



Background

- A Texas A&M study found that many college students had trouble coping with pandemic related stress and some had suicidal thoughts as a result of the pandemic. (Wang et al., 2020).
- Social media use is prevalent among college-aged people with 90% of people ages 18-29 having used some form of social media (PEW Research Center, 2019).
- A study done in China found COVID-19 related stressors combined with high social media use was associated with depression (Nan Zhao & Guangyu Zhou, 2020).
- Given the possible link between social media use and mental health during the pandemic, we plan to examine if UCSD undergraduates report any differences from baseline levels of stress after using different social media sites.

Objective

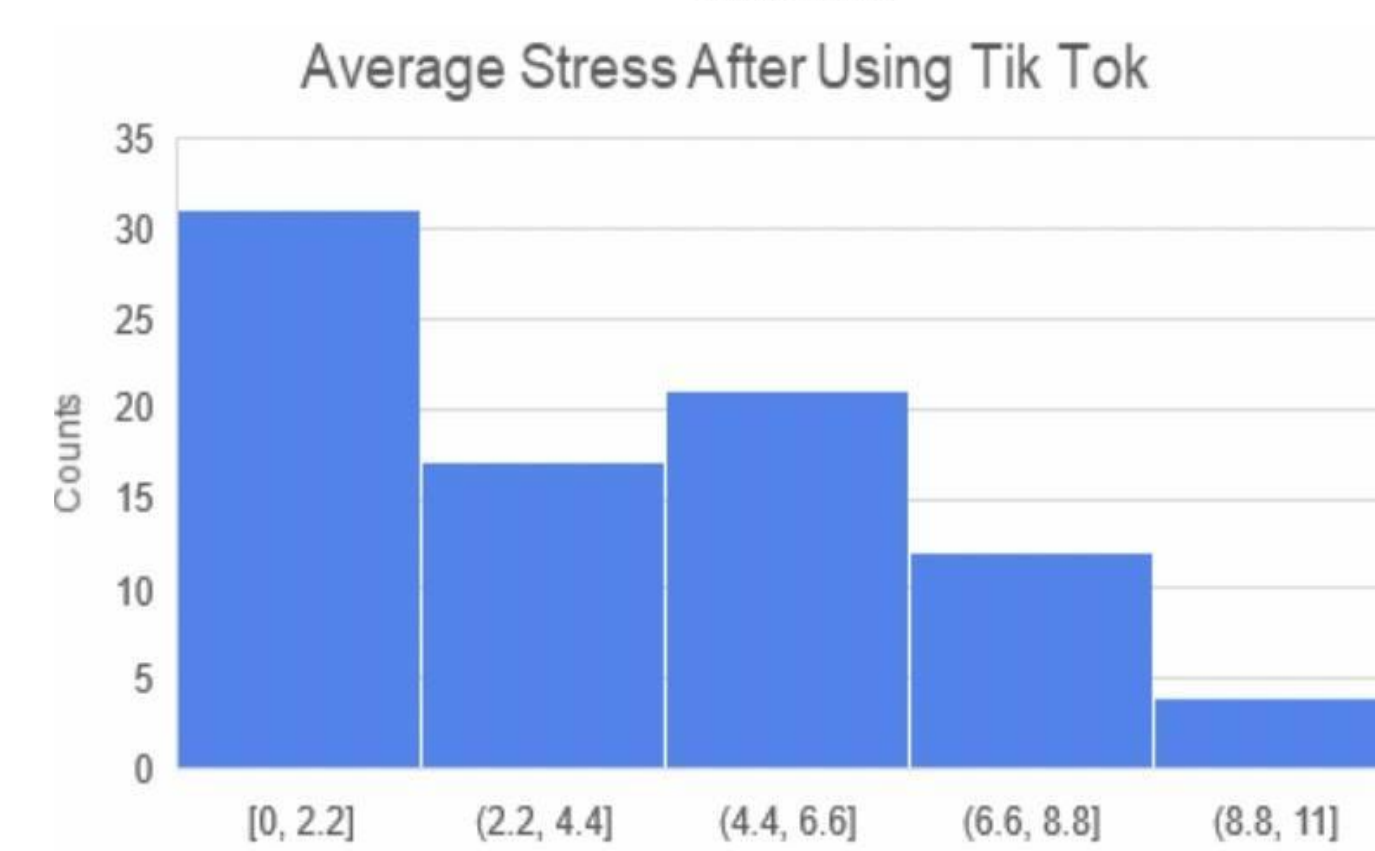
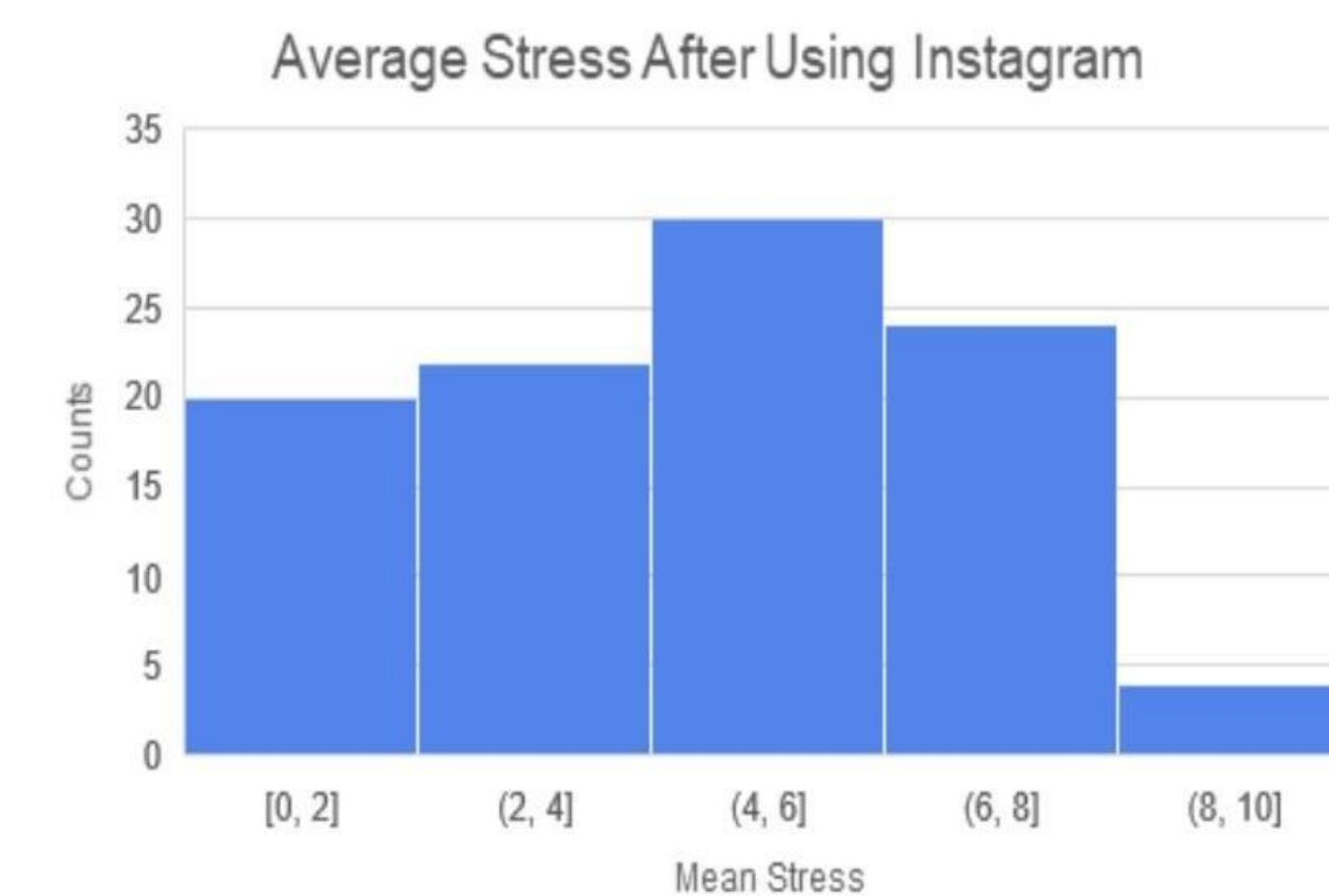
- To determine whether there are differences in stress levels among UCSD undergraduate students based on the amount of time spent on various social media platforms

Methods

- In April-May 2021, the *Social Media Usage and Stress Among UCSD Students During the COVID-19 Pandemic Survey* was distributed to UCSD undergraduate students through email and class presentations
- Using a cross-sectional primary data analysis study design, students were asked which social media platforms they used and the amount of time spent daily.
- This survey measures the exposure (various social media platforms including Facebook, Instagram, Tik Tok, and Twitter) with the outcome (stress levels) (n=101)
- Statistical Analysis was used to compare the mean stress levels between two different platforms: Instagram and Tik Tok. We used a one sample t test
- Statistical Analysis was also used to compare Tik Tok, Facebook, and Twitter to the baseline stress level of 5. We also used a one sample t test

Results

- Our sample included 101 UCSD undergraduate public health students.
- The most used social media platform was Instagram with 96% (n=97) of participants reporting use
- Half of the participants (51.5%; n=52) in this study reported being stressed "fairly often" in their lives, over a quarter (26.7%; n=27) report being stressed "very often".
- The baseline level of stress by the most used social media platform was fairly consistent across social media platforms

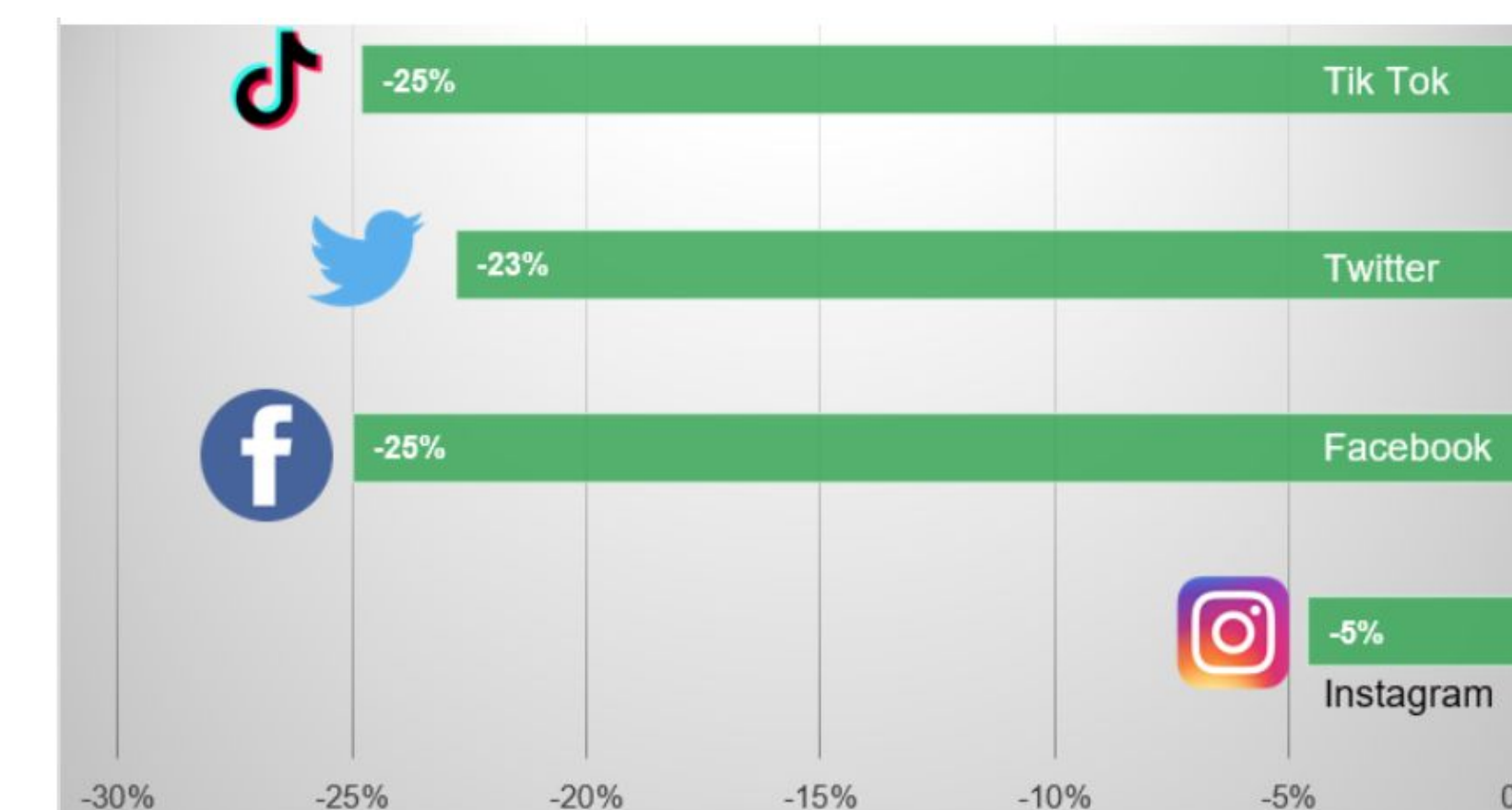


- One-sample t-tests were performed with the assumption that the data was continuous, that the observations were independent, and the data was approximately normally distributed
- A one-sample t-test found that the mean stress after visiting Instagram was significantly higher than the average mean stress after using Tik Tok (and the other social media platforms)
- A separate one-sample t-test found that the mean stress after visiting Tik Tok, Facebook, and Twitter was significantly different than a mean stress of 5 (which would indicate that an individual is as stressed as before after using that social media platform.)

Mean Stress(Instagram)	Mean(Facebook)	Mean(Twitter)	Mean(Tik Tok)
4.77	3.758241758	3.857142857	3.764705882
Median(Instagram)	Median(Facebook)	Median(Twitter)	Median(Tik Tok)
5	4	5	4
Standard Deviation(Instagram)	Standard Deviation(Facebook)	Standard Deviation(Twitter)	Standard Deviation(Tik Tok)
2.390448164	2.320635255	2.722780534	2.763051534
Mean(Baseline Stress Facebook)	Mean(Baseline Stress Twitter)	Baseline Stress(Instagram)	Baseline Stress(Tik Tok)
4	4.1	4.025	4.138888889
Count(Instagram Most Used)	Count(Tik Tok Most Used)	Count(Facebook Most Used)	Count(Twitter Most used)
40	36	12	10

Results

Difference in Perceived Stress After Using Social Media from Baseline Levels of Stress



The above graph showcases both how mean stress after visiting Instagram is significantly higher than mean stress after visiting other platforms, but also shows that the other social media platforms significantly reduced baseline stress.

- Our findings in this study indicate that public health students are experiencing high levels of stress in 2021 during the COVID-19 pandemic, but that this stress is not exacerbated by and may even be lessened by use of popular social media sites Facebook, Instagram, Twitter, and Tik Tok.

Conclusion

- While we predicted an overall positive correlation between exposure to social media platforms and stress based on previous studies, our research indicates that students during the COVID-19 pandemic reported lower levels of stress after engaging with most (three fourths) of the social media platforms we studied

References

2009 H1N1 Pandemic (H1N1pdm09 virus). (2019, June 11). Retrieved February 19, 2021, from <https://www.cdc.gov/flu/pandemic-resources/2009-h1n1-pandemic.html>

Ali, K., Zain-ul-abdin, K., Li, C., Johns, L., Ali, A. A., & Carcioppolo, N. (2019). Viruses going viral: impact of fear-arousing sensationalist social media messages on user engagement. *Science communication*, 41(3), 314-338.

American Psychological Association (2020). *Stress in America™ 2020: A National Mental Health Crisis*.

Demographics of social media users and adoption in the United States. (2020, June 05). Retrieved February 19, 2021, from <https://www.pewresearch.org/internet/fact-sheet/social-media/>

Hampton, K., Rainie, L., Lu, W., Shin, I., & Purcell, K. (2015, January 15). *Social Media and Stress* | Pew Research Center. Pew Research Center. <https://www.pewresearch.org/internet/2015/01/15/social-media-and-stress/#fnref-12625-2>

Koskan, A., Foster, C., Karlis, J., Rose, I. and Tanner, A. (2012), "Characteristics and influences of H1N1 communication on college students", *Disaster Prevention and Management*, Vol. 21 No. 4, pp. 418-432. <https://doi.org/10.1108/09653561211256134>

Wang, X., Hegde, S., Soni, C., Kellers, B., Smith, A., Sasangohar, F., ... Authors... L. (n.d.). Investigating mental health of US college students during the COVID-19 Pandemic: Cross-sectional survey study. Retrieved February 19, 2021, from <https://www.jmir.org/2020/g/e22817/>

World Health Organization (WHO). *Weekly epidemiological update – 12 January 2021*. 2021. Available from: <https://www.who.int/publications/m/item/weekly-epidemiological-update--12-january-2021>.

Zhao N, Zhou G. Social Media Use and Mental Health during the COVID-19 Pandemic: Moderator Role of Disaster Stressor and Mediator Role of Negative Affect. *Appl Psychol Health Well Being*. 2020 Dec;12(4):3059-3078. doi: 10.1111/aphw.12226. Epub 2020 Sep 17. PMID: 32945123; PMCID: PMC7556964.

Conclusion

- Further research is needed to identify key contributors to stress during the COVID-19 pandemic because they may play a key role in overall mental health and well-being of college students. Investigation into possible coping strategies and stress management interventions that may be appropriate, including healthy social media use, could give us more insight into how to treat stress in college students generally as well as maintain mental health during potential public health crises in the future.



Policy Implications

In a time of distancing, social media platforms could offer a key way to connect with each other. Future policies could expand on these associations and develop recommendations for healthy social media use.

