

# UCF Student Stress Related to COVID-19 & How Proximity in the Classroom has Affected how Students Learn: Effective Strategies to Mitigate Student Stress in Relation to COVID19 in Face to Face Classes

## Project Objective or Aim

The aim of this research is to look at how student stress might be affected based on proximity to other students in lecture halls or other confined learning environments in the months after COVID-19's falloff and decline. We intend to utilize student interviews and random student surveys conducted online to find how the interpersonal distances between groups might have been modified and how forcing students together might have increased stress alongside it. We then desire to use this studied information and ask how UCF can mitigate the stress created after COVID-19 to make better learning environments.

## Project Background and Significance

Before SARS-CoV-2 or COVID-19, human personal distance averaged between 88.3 and 91.7 cm on a global scale (Sorokowska, 2017, p. 584; Welsch, 2019, p. 7). This distance is within the lowest point of a V-shaped graph displaying the differing distances people are willing to stand near one another (Welsch, 2019, p. 9). During COVID-19, there was an increased stress level caused by the fear of COVID-19 that led many to increase their interpersonal distance in order to stay at safer distances to one another. For example, it has been shown that the majority of those within summer camps have engaged in safe distancing practices, however despite the increased distance a large majority of these interactions does spark an increased interaction at a low distance which leads to a potential higher chance of spreading of COVID-19 (Leoni, 2022). Furthermore, within the context of travel, it becomes apparent that many became unwilling to travel due to the outbreak of COVID-19, with 46% studied (n = 300) in France unwilling to travel because of this world-breaking issue (Lebrun, 2021, p. 481). Although it has been already studied in the contexts of summer camps and others, it is important to study similarity in other contexts as COVID-19 dependent research has shown to be context important, both in location as Jetten (2021) mentions and in environment as Sorokowska (2017, p. 586) finds that comfort levels in interpersonal space change when living in differing temperatures. Thus it is important to modify the scope of past research to support a context of University Schools in Florida, more specifically the University of Central Florida. Thus it should be understood that this research could vary wildly in the context of other schools.

In the context of learning centers, the way in which people learn in relation to COVID-19 has shown difficulty. Humans are societal-based creatures who depend on the actions of others. In compliance with COVID-19-based regulations it is difficult to ask those to be compliant with masks and larger interpersonal distances (Moya, 2020). Thus, it can be seen that it has been heavily studied the compliance before and during COVID-19 when interpersonal distances are discussed, however it has not been studied the levels of compliance when returning to a pre-COVID-19 world, specifically in the context of university lecture halls.

## Research Methods

The research method that our group will be utilizing most is the reviewing and analyzing of peer-reviewed articles. More specifically, we are going to be analyzing the purpose, design, methodology, and results from such articles to see how they can apply to mitigate proximity-based stress levels post-COVID. Through analyzing peer-reviewed articles, our group will be able to create a sound and proven result on if proximity affects stress, and how UCF could mitigate such stress. Within the scope of peer-reviewed articles, our group will be viewing related performances and studies behind the psychological landscape of students post-COVID and how social support and societal norms have shifted. Studying such psychological results will help our group pinpoint stress-related issues among UCF's culture, students, and faculty.

Furthermore, our group will use UCF Qualtrics to survey random people with different backgrounds and personalities to increase our information database. Two ways in which we can randomly conduct this survey is through standing outside of large lecture halls and asking any available student willing to fill out an anonymous paper survey. Another way that we can conduct the Qualtrics survey is through mass email. To incentivize students to take it, we will attach a \$5 gift card to student participants who complete the survey, with the first question being a filter question to determine if the student taking the survey is eligible with a maximum of 100 students being eligible for the survey. In our survey we will be asking specific questions as to how COVID impacted proximity-based stress levels and what steps UCF could take to reduce such stress. Having access to data that was directly performed by our group will help narrow down the scope of our research because we can synthesize information from peer-reviewed articles and the Qualtrics survey to package a very reliable research proposal. Two downsides that might come about when conducting the survey through email is the lack of control on the randomness variable. Furthermore, our group might run into issues of privacy when distributing the email on a mass scale.

## Expected Outcome

The expected outcome of this research is finding if a problem exists related to stress and researching how UCF can modify the way in which it conducts face to face lectures to better fit students requirements and to make sure that student stress levels stay at a level that is

comparable to a context before COVID-19. We hope to gain insight on the effects that close interpersonal proximity could have on one another in the classroom and its relation to stress. We hope to encourage UCF to change the ways in which it conducts classes in order to create a more stress-free environment. This could mean changing lecture hall designs to better accommodate space between students, providing more flexibility to students in how they communicate by offering zoom subscriptions to students where they may need to work with one another outside of the classroom, providing alternatives to in-class meetings like classroom meetings outside, slower migration into larger class sizes, lessening the amount of overfilling that can occur when signing up for classes, etc.

We then plan to write a scholarly research article that showcases the possible effects of close interpersonal classes. Based on the outcome of the effects, we can provide concise and reputable data on the ratio of safe distancing practices to not only protect physical health but mental health as well. We plan on presenting our research article to UCF staff and Student Government in hopes of finding a feasible middle ground where the university can accommodate its students in reducing proximity-based stress. Attached to our research article, we will have different types of visuals such as graphs, pictures, and diagrams to deliver the facts and statistics of our findings. Student data in regards to self-diagnosed stress levels pre-COVID and post-COVID will be best represented in a graph. Furthermore, comparing those self-diagnosed stress levels to scientifically proven data behind the negative effects of closely packing people together. With our research, we not only aim to change the perspective of the UCF community, but also inform students who attend sizable public universities about the underlying impact of interpersonal distances on stress.

## Literature Review

- Jetten, Bentley, S. V., Crimston, C. R., Selvanathan, H. P., & Haslam, S. A. (2021). COVID-19 and social psychological research: A silver lining. *Asian Journal of Social Psychology*, 24(1), 34–36. <https://doi.org/10.1111/ajsp.12465>
- Lebrun A.M., Corbel R., & Bouchet P. (2021) Impact of Covid-19 on travel intention for summer 2020: a trend in proximity tourism mediated by an attitude towards Covid-19. *Service Business*, 16(3), 469-501. <https://doi.org/10.1007/s11628-021-00450-z>
- Leoni E., Cencetti G., Santin G., Istomin T., Molteni D., Picco G.P., Farella E., Lepri B., & Murphy A.L. (2022). Measuring close proximity interactions in summer camps during the COVID-19 pandemic. *EPJ Data Science*, 11, 5. <https://doi.org/10.1140/epjds/s13688-022-00316-y>
- Moya, Cruz y Celis Peniche, P., Kline, M. A., & Smaldino, P. E. (2020). Dynamics of behavior change in the COVID world. *American Journal of Human Biology*, 32(5), e23485–n/a. <https://doi.org/10.1002/ajhb.23485>
- Sorokowska, Sorokowski, P., Hilpert, P., Cantarero, K., Frackowiak, T., Ahmadi, K., Alghraibeh, A. ., Aryeetey, R., Bertoni, A., Bettache, K., Blumen, S., Błażejewska, M., Bortolini, T., Butovskaya, M., Castro, F. ., Cetinkaya, H., Cunha, D., David, D., David, O. ., ...

Stamkou, E. (2017). Preferred Interpersonal Distances: A Global Comparison. *Journal of Cross-Cultural Psychology*, 48(4), 577–592. <https://doi.org/10.1177/0022022117698039>  
Welsch, von Castell, C., & Hecht, H. (2019). The anisotropy of personal space. *PloS One*, 14(6), e0217587–e0217587. <https://doi.org/10.1371/journal.pone.0217587>

## Preliminary Work and Experience

A significant piece of preliminary work that our group accomplished in preparation for the project was the annotated bibliography. The collective group experience of checking each other's sources, analyzing them, and coming up with relevant information to our research topic helped us build a solid foundation of information that our group could codify and process to better understand what it is to be researched.

From previous semesters, one of our researchers, Mark, participated in a semester-based research project in the class ENC 1102 where he researched the context of social media and its effects and reactions to the recent/current Russia-Ukraine war. Additionally, Bee, another one of our researchers, has experience in coordinating data collection via in-person surveys and examining large data sets to find trends. Another researcher from our group, Jason, has professional experience with organizing Florida real estate market data, finding trends, and applying the data to find the most cost-effective marketing locations.

## IRB Statement

We require IRB approval and our research falls under Exemption 45 CFR 46.104(d)(2).

## Budget

	Amount	Cost per	Total
Staff	40	\$25/hr	\$750
Student Salary	10	\$22/hr	\$220
Participant Gift Cards	100	\$5/person	\$500
Total			\$1470

In total, we are asking UCF to provide 1,470 dollars in order to cover the costs of paying student researchers, the UCF faculty member, and for students surveyed through gift cards.