

# The Impact of COVID-19 in Education and Mental Health of Student at Arizona State University

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## INTRODUCTION

According to Son et al. (2020), COVID-19 negatively impacted higher education, especially college students, where 71 percent of 195 students who participated in the study had increased mental health issues, such as anxiety and depression. The increasing number of students experiencing depressions and anxiety must be studied, especially for low-income and minority students. This study aims to determine whether the levels of depression amongst students at Arizona State University increased by using Patient Health Questionnaire (PHQ-9). However, the results of the PHQ-9 are not a diagnostic tool to know whether the students are suffering from depressions.

Also, in a recent study, Rodriguez-Planas (2020) suggested that college students in low-income brackets will mostly likely experience hardship—with food, housing, and job—despite receiving help from the government. These factors are stressful life events, which elevate depression, per Shapero et al. (2014). That is why this study aims to identify services that could help students and suggest improvements to assist low-income students identified as minorities and with higher levels of depression. Providing on-campus and virtual services for immersion and online students will help make students productive, active, and healthier, not just mentally but physically, as well.

## OBJECTIVE

To help improve the services to immersion and online students, especially those who identified as low-income and minority students, offered by Arizona State University.

## METHOD

This study currently received a total of 170 respondents from Arizona State University. All students who agreed to participate received a consent form and link to the survey to answer 43 questions, which demographics, school activities, responsibilities, and PHQ-9 are included. The recruitment is currently ongoing, and the number of respondents is increasing by the day.

The statistical test used to measure the comparison was descriptive statistics and Chi-Square using the 27th version of the SPSS. These tests will help to find out whether there is a significant difference. It will be considered statistically significant if  $\alpha < .05$ .

## ABSTRACT

Numerous studies show the impact of the COVID-19 pandemic on people's lives, especially mental health, worldwide. However, only a few studies were conducted regarding the adverse effects of COVID-19 on students' learning and mental health in higher education. This study predicted that minority groups are affected the most compared to their non-minority counterparts in Arizona State University. All participants will receive an online survey regarding their learning opportunities, such as online access to courses and advising, available to them and PHQ-9 to measure the level of depression [not use to diagnose depression]. To measure and compare the results, all answers will be assessed in descriptive statistics, t-test, and chi-square test using SPSS software version 27. The results of this study will give light on how programs, such as counseling and tutor departments, in the university could better help students affected by COVID-19 the most.

## RESULTS

Variables	Gender				Total	Value of the test statistics	p-value*
	Female	Male	Prefer not to say	Other			
Age						6.639 *	0.675
18-24	32	15	0	0	47		
25-34	41	17	1	1	59		
35-44	26	10	1	1	38		
45 and	21	5	0	0	26		
Total	120	47	2	1	170		
Race						36.641*	0.001
Asian or Pacific Islander	6	16	0	0	22		
Black or African American	14	6	0	0	20		
Hispanic or Latino	15	7	0	1	23		
White or Caucasian	72	15	2	0	89		
Native American or Alaskan Native	2	0	0	0	2		
Multicultural or Bi-racial	11	3	0	0	14		
Total	120	47	2	1	170		
Country of Residence						9.925 *	1.000
USA	109	45	2	1	157		
Egypt	1	0	0	0	1		
Germany	2	0	0	0	2		
India	0	1	0	0	1		
Jordan	1	0	0	0	1		
Qatar	0	1	0	0	1		
Saudi	2	0	0	0	2		
Netherlands	1	0	0	0	1		
United Arab	2	0	0	0	2		
The Kuwait	1	0	0	0	1		
Total	120	47	2	1	170		
Country of Origin						15.61*	1.000
USA	83	44	2	1	130		
Egypt	4	0	0	0	4		
Philippines	2	1	0	0	3		
Brazil	1	0	0	0	1		
Canada	1	0	0	0	1		
China	1	0	0	0	1		
Chile	1	0	0	0	1		
India	12	1	0	0	13		
Italy	1	0	0	0	1		
Mexico	3	0	0	0	3		
Saudi	4	0	0	0	4		
Palestine	1	1	0	0	2		
Sri Lanka	1	0	0	0	1		
United Kingdom	2	0	0	0	2		
Vietnam	1	0	0	0	1		
The Jordan	1	0	0	0	1		
Total	120	47	2	1	170		
Religion						28.212 *	0.559
No Religious	24	8	1	0	33		
Christianity	40	20	0	1	61		
Islam	10	3	0	0	13		
Hinduism	5	4	0	0	9		
Buddhism	1	1	0	0	2		
Judaism	3	0	1	0	4		
Wiccan/Pag	3	1	0	0	4		
Agnostic	12	5	0	0	17		
I prefer not	1	1	0	0	2		
Atheist	9	2	0	0	11		
Other	8	2	0	0	10		
Total	116	47	2	1	166		
Marital Status						17.565 *	0.286
Single (Not Married)	53	27	1	0	81		
Married	40	13	1	0	54		
Living with a partner	11	7	0	1	19		
Separated	1	0	0	0	1		
Divorced	14	0	0	0	14		
Widowed	1	0	0	0	1		
Total	120	47	2	1	170		
Dependents (Child/Children)						3.617 *	0.306
Yes	53	13	1	0	67		
No	67	31	1	1	100		
Total	120	44	2	1	167		
Employment Status						3.19 *	0.785
Not	29	14	0	0	43		
Part-time (<29 hours per week)	68	26	1	1	96		
Full-time (>30 hours per week)	23	7	1	0	31		
Total	120	47	2	1	170		
Form of Transportation						3.995 *	0.262
Public transportation	7	7	0	0	14		
Personal Vehicle	111	39	2	1	153		
Total	118	46	2	1	167		

- 8 cells (50.0%) have expected count less than 5. The minimum expected count is .15.
- 15 cells (62.5%) have expected count less than 5. The minimum expected count is .01.
- 42 cells (95.5%) have expected count less than 5. The minimum expected count is .01.
- 65 cells (95.6%) have expected count less than 5. The minimum expected count is .01.
- 35 cells (79.5%) have expected count less than 5. The minimum expected count is .01.
- 17 cells (70.8%) have expected count less than 5. The minimum expected count is .01.
- 4 cells (50.0%) have expected count less than 5. The minimum expected count is .40.
- 6 cells (50.0%) have expected count less than 5. The minimum expected count is .18.
- 5 cells (62.5%) have expected count less than 5. The minimum expected count is .08.

## GRAPHS

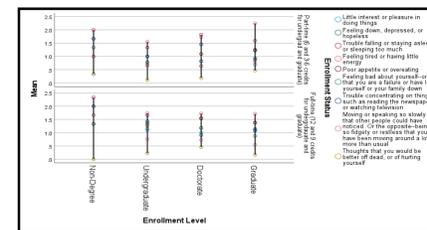


Figure 2. Comparisons of PHQ-9 between enrollment status and levels.

Based on the current data, non-degree students for both part- and full-time enrollment face difficulties sleeping compared to undergraduates, graduates, and doctoral students. However, graduate and doctoral degree students for both part- and full-time enrollment are more tired and having little energy.

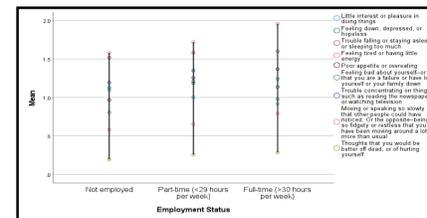


Figure 3. Levels of PHQ-9 on employment status.

The graph shows that full-time employees are more tired than students working less than 29 hours a week and not employed students. Though students who are not employed, working part-time, and full-time showed almost similar patterns of trouble falling asleep, sleeping too much, or staying asleep.

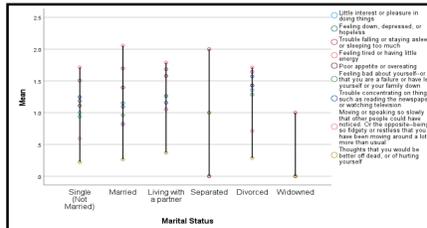


Figure 4. Levels of PHQ-9 on marital status.

Married students are more tired and feel no energy, followed by living with a partner(s), divorced, and single. Though, students who are separated have more trouble sleeping, staying asleep, or sleeping too much.

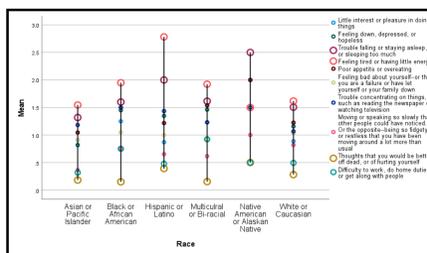


Figure 5. Levels of PHQ-9 on race.

Black or African American and Multicultural or Bi-racial students scored higher when it comes to being tired. While White or Caucasians and Asian or Pacific Islander students almost have similar results with being tired and having difficulties sleeping. Hispanic or Latino students scored the highest when it comes to being tired. Moreover, they are second to Native American or Alaskan Natives for trouble sleeping or staying asleep.

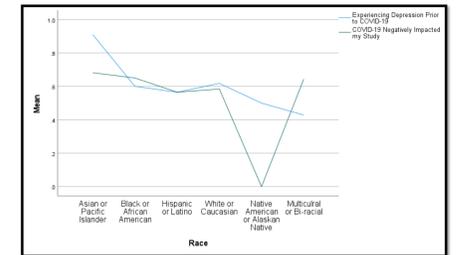


Figure 6. Races who experiencing depression prior to COVID-19 and reported negatively affected their studies.

Asian or Pacific Islander students reported the highest level of depression before COVID-19 and negatively affected their studies. White and Caucasian students reported the second-highest group regarding depression before the pandemic and followed by Black or African American, Native American or Alaskan Native, Multicultural or Bi-racial groups. Though, when it comes to the impact of COVID-19 in their study, Black or African American and Multicultural and Bi-racial placed second, followed by Hispanic or Latino and White or Caucasian. The lowest affected one is the Native American or Alaskan Native.

## CONCLUSION

Based on the current data, students who are married, living with a partner (s), having a part- and full-time employment reported higher when it comes to being tired or having no energy. This is also similar with students who graduate and doctoral degrees are attending part- and full-time enrollment. Also, students of all races reported higher scores in being tired, followed by lack of difficulty of sleeping or staying asleep, or sleeping too much, and trouble concentrating.

Also, before COVID-19, students reported that they were already suffering from depression. Asian and Pacific Islanders are currently the highest groups who reported depression, followed by White or Caucasian, Black or African-American, Native American or Alaskan Native, and Multicultural or Bi-racial groups. The Asian and Pacific Islanders also reported the highest when it comes to being hit by COVID-19 negatively when it comes to their studies.

This suggests that the student need help when it comes to managing their time and providing tools to help students balance their personal and work responsibilities, which the university could provide by providing training, workshops, and short courses that could benefit the students' college and future careers.

However, this study is still ongoing research and still receiving data from participants. So, further study is still needed to have a better understanding of the results.

## REFERENCES

- Rodriguez-Planas, N. (2020). Hitting Where it Hurts Most: Covid-19 and Low-Income Urban College Students (SSRN Scholarly Paper ID 3682958). *Social Science Research Network*. <https://papers.ssrn.com/abstract=3682958>
- Shapero, B. G., Black, S. K., Liu, R. T., Klugman, J., Bender, R. E., Abramson, L. Y., & Alloy, L. B. (2014). Stressful life events and depression symptoms: the effect of childhood emotional abuse on stress reactivity. *Journal of clinical psychology*, 70(3), 209–223. <https://doi.org/10.1002/jclp.22011>
- Son, C., Hegde, S., Smith, A., Wang, X., & Sasangohar, F. (2020). Effects of COVID-19 on College Students' Mental Health in the United States: Interview Survey Study. *Journal of medical Internet research*, 22(9), e21279. <https://doi.org/10.2196/21279>

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