

Life during COVID: A Survey of Texas A&M University - San Antonio Students Experiencing
the Global Pandemic
PCOE Report
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The Life during Covid-19 survey was administered with funding from the President's Commission on Equity to measure A&M-SA students' food insecurity, stress, diet, and activity level measures. The survey was open to all current A&M-SA students. It was advertised to students via emails from the Growler and the Office of Student Success Engagement and via social media accounts, including Facebook, Instagram, Twitter, and LinkedIn. The survey was open for two weeks, from November 19 – December 3, 2020. We worked with the Marketing and Communications Operations Office to disperse the survey multiple times over the two week period. Prizes, including gift cards, Fitbit Smartwatches, and an Apple watch, were awarded based on a random drawing to encourage students to participate.

This report also compares information on emotional statuses, food security, diet and exercise to Jaguar Freshman Health and Wellness Study data previously collected by the researchers from the Fall 2018 and Fall 2019 freshman classes in order to examine the effects of the pandemic on our students. Researchers are available for further information regarding data.

A. Sample Description

Life during Covid-19 collected data from 317 A&M-SA students. Table 1 (see Appendix) displays the demographic information of the sample. The sample was largely comprised of upperclass (28.08% juniors and 40.38% seniors) females (82.33%) who were 27 years old, on average. Most of the sample identified as Latino (72.24%), and about 40% speak either Spanish or Spanglish at home. About 40% of the sample is comprised of first (10.41%) or second (29.02%) generation immigrants. The majority of respondents are single (63.14%), followed by those who are married (23.66%). Roughly two-thirds of the sample were taking classes entirely online in the Fall 2020 semester, with about the other one-third taking a mix of online and in-person classes. Living situation was distributed with most of the sample living with parents (45.43%), with a spouse or partner (24.92%), or on their own (18.30%).

Food security was measured as adult and household food security, with the latter collecting information on families with children. Each food security measure was coded into two categories following USDA guidelines¹: food secure and food insecure. For adult food security, about 27% of the sample was food insecure. For household food security – that is, respondents in households with children – about 12% was food insecure.

The survey collected a range of health measures. The 21-question version of the Depression, Anxiety, and Stress Scale (DASS) was included to measure negative emotional states. DASS-21 was treated as continuous measure, ranging from 0 to 63. Higher values indicate worse emotional states. Cronbach's alpha for DASS is 0.94. On average, the sample reported a DASS score of 16. Average scores on the subscales, which each ranged from 0 to 21, showed

¹ <https://www.ers.usda.gov/topics/food-nutrition-assistance/food-security-in-the-us/definitions-of-food-security.aspx>

that stress was the highest (6.59), followed by depression (5.41), and anxiety (4.00). The survey included several additional self-rated health measures with answer options that included poor (1), fair (2), good (3), very good (4), and excellent (5). Average ratings showed sleep quality was rated 3.44, physical health was rated 3.26, and mental health was rated 2.90. The low self-rated mental health results can be seen in more detail in Table 2 (see Appendix), with just over a third of participants indicating their mental health was either poor or fair. Additionally, the average body mass index (BMI) of the sample was 29.16, which is at the high end of the overweight category. About 80% of the sample had eaten fast food in the last week, 50% had drunk alcohol in the past month, and 55.94% did not currently exercise. Almost 25% had no health insurance.

Figures 1-4 provide a description of the sample in regard to specific Covid-19 measures. Just over half the sample reported they were an essential worker (50.26%). About 20% were working entirely from home, while two-thirds had a child who was remote learning at home. About 10% of students sampled were recently laid off or furloughed due to Covid-19 (see Table 1). Figure 1 also shows that 28.57% of the sample personally knew someone who had passed away from Covid-19. Figure 2 provides a breakdown the different people survey respondents know who had Covid-19. About 12% of the sample had Covid-19. Roughly 6% of respondents' partners and 2% of respondents' children had Covid-19. The largest representation is seen in respondents' family members (55%), friends (51%) and coworkers (31%) having Covid-19.

Figure 1. Descriptive Results from Covid-19 Items, Life during Covid-19

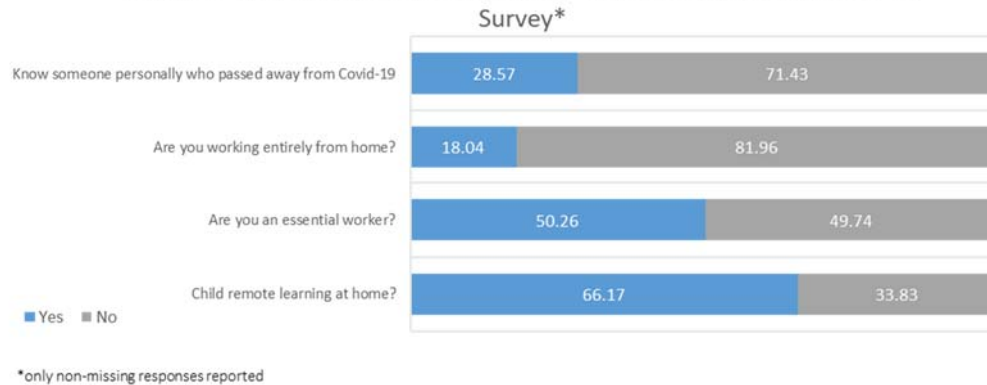


Figure 2. Do You Know Anyone Who Has Had Covid-19 (N=298)

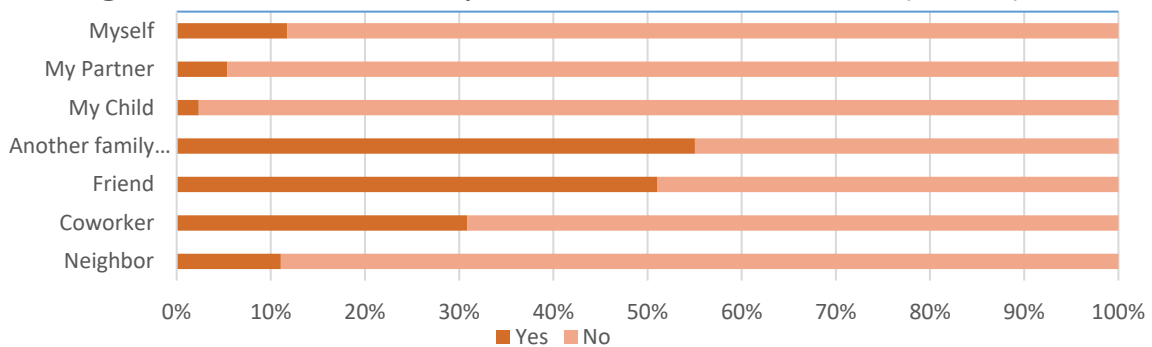
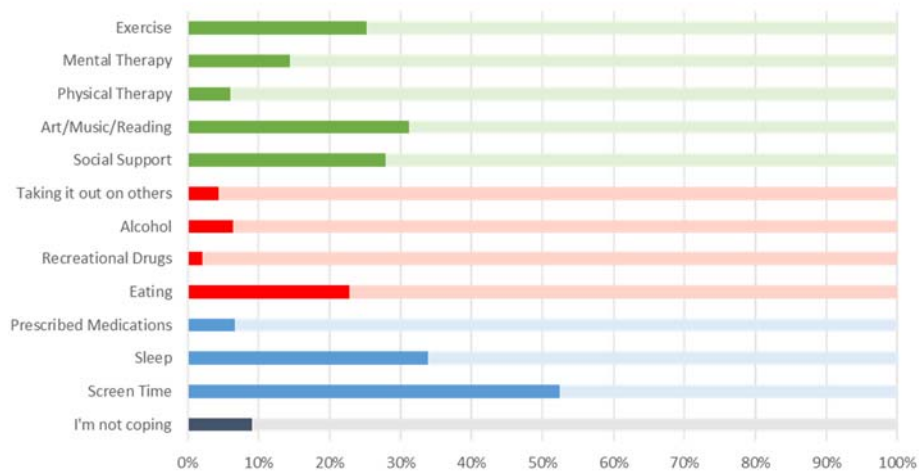


Figure 3 reveals how students in the sample are coping with the pandemic. There are some positive coping methods occurring, such as art, music, or reading (31.21%), social support (27.85%), and exercise (25%), with fewer respondents reporting negative coping methods, such as taking it out on others (4.36%), using alcohol (6.38%), or eating (22.82%). About a third of the sample reports sleeping as a way to cope, and over half (52.35%) are turning to screen time (i.e. playing video games, watching TV or movies, or using their cell phone) to cope. Nine percent of the sample reported that they are not coping.

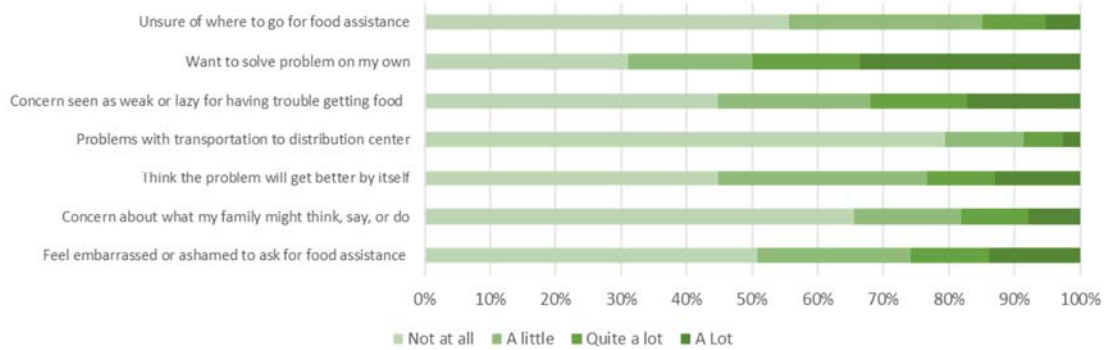
Figure 4 takes a closer look at respondents who indicated they did not have enough of the kinds of food they want to eat during the pandemic. Respondents indicated how much various statements have ever stopped, delayed, or discouraged them from seeking assistance to getting food. The highest reported reasons – those who say either “quite a lot” or “a lot” – we see are that they want to solve the problem on their own (50%), they are concerned of being seen as weak or lazy for having trouble getting food (31.92%), they feel embarrassed or ashamed to ask for food assistance (25.86%), they think the problem will get better by itself (23.27), and they are concerned about what their family might think, say, or do (18.1%).

Figure 3. Covid-19 Coping Methods (N=298)



Note: Darker bars indicate percent of students who are using that coping methods, lighter bars indicate those who are not

Figure 4. Barriers to Seeking Food Assistance during Pandemic (N=116)



Note: Sample only students who indicated they do not always have enough of the kinds of food they want to eat

B. Diet and Exercise

A total of 534 participants were included in the final analyses (see Table 5) which examined diet and exercise patterns. We found that the average body mass index (BMI) was significantly higher in the Life during Covid-19 sample (29.21 ± 7.48 vs. 26.86 ± 6.73 , $p < 0.001$) compared to the freshman sample (Table 5). Although there was no significant difference in the participation of regular exercise between the two groups, fewer people during Covid-19 engaged moderate (94.01 vs. 99.02%, $p < 0.05$) and/or strenuous exercise (80.44 vs. 98.02, $p < 0.001$) compared to freshman group. We believe that less physical activity, more snacking and fast food consumption, and stress-related eating habits including binge-eating and disordered eating may play a role in high BMI in Covid-19 sample. However, the findings of this study should be treated with caution for the following reasons. First, the Life during Covid-19 sample generated a convenience sample that may not be perfectly representative of our population. Also, self-reported body weight and height in Covid-19 sampling may be subject to recall bias, which may affect the precise calculation of the BMI.

Table 5. Comparison of Diet and Exercise Patterns between Life during Covid-19 Sample (N=317) and Freshman Sample (N=217)

	Percent/Mean(SD)		t-test
	Life during Covid-19 Sample	Freshman Sample	
BMI	29.21 (7.48)	26.86 (6.73)	***
Fast Food (last week)			
Never	14.34	8.29	
1 to 3 times	45.1	48.78	
4 or more times	40.56	42.93	
Regular Exercise			
Yes	40.94	47.47	
No	59.06	52.53	
Moderate Exercise			
Yes	94.01	99.02	*
No	5.99	0.98	
Strenuous Exercise			

Yes	80.44	98.04	***
No	19.56	1.96	

Note: BMI range is 16.46 to 66.55 for Life during Covid-19 sample and 9.29 to 50.14 for Freshman sample. Self-rated physical health ranges from 1-5, with higher values indicated better health. *** $p < 0.001$; * $p < 0.05$.

C. Conclusion

The funding provided from the PCOE allowed us to collect valuable data about how A&M-SA students were experiencing the Covid-19 pandemic. There are many variables to consider, and additional results can be seen in the tables and figures attached in the appendix. We will continue to analyze the data and plan to submit a white paper to the University.

Appendix

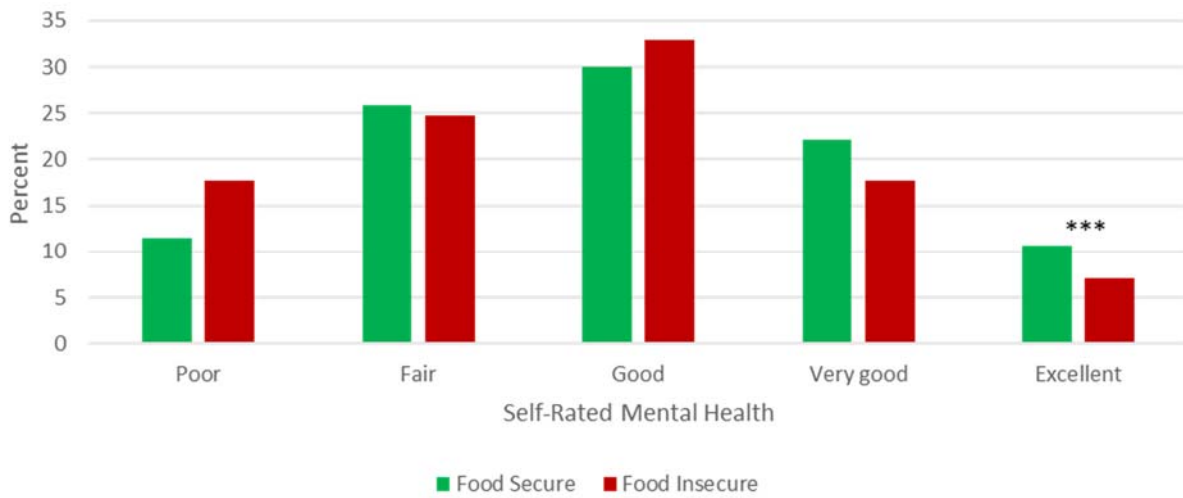
Table 1. Core Demographics, Life during Covid-19 Sample (N=317)					
	%/Mean(SD)	Min/Max		%/Mean(SD)	Min/Max
Gender			DASS	16.09 (13.01)	0/63
Male	16.72		Depression (DASS Subscale)	5.41 (5.17)	0/21
Female	82.33		Anxiety (DASS Subscale)	4.00 (4.03)	0/21
Other/Missing	0.95		Stress (DASS Subscale)	6.59 (4.89)	0/21
Class Standing			Adult Food Security		
Freshman	13.25		Food Secure	69.40	
Sophomore	10.09		Food Insecure	26.81	
Junior	28.08		Missing	3.79	
Senior	40.38		Household Food Security		
Graduate	8.20		Food Secure	30.28	
Race			Food Insecure	11.99	
White	17.98		Missing	5.99	
Black	4.73		Not applicable	50.79	
Latino	72.24		Self-rated Mental Health	2.90 (1.16)	1/5
Other	4.73		Self-rated Health	3.26 (1.02)	1/5
Missing	0.32		BMI	29.16 (7.47)	16.46/66.55
Age	27.19 (9.52)	18/62	Self-rated Sleep Quality	3.44 (1.07)	1/5
Marital Status			Fast food frequency last week		
Single	63.41		Never	12.50	
Cohabiting	7.26		Once	31.25	
Married	23.66		2-3 times	37.81	
Divorced/Separated	5.68		4-5 times	11.56	
Spanish/Spanglish Language Spoken at Home			Missing	6.88	
Yes	40.69		Currently exercise		
No	59.31		Yes	38.13	
Immigrant Generation			No	55.94	
First	10.41		Missing	5.94	
Second	29.02		Health Care Access		
Third or greater	59.62		Under parents' health insurance	35.00	
Missing	0.95		Health insurance through work	19.06	
Employment			Student health insurance	0.94	
Not employed	33.12		Health ins. through government	10.00	
Work 40+ hours/week	15.14		Health ins. through marketplace	5.31	
Work 20-40 hours/week	15.14		None: pay out of pocket	19.38	
Work <20 hours/week	21.77		None: healthy and no need	4.38	
Recently laid off/furloughed	9.64		Other	5.63	
Missing	5.36		Missing	0.31	
Living Situation			Alcohol Frequency (past month)		
Dorm	8.83		10 or more times	5.31	
On my own	18.30		5-9 times	7.50	
With parents/other adult family	45.43		2-4 times	23.44	
With spouse/partner	24.92		1 time	14.38	
Roommate	1.58		0 times	12.81	
Temporary place	0.32		I do not drink	36.56	
Don't have residence	0.63				
Class Mode					
Only online	64.69				
Only in-person	1.88				
Mix of online and in-person	33.13				
Missing	0.31				

Table 2. Self-rated Mental Health Variable Breakdown, Life during Covid-19 Sample (N=317)		
	Count (N)	Percent
Poor	40	12.62
Fair	79	24.92
Good	98	30.91
Very good	67	21.14
Excellent	30	9.46
Missing	3	0.95

Table 3. DASS Score and Food Security Comparison across A&M-SA Samples			
	DASS Score		Two sample t-test p-value
	Life during Covid-19 Sample	Freshman Sample	
Adult Food Security¹			
Food Secure	14.69	11.79	<0.001
Food Insecure	20.50	18.25	<0.001
Household Food Security²			
Food Secure	13.94	11.41	<0.001
Food Insecure	19.37	20.76	0.032
Note: DASS Score ranges from 0-63. Low values indicate better mental states. ¹ :Sample size for Life during Covid-19 sample is 295, for the Freshman sample is 203. ² :Sample size for Life during Covid-19 sample is 131, for the Freshman sample is 96.			

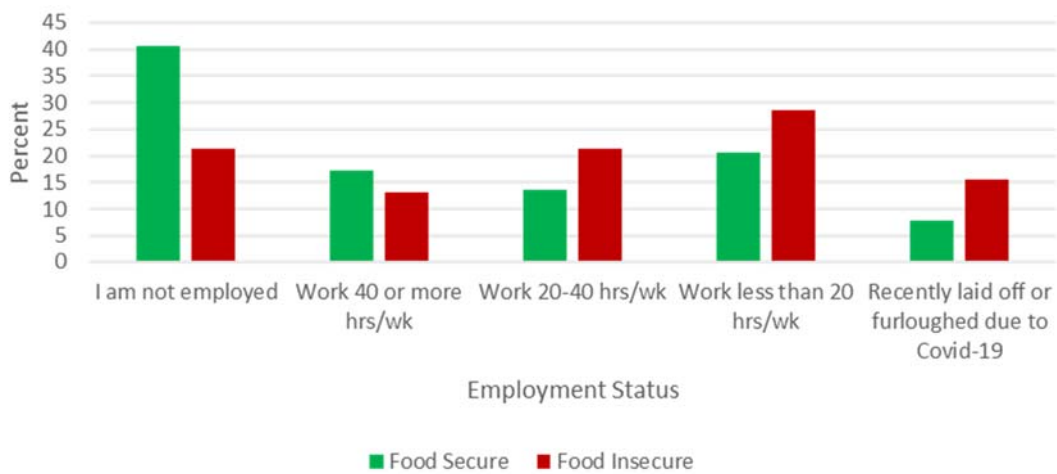
Table 4. T-test of Stress by Class Delivery Mode (Mean Score and Standard deviation reported)					
Class Delivery Mode	Depression	Anxiety	Stress	DASS	Self-rated mental health
Only Online	5.32 (0.37)	3.61 (0.25)	6.29 (0.34)	15.27 (0.88)	2.96 (0.08)
Some/all in-person	5.63 (0.50)	4.79 (0.47)	7.19 (0.49)	17.74 (1.38)	2.77 (0.10)
	p=0.62	p=0.02	p=0.12	p=0.12	p=0.17
	N: 307	N: 305	N: 306	N: 301	N: 313
Note: Some/all in person group includes students who either took only in-person class or a mix of in-person and online classes in Fall 2020. Depression, anxiety and stress all range from 0-21 and DASS ranges from 0-63; higher values indicate worse mental states. Self-rated mental health ranges from 1-5; higher values indicate better mental health.					

Figure 5. Self-Rated Mental Health and Adult Food Security



Note: ***two sample t-test significant at $p < 0.001$

Figure 6. Employment Status and Adult Food Security



Note: Chi-square test significant ($p=0.006$), $N=298$.