

Investigating Mental Health of US College Students after One Year since the COVID-19 Pandemic Outbreak

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Background



Figure 1: Grewe, L. (2020, March 30). ["Coronavirus Outbreak"]. Retrieved March 24, 2021, from <https://www.kktv.com/content/news/What-to-know-Monday-about-COVID-19-569215011.html>

The Initial Outbreak
 On March 23, 2020, Texas A&M University (TAMU) closed all their campuses and switched to teaching remotely, shortly after, the state of Texas announced a stay-at-home order. A month later, a survey was administered to students at TAMU to show how the COVID-19 pandemic has affected their mental health. The study suggested majority of respondents experienced an increase in stress, due to worry for loved ones and personal health.

A survey study conducted by researchers in May 2020 (Wang et al., 2020) found that college students' mental health was negatively impacted by the pandemic. The current study aims to understand whether the conditions changed during the past year.

Research Aims

Aim 1: Our hypothesis is that the frequency and severity of depression and anxiety will be lower than in the previous study since students' familiarity with living in a pandemic has increased over the past year.

Aim 2: Coping mechanisms will also be compared with the previous study to see if there were significant changes, and whether there were new strategies students used to adapt to various new environments.

Methods

A survey will be administered to students of Texas A&M University via email again.

Demographics and Standard Questionnaires

Characteristics of a sample population can be further categorized by gender, age, classification and program major. The Patient Health Questionnaire (PHQ-9) and Generalized Anxiety Disorder (GAD-7) screener assess the severity of Depression and Anxiety symptoms occurring the past two weeks.

Stressors and Coping Mechanisms

Survey contains a list of Academic, Health and Lifestyle concerns and respondents select the level of impact the stressors have played in the last month. Participants are asked to state what coping mechanisms they used to mitigate pandemic concerns.

Expected Results

Disclaimer: The following results are not accurate, they are only the researchers' expectations.

PHQ-9

- The mean score of all classifications decreased from 10 to 6
- Freshman had the largest decrease of all classifications, from 11.61 to 7.1
- All classifications dropped a level of severity (e.g. moderate to mild)

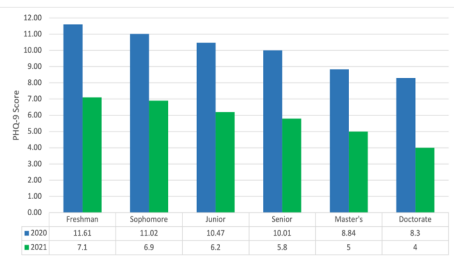


Figure 2: Mean Patient Health Questionnaire-9 (PHQ-9) score by classification. (Wang et al., 2020) vs (expected 2021)

GAD-7

- The university's average GAD-7 score has decreased by over 60%
- Decreasing scores for higher classification trend continued
- Students scored lower on GAD-7 than PHQ-9 (most likely depressed)

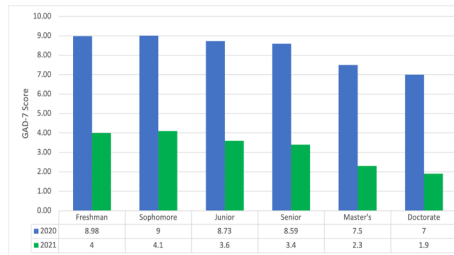


Figure 3: Mean Generalized Anxiety Disorder-7 (GAD-7) score by classification. (Wang et al., 2020) vs (expected 2021)

Implications

This study contributes to knowledge about students' well-being at various stages of a pandemic. The main practical implication is for providing a framework of data and analysis for future pandemics, while targeting issues at certain stages of a pandemic so that universities are better equipped to provide resources to their students.

Future Work

Regions

An adaptation of our method is to rank academic, lifestyle, and health related concerns with different importance and cluster them into "regions", drawing from previous data on how often they appear and how severe they are reported to be. This mechanism would aid in distinguishing which issues are essential for colleges to address, and which issues seldom appear.

Statistical Analysis Methods

A two-way analysis of variance (ANOVA) was used to show the impact of gender and classification on PHQ-9 scores, which assumes a normal distribution. In a real world implication where multiple sources are investigated, normal distribution may not be correct to assume and would be replaced with a non parametric test i.e. Kruskal-Wallis. In this scenario, a non parametric test would allow for a better separation of means and significance levels.

Data Collection Method

A questionnaire and interview are conducted to obtain data from research subjects in which they are aware they are taking part in a scientific study. This documented behavior may not be indicative of "true" behavior as it can be circumvented by observational techniques of the subjects. Covert observation can be used to record the time increments and quantity of students who are postponing or missing assignment deadlines.