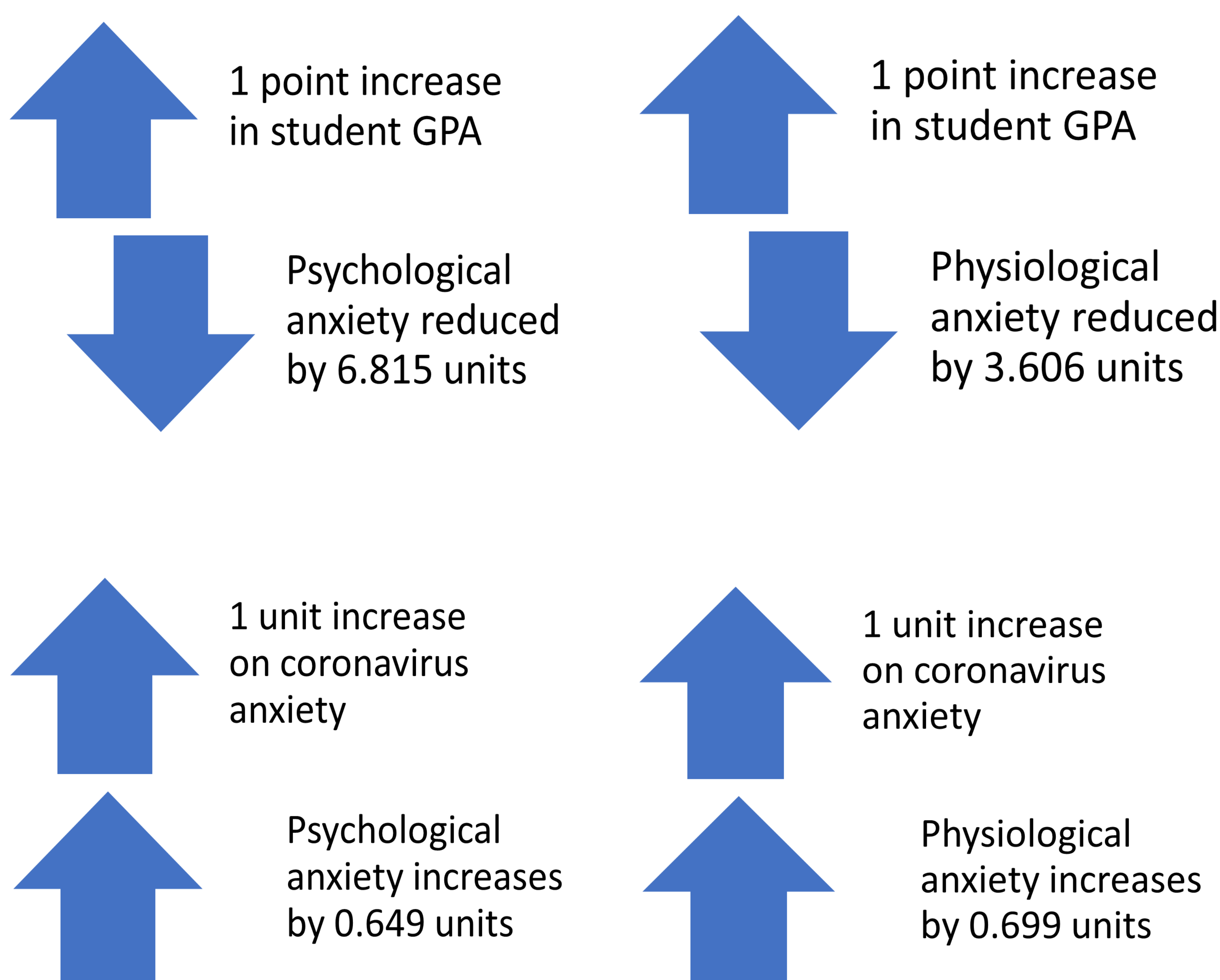
## METHODS

Undergraduate and graduate students from the University of Kentucky College of Health Sciences were invited to participate in a voluntary, confidential online survey. The 76-question survey consists of multiple-choice, Likert scale, and qualitative items to obtain reflection. Survey questions include student demographics, support systems available to students, comparisons prior to and during the COVID-19 pandemic related to student residence, sleep, exercise, academic preparation, and perceived anxiety. Integrated into the survey is a validated Online Test Anxiety Inventory (OTAI) developed by Abolghasemi et. al and a separate Coronavirus Anxiety Scale.<sup>1,2</sup> The reliability of Psychological Anxiety, Physiological Anxiety, Online Anxiety, and Coronavirus Anxiety is 0.881, 0.813, 0.805, and 0.875, respectively. Dependent variables include psychological, physiological, and online anxiety. Independent variables include faculty support, staff support, caregiver status, residence change, race, gender, undergraduate versus graduate status, cumulative GPA, and coronavirus anxiety. A stepwise regression model was employed, and qualitative comments were reviewed for themes.

## RESULTS

32.2% variance of students' psychological anxiety and 32.5% variance of students' physiological anxiety are explained by the two independent variables of cumulative GPA and coronavirus anxiety. On average, when controlling other variables, with one point increase on student GPA, psychological anxiety will reduce 6.815 units; with one unit increase on coronavirus anxiety, the psychological anxiety will increase 0.649 units; with one point increase in student GPA, the physiological anxiety will decrease 3.606 units; and with one unit increase in coronavirus anxiety, the physiological anxiety will increase 0.699 units. No independent variables were selected into the final model for online anxiety based on stepwise regression.

Demographics (n=66, 79% response rate)	
Females	62
Males	4
Undergraduate Students	33
Graduate Students	33
Caucasian	59
Students of Color	7



## SUMMARY OF RESULTS

As GPA increases, psychological and physiological anxiety decreases. As coronavirus anxiety increases, psychological and physiological anxiety increases. Thus, as predicted, the positive correlation between psychological, physiological, and coronavirus anxiety demonstrates that as one area of anxiety increases the other follows. Additionally, as students feel more confident in their academic outcomes, their anxiety decreases, as reflected by the negative correlation between GPA and psychological and physiological anxiety.

Qualitative data themes include 1) student requests for practice questions and study guides and 2) anxiety related to online proctoring systems (respondus).

## DISCUSSION

Improved academic outcomes correlate to reduced student psychological and physiological anxiety. Anxiety perceived by students as a result of the COVID-19 pandemic, in contrast, correlates to increased student psychological and physiological anxiety. According to Liyanage, et al., "lockdown, social isolation, and the disruption of daily life during the COVID-19 period have affected student lives and disposed them to stress, potentially creating a new public health crisis."<sup>3</sup>

## CONCLUSION

Recognizing the influence of the pandemic on student academic performance is crucial to providing student-centric support to foster student wellness and success.

## ACKNOWLEDGMENTS

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3. Liyanage, S.; Saqib, K.; Khan, A.F.; Thobani, T.R.; Tang, W.-C.; Chiarot, C.B.; AlShurman, B.A.; Butt, Z.A. Prevalence of Anxiety in University Students during the COVID-19 Pandemic: A Systematic Review. *Int. J. Environ. Res. Public Health* 2022, 19, 62. <https://doi.org/10.3390/ijerph19010062>