

# **Was the 2020 Presidential Election Nerve-Wracking?**

## **Changes in Mental Health Among College Dreamers**

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### **Abstract**

U.S. presidential elections can be stressful for many Americans; however, there is little research as to how elections might influence mental health of undocumented immigrants specifically. The 2020 U.S. Presidential Election had the potential to dramatically influence immigration policies with the Democratic candidate promising a pathway toward citizenship for undocumented immigrants who arrived in the U.S. as minors (i.e., dreamers), and the incumbent Republican candidate threatening to terminate the DACA program. Using an online survey method, this exploratory longitudinal study examined whether dreamers' mental health changed following the U.S. presidential election, while also examining risk factors associated with their mental health. We employed GAD-7 and PHQ-9 questionnaires as preclinical screens for anxiety and depression. We found that the mean anxiety and depression scores decreased significantly following the election, i.e., when the democratic candidate was declared the winner. Risk factors for mental health problems also differed before and after the election. Risk factors for depression before the election included being female, Hispanic white, having a low self-reported status on the subjective social ladder, and having high perceived discrimination; risk factors for depression after the election included coming to the U.S. at an older age and high perceived discrimination. Risk factors for anxiety before the election included being female, having more siblings, both parents working, and high perceived discrimination. Risk factors for anxiety after the election included low self-reported status on the subjective social ladder, being a freshman, and high perceived discrimination. Preliminary results suggest that mental health of dreamers improved after the election. In addition, while risk factors differed before and after the election, perceived everyday discrimination remained a consistent risk factor for mental health issues.

### **Introduction**

The year 2020 has introduced a variety of challenges to mental health. In the United States, the first case of coronavirus disease 2019 (COVID-19) infection was reported in January 2020, and

widespread infection was documented by March, signaling the start of the COVID-19 pandemic on U.S. soil. In addition to the pandemic, the year 2020 was also a particularly contentious election year for the U.S., with the outcome of the presidential election having a potentially dramatic impact on American politics, including policies governing undocumented immigrants. This past election season has affected many people in the U.S. emotionally, particularly racial minorities and immigrants. The present study employed a longitudinal survey method to examine the mental health of a subset of undocumented immigrants (i.e., dreamers) currently enrolled at a public university before and after the 2020 U.S. presidential election.

It has been estimated that about 11 million people living in the U.S. are undocumented<sup>1</sup> with one third having entered the U.S. as minors.<sup>2</sup> In 2012, President Obama established Deferred Action for Childhood Arrivals (DACA), a 2-year program allowing some qualified undocumented immigrants who arrived in the U.S. as minors (colloquially known “dreamers”) to be exempted from deportation and obtain work permits. About 830,000 people have been accepted into the DACA program until President Donald Trump put a temporary end to the program in 2019. It was estimated in 2017 that about 241,000 DACA recipients were enrolled in U.S. colleges.<sup>3</sup> Overall, it has been estimated in 2020 that 450,000 undocumented students were enrolled in U.S. colleges and universities.<sup>4</sup>

While there is extensive evidence that dreamers and their families experience a myriad of social, economic, and public health disadvantages, emerging evidence has indicated that the COVID-19 pandemic has made matters worse, especially in terms of mental health.<sup>5-8</sup> Notably, undocumented families were largely barred from government economic relief, such as stimulus checks provided through the CARES Act and unemployment benefits. In addition, many undocumented immigrants may be less likely to seek healthcare assistance for COVID, due to lack of health insurance and also fears of detainment or deportation. Thus, the health crisis and economic fallout from the COVID-19 pandemic provided new challenges with the potential to further harm mental health of undocumented immigrants.

The 2020 U.S. presidential election likely provided another source of mental health distress for undocumented immigrants, considering predictions that the outcome of the presidential election would dramatically influence immigration policies, including the fate of the DACA program.<sup>9</sup> Specifically, incumbent presidential candidate Donald Trump had promised to end the DACA program, while the democratic candidate Joseph Biden had announced his plans to provide dreamers a pathway toward citizenship. Therefore, it had been reasonably assumed that the election outcome would have a dramatic impact on the future and wellbeing of undocumented immigrants living in the U.S., and as a result, their mental health.<sup>10</sup> There is extensive evidence that sudden current events including natural disasters, epidemics or pandemics, can impact health outcomes.<sup>11</sup> Some research has also examined how a political event such as the U.S. presidential election might similarly influence mental health, especially among racial minorities.<sup>12,13</sup> For example, mental health outcomes among Black Americans improved after the 2008 presidential election.<sup>12</sup> To our knowledge, the effect of the 2020 presidential election on mental health has not been adequately investigated in dreamers.

Dreamers are an important and growing immigrant population in the U.S., however, quantitative studies on this group are lacking due to data constraints preventing researchers from distinguishing legal status. The little research that has been conducted on this population has indicated trends for disadvantages in mental health, compared to non-Hispanic and Hispanic white U.S. citizens.<sup>5,14,15</sup> The present study employs an advantageous group of undocumented

college students currently enrolled at a public university in Delaware. We used a survey method approach to examine changes in mental health symptoms before and after the 2020 U.S. presidential election, and also to potentially identify risk factors associated with mental health symptoms in this population. This study hopes to gather important data on undocumented immigrants' mental health that should facilitate the development of public policies that help this under-served population.

## Data and Methods

Participants were recruited from a population of approximately 150 undocumented undergraduate college students currently enrolled at a public university in Delaware. These students are DACA recipients who have been awarded a scholarship from TheDream.US foundation. This scholarship provides out-of-state tuition and other related expenses allowing dreamers from "locked-out states" (i.e., states with policies that restrict their access to college) to attend one of four partner colleges to obtain a four-year degree.

The presidential election took place on November 3<sup>rd</sup> 2020. The pre-election survey was conducted on October 6<sup>th</sup> 2020 and the post-election survey was conducted on December 1<sup>st</sup> 2020. Eighty-three students were recruited for the pre-election survey and 79 students remained for the post-election survey, with a retention rate of 95%. The pre-election survey contained questions pertaining to their demographic information (age, gender, race, ethnicity, country of origin, age of migration), education, employment background, and measures to evaluate their mental health. The post-election survey only included measures for mental health. The two surveys were linked through students' identification numbers and email addresses. An arbitrary and anonymous ID number was attached to each respondent, and the original identifiers were removed from all digital copies of the surveys. The cases with missing values on the mental health outcomes were dropped using listwise deletion. All procedures were approved by the University's Institutional Review Board.

## Outcome Measures

The outcome of interest was mental health status, measured using two widely validated questionnaires for anxiety and depression, i.e., the Generalized Anxiety Disorder scale – 7 item (GAD-7) and the Patient Health Questionnaire – 9 item (PHQ-9), respectively. We also included the fear of COVID-19 scale (FCV-19S) as one of the outcome variables.

For each assessment, the respondent read a list of symptoms and rated how often they experienced each symptom over the past two weeks (0 = Not at all, 1 = Several days, 2 = More than half the days, 3 = Nearly every day). The GAD-7 and PHQ-9 have been employed for predicting the presence of anxiety and depressive disorders. In the clinical setting, a score of 10 or greater on the GAD-7 or PHQ-9 serves as a cutoff point, suggesting the patient should be further evaluated for anxiety or depression disorders, respectively. This is based on research indicating a PHQ-9 score  $\geq 10$  has a sensitivity of 88% and a specificity of 88% for major depression (Kroenke, Spitzer, & Williams, 2001). Likewise, a GAD-7 score  $\geq 10$  has a sensitivity of 89% and a specificity of 82% for generalized anxiety disorder.<sup>16</sup> Notably, the GAD-7 questionnaire has good internal reliability with a Cronbach's alpha of 0.91 when used in the general population<sup>17</sup> and a Cronbach's alpha of 0.85 when employed in college students.<sup>18</sup> The GAD-7 has also been used to measure mental health in undocumented college students.<sup>19</sup>

## Covariates

In addition to the PHQ-9 and GAD-7, the present study also utilized the FCV-19S as one of the outcome variables. This is a 7-item scale with robust psychometric properties.<sup>20</sup> The FCV-19S has been shown to a reliable measure of COVID-19 fears among males and females, as well as individuals of all ages. Higher overall scores on the FCV-19S indicate more severe fear of COVID-19.

Potential risk factors for mental health issues included demographic and socioeconomic characteristics as well as perceived discrimination measured using the perceived discrimination scale. Demographic variables include continuous variables, such as age and the square of age. In addition, we have included a binary variable for biological sex (female = 1, male = 0), a binary variable for race (white = 1, non-white = 0), a continuous variable for age of migration, a categorical variable for year in college, and a binary variable for place of birth (Mexico = 1, others = 0). Socioeconomic variables include number of siblings as a continuous variable, mother and father's unemployment status as binary variables, subjective social ladder as a continuous variable, and student working at least part-time or full-time as a binary variable (yes = 1, no = 0). We also included DACA status as a binary variable (yes = 1, no = 0), everyday discrimination scale as a continuous variable, and whether the person was paying attention to election-related news as a binary variable (yes = 1, no = 0). A self-report of subjective social status was also measured using the MacArthur Scale of Subjective Social Status.<sup>21</sup>

We first calculated the mean scores for the mental health outcomes on the PHQ-9 and GAD-7, and the number of respondents meeting the cutoff on each questionnaire. We then performed a t-test and z-test to determine whether there were significant differences in the mean pre- and post-election scores and differences in the number of respondents meeting the cutoffs before and after the election. We also performed logistic regressions to identify risk factors associated with their mental health scores and meeting the mental health cutoffs.

## Results

Table 1 displays descriptive statistics for the mental health risk factors. All variables are derived from the pre-election survey. The mean age for our sample (n=79) is 21 (SD: 2.23). More than half of the respondents in are sample were females (67%). Regarding ethnicity, 97% of the respondents identified as Hispanic. In terms of race, 47% identified as white, 49% identified as other, and the rest as black or Asian. Eighty-five percent of the participants were DACA recipients at the time of the survey. It should be noted that younger dreamers may be less likely to have DACA status, due to the Trump Administration's refusal to accept new DACA applications. The average age of migration for our sample was 4 years old (SD: 2.19). The majority of respondents (71%) reported Mexico as their country of birth. The average number of siblings was 2.6 (SD: 1.44). The average number reported on the subjective social ladder scale was 4.14 (SD: 1.12).

Table 1. Descriptive Statistics

| Variables         |       |          |
|-------------------|-------|----------|
| <b>Age (mean)</b> | 21    | SD: 2.23 |
| <b>Sex (%)</b>    |       |          |
| Male              | 32.91 |          |
| Female            | 67.09 |          |

|   |          |          |
|---|----------|----------|
| Total                                     | (100)    |          |
| <b>Ethnicity (%)</b>                      |          |          |
| Hispanic                                  | 97%      |          |
| <b>Race (%)</b>                           |          |          |
| White                                     | 47.47    |          |
| Black                                     | 1.32     |          |
| Asian                                     | 2.63     |          |
| Others                                    | 48.69    |          |
| Total                                     | (100)    |          |
| <b>DACA recipient (%)</b>                 | 84.81    |          |
| <b>Age of migration (mean)</b>            | 3.68     | SD: 2.19 |
| <b>Origin of Birth (%)</b>                |          |          |
| Mexico                                    | 70.89    |          |
| Other                                     | 29.11    |          |
| Total                                     | (100)    |          |
| <b>Number of siblings</b>                 | 2.56     | SD: 1.44 |
| <b>Subjective social ladder</b>           | 4.14     | SD: 1.12 |
| <b>Both parents employed (%)</b>          | 54.43    |          |
| <b>Respondent currently working (%)</b>   | 50.63    |          |
| <b>College year (%)</b>                   |          |          |
| Freshmen                                  | 10.13    |          |
| Sophomore                                 | 26.58    |          |
| Junior                                    | 27.8     |          |
| Senior and above                          | 35.45%   |          |
| Total                                     | (100.00) |          |
| <b>Paid attention to the election (%)</b> | 84.81    |          |
| <b>Perceived discrimination scale</b>     | 8.00     | SD: 5.35 |
| N   | 79       |          |

Table 2 presents the descriptive statistics for the mental health outcome variables before and after the election. The mean FCV-19S score was 18.7 before the election and 20.52 after the election, an increase of 1.82 points. A t-test indicated that the increase was significant, suggesting that fear of covid-19 was higher after the election, compared to before the election (t test = 2.91; p level=0.0047). The average GAD score decreased from 8.67 (SD=6.13) before the election to 6.84 (SD=5.49) after the election. The t-test indicated that this decrease was significant (t test = -3.18; p level = 0.0021). The average PHQ score decreased from 10.09 (SD=6.62) before the election to 7.61 (SD=6.18) after the election, and the difference was significant according to a t-test test (t test=-4.58, p level < 0.001).

Table 2 also displays the percentage of respondents meeting the mental health cutoffs before and after the election, as well as the z tests to test whether differences in the proportion of respondents meeting the cutoff changed significantly. The suggested cutoff score for FCV-19S is 16.5. It has been demonstrated previously that a score of 16.5 or higher significantly predicts

anxiety, health anxiety, and posttraumatic stress symptoms.<sup>22</sup> The percentage of respondents in our study who met the FCV-19S cutoff remained the same before and after the election. In contrast, the proportion of respondents meeting the cutoffs on the GAD-7 and PHQ-9 differed before and after the election. Specifically, before the election, 40% of the sample met the cutoff for depression, and 53% met the cutoff for anxiety. These numbers went down to 28% and 30%, respectively, after the election. The z test indicated that the decrease in the percentages of respondents meeting the cutoffs was significant for the PHQ-9 (z test = -2.90, p =0.00), but not for the GAD-7 (z test =-1.35, p=0.18).

In summary, the results on mental health analyses indicate a significant increase in fear of COVID-19 (measured using the FCV-19S), but a significant *decrease* in anxiety and depression scores (measured using GAD-7 and PHQ-9, respectively) before and after the election. In contrast, while the proportion of those meeting the clinical cutoffs for anxiety and depression also decreased following the election, the decrease was only statistically significant for depression.

Table 2. Mental Health Variables

| Mental Health Variables | Pre-Election    | Post-Election   | Difference | T test  | p level |
|-------------------------|-----------------|-----------------|------------|---------|---------|
| Mean FCV-19S<br>(SD)    | 18.7<br>(5.49)  | 20.52<br>(7.64) | 1.82       | 2.91    | 0.0047  |
| Mean GAD<br>(SD)        | 8.67<br>(6.13)  | 6.84<br>(5.49)  | -1.84      | -3.18   | 0.0021  |
| Mean PHQ<br>(SD)        | 10.09<br>(6.62) | 7.61<br>(6.18)  | -2.48      | -4.58   | 0       |
|                         |                 |                 |            | Z test  | p       |
| % meet FCV-19S cutoff   | 60.76           | 60.76           | 0          | 0       | 1       |
| % meet PHQ cutoff       | 53.16           | 30.38           | -22.78     | -2.9036 | 0.00    |
| % meet GAD cutoff       | 37.97           | 27.97           | -10.00     | -1.35   | 0.18    |

Note: The cutoff score we used for FCV-19S is 16.5, for GAD-10 is 10, and for PHQ-9 is 10.

Table 3 lists additional details about how the percentages of respondents meeting the GAD-7 and PHQ-9 cutoffs changed pre- and post-election. Notably, about half of the respondents who met the PHQ-9 and GAD-7 cutoffs before the election continued to meet the clinical cutoffs after the election.

Table 3. Percentages Meeting PHQ, GAD, and FCV-19S Cutoff Pre- and Post-Election

| PHQ<br>Pre-election    | Post-election          |                 |            |
|------------------------|------------------------|-----------------|------------|
|                        | Do not meet the cutoff | Meet the cutoff | N          |
| Do not meet the cutoff | 33 (41.8)              | 4 (5.00)        | 37 (46.84) |
| Meet the cutoff        | 22 (27.85)             | 20 (25.32)      | 42 (53.16) |
| N                      | 55 (68.62)             | 24 (30.38)      | 79 (100)   |
| GAD<br>Pre-election    | Post-election          |                 |            |
|                        | Do not meet the cutoff | Meet the cutoff | N          |
| Do not meet the cutoff | 41 (51.90)             | 8 (10.13)       | 49 (62.03) |
| Meet the cutoff        | 16 (20.25)             | 14 (17.72)      | 30 (37.97) |

| N                      | 57 (72.15)             | 22 (27.85)      | 79 (100)   |
|------------------------|------------------------|-----------------|------------|
| <b>FCV_19S</b>         | Post-election          |                 |            |
| Pre-election           | Do not meet the cutoff | Meet the cutoff | N          |
| Do not meet the cutoff | 18 (22.78)             | 13 (16.46)      | 31(39.24)  |
| Meet the cutoff        | 13 (16.46)             | 35 (44.30)      | 48 (60.76) |
| N                      | 31 (39.24)             | 48 (60.76)      | 79 (100)   |

Note: values expressed as N (% of total)

Table 4 displays results from the logistic regression models to estimate risk factors for meeting the PHQ-9 and GAD-7 cutoffs before the election. The logistic models estimating meeting the PHQ-9 and GAD-7 cutoffs are analyzed separately. The coefficients and the odds ratios are reported in the table. Note that the coefficients are the log of odds ratios. In other words, the odds ratios are calculated from exponentiating coefficients. Therefore, the coefficients and the odds ratios indicate the same results. In the PHQ-9 model, the coefficients and odds ratios for female, white, subjective social ladder, and perceived discrimination scale were significant at the  $p < 0.05$  level. Specifically, the odds ratio for the variable female is 8.41 ( $p=0.024$ ), indicating that holding all other independent variables constant, female college dreamers were 8.4 times more likely than their male counterparts to meet the PHQ-9 cutoff before the election. The odds ratio for the variable Hispanic white is 6.90 ( $p = 0.021$ ), suggesting that Hispanic white college dreamers were about seven times more likely than other college dreamers to meet the PHQ-9 cutoff score before the election, holding other covariates constant. The odds ratio for the variable subjective social ladder was 0.39 ( $p=0.013$ ), indicating that the odds of meeting the PHQ-9 cutoff before the election was predicted to decrease by 61% for each additional scale increase in the subjective social ladder, holding other covariates constant. Lastly, in this model, the odds ratio for the everyday discrimination scale was 1.37 ( $p=0.000$ ). This result suggests that the odds of meeting the PHQ-9 cutoff before the election was predicted to increase by 37% for each additional scale increase on the perceived everyday discrimination scale, holding other covariates constant.

In the GAD-7 model, the coefficients and odds ratios were statistically significant for the following variables: female, number of siblings, both parents working, and perceived everyday discrimination scale. The odds ratio for female was 11.14 ( $p=0.041$ ), suggesting that holding all other covariates constant, female college dreamers were 11 times more likely than their male counterparts to meet the GAD-7 cutoff before the election. The odds ratio for the number of siblings was 1.95 ( $p=0.044$ ), indicating that holding all covariates constant, the odds of meeting the GAD-7 cutoff before the election was predicted to increase by 95% for each additional sibling the college dreamer had. Lastly, the odds ratio for the everyday discrimination scale was 1.37 ( $p=0.000$ ). This result suggests that the odds of meeting the GAD-7 cutoff before the election was predicted to increase by 37% for each additional scale increase on the perceived everyday discrimination scale, holding other covariates constant.

In summary, before the election, the risk factors for college dreamers meeting the depression cutoff included being female, being Hispanic white, low in the subjective social ladder, and high in perceived discrimination. In addition, the risk factors for college dreamers meeting the anxiety cutoff included being female, having more siblings, both parents working, and having high perceived discrimination. The Hosmer-Lemeshow tests for the goodness-of-fit of both the PHQ-9 and GAD-7 models indicate that the present models are appropriate.

Table 4 and Table 5 present results from the logistic regression models to estimate risk factors for meeting the PHQ-9 and GAD-7 cutoffs *after* the election. The logistic models estimating whether respondents met the PHQ-9 and GAD-7 cutoffs were analyzed separately. In the PHQ-9 model, the coefficients and odds ratios for the following variables were significant at the  $p < 0.05$  level: meeting the PHQ-9 cutoff before the election, age of migration, and score on the perceived discrimination scale. The odds ratio for meeting the PHQ-9 cutoff before election was 8.28 ( $p=0.018$ ), suggesting that college dreamers who met the PHQ-9 cutoff before the election were 8 times more likely to meet the PHQ-9 cutoff after the election compared to other dreamers, holding all independent variables constant. In addition, the odds ratio for age of migration was 0.58 ( $p=0.041$ ), indicating the odds of meeting the PHQ-9 cutoff after the election was predicted to decrease by 42% for each additional year added to age of migration. Lastly, the odds ratio for the perceived everyday discrimination scale is 1.23 ( $p=0.011$ ), suggesting that the odds of meeting the PHQ-9 cutoff after the election was predicted to increase by 23% for each additional scale increase in perceived everyday discrimination, holding other covariates constant.

Regarding the likelihood of meeting the GAD-7 cutoff, the odds ratios for the following variables were statistically significant at the  $p < 0.05$  level: meeting the GAD-7 cutoff before the election, subjective status on the social ladder, being a freshman, and perceived everyday discrimination. Results indicated that college dreamers who met the GAD-7 cutoff before the election were 11 times more likely to meet the GAD cutoff after election compared to other college dreamers, holding other covariates constant ( $OR = 11.09$ ,  $p=0.029$ ). In addition, the odds of meeting the GAD cutoff after the election was predicted to decrease by 67% for each additional scale increase in the subjective social ladder, holding other covariates constant ( $OR=0.33$ ,  $p=0.035$ ). Results also revealed that relative to sophomores, freshmen are about 178 times more likely to meet the GAD cutoff after the election while holding all the independent variables constant ( $OR=178.56$ ,  $p=0.018$ ). Lastly, the odds of meeting the GAD cutoff after the election was predicted to increase by 19% for each additional scale increase on the perceived everyday discrimination scale, holding other covariates constant ( $OR=1.19$ ,  $p=0.039$ ).

In summary, after the election, the risk factors for college dreamers meeting the depression cutoff included having met the PHQ-9 cutoff before the election, age of migration, and high perceived discrimination. In addition, the risk factors for college dreamers meeting the anxiety cutoff after the election included having met the GAD-7 cutoff before the election, reporting low status on the subjective social ladder, being a freshman, and having high perceived discrimination. The Hosmer-Lemeshow tests for the goodness-of-fit of both the PHQ-9 and GAD-7 models indicate that the present models are appropriate.

## Discussion and Conclusion

The political discourse about dreamers is often centered on the benefits and drawbacks of different immigration policies, whereas the mental health of this population is rarely considered. The present study was designed to gain a preliminary understanding of how a major political event, i.e., the U.S. 2020 presidential election, might influence mental health among undocumented college students. While undocumented college students are commonly considered a hard-to-reach population, the present study recruited a readily available population of dreamers at a Delaware university and tracked their mental health before and after the election. We predicted that, if the incumbent Republican candidate (who opposed the DACA program) won the election, the dreamers in our sample would demonstrate worse mental health (i.e., increased



measures of anxiety and depression). If, on the other hand, the Democratic candidate (who voiced support for the DACA program) won the election, this would have a positive impact on mental health of dreamers in our sample. Our findings indicated that, after the Democratic candidate was declared the winner, mental health improved in our sample. There was a significant decrease in mean scores on the PHQ-9 and GAD-7 questionnaires after the election vs. before the election (signifying a potential drop in depression and anxiety, respectively). In addition, the percentage of dreamers who met the cut off for depression on the PHQ-9 scale also dropped significantly after the election (the percentage of respondents meeting the cutoff for anxiety on the GAD-7 also decreased post-election, but not significantly). Importantly, previous research has shown that respondents with a higher score on the PHQ-9 or GAD-7 scale are more likely to be diagnosed with a depressive or anxiety disorder upon further evaluation.<sup>16</sup> However, further research will be required to determine whether election results can actually affect whether dreamers meet the official criteria for diagnosis.

The present study also identified important risk factors for mental health problems in this population before and after the election. Pre-election risk factors for depression included being female, Hispanic white, having a low self-reported status on the subjective social ladder, and having high perceived discrimination. Post-election risk factors for depression included coming to the U.S. at an older age and high perceived discrimination. Pre-election risk factors for anxiety included being female, having more siblings, having two working parents, and high perceived discrimination. Post-election risk factors for anxiety included low self-reported social status on the subjective social ladder, being a freshman, and high perceived discrimination. The findings demonstrate how risk factors for a potential mental illness may depend on pre-election anxieties and post-election outcomes. Notably, however, perceived discrimination remained a prominent risk factor for depression and anxiety before and after the election, demonstrating the timelessness of this factor in negatively impacting mental health.

Our findings are consistent with previous research indicating high incidence of mental health issues among undocumented immigrants<sup>23</sup> and how potential changes to immigration policy can impact mental health.<sup>10</sup> Despite a need for mental health services, prior research suggests that undocumented immigrants may be less likely to seek mental health services due to low access as well as financial and psychosocial barriers.<sup>24</sup> Undocumented immigrants have lower access to health services in general, and fears of detainment and deportation may further dissuade this population from seeking medical attention.<sup>25,26</sup> However, even when undocumented college students have access to on-campus mental health services, they might normalize mental health issues as being part of their tentative immigration status and may not seek mental health treatment due to its inability to fully resolve their immigration-related concerns.<sup>24</sup>

Going forward, community outreach will remain a critical component to any program that hopes to alleviate mental health issues among undocumented immigrants. Such programs will need to address financial as well as psychosocial barriers for obtaining mental health services. In addition, our present findings may be useful in identifying individuals at greater risk for anxiety and depression, and community members and policymakers may devote special attention to targeting these individuals in their outreach programs. In particular, the critical finding that elections may be nerve-wracking for undocumented immigrants suggests that heightened mental health outreach may be especially important during election season.

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Table 4. Logistic Regression: Predicting of Meeting the PHQ and GAD Cutoff Before Election

| Variable                   | PHQ         |      |                        |              | GAD         |      |                       |              |
|----------------------------|-------------|------|------------------------|--------------|-------------|------|-----------------------|--------------|
|                            | Coefficient | SE   | Odds Ratio (95% CI)    | Significance | Coefficient | SE   | Odds Ratio (95% CI)   | Significance |
| Age                        | 3.91        | 3.93 | 50.13 (0.02, 110063.9) | 0.319        | 0.81        | 4.39 | 2.26 (0.00, 12192.97) | 0.853        |
| Square of age              | -0.08       | 0.09 | 0.92 (0.78, 1.09)      | 0.346        | -0.02       | 0.08 | 0.98 (0.81, 1.18)     | 0.815        |
| Male                       | REF         | REF  | REF                    | REF          | REF         | REF  | REF                   | REF          |
| Female                     | 2.13*       | 0.94 | 8.41 (1.32, 53.49)*    | 0.024        | 2.41*       | 1.18 | 11.14 (1.11, 112.05)* | 0.041        |
| Hispanic White             | 1.93*       | 0.84 | 6.90 (1.33, 35.66)*    | 0.021        | 0.41        | 0.96 | 1.51 (0.23, 9.85)     | 0.669        |
| Other race                 | REF         | REF  | REF                    | REF          | REF         | REF  | REF                   | REF          |
| DACA recipient             | 0.05        | 1.19 | 1.05 (0.10, 10.82)     | 0.966        | -0.04       | 1.21 | 0.96 (0.09, 10.29)    | 0.974        |
| Age of migration           | 0.42        | 0.25 | 1.52 (0.94, 2.46)      | 0.088        | 0.22        | 0.23 | 1.24 (0.79, 1.95)     | 0.35         |
| Born in Mexico             | 1.37        | 0.88 | 3.93 (0.70, 22.03)     | 0.12         | -0.27       | 0.90 | 0.77 (0.13, 4.47)     | 0.767        |
| Born in other countries    | REF         | REF  | REF                    | REF          | REF         | REF  | REF                   | REF          |
| Number of siblings         | 0.41        | 0.29 | 1.50 (0.86, 2.63)      | 0.153        | 0.67*       | 0.33 | 1.95 (1.02, 3.74)*    | 0.044        |
| Subjective social ladder   | -0.95*      | 0.38 | 0.39 (0.18, 0.82)*     | 0.013        | 0.37        | 0.36 | 0.69 (0.34, 1.40)     | 0.304        |
| Both parents working       | 1.49+       | 0.83 | 4.45 (0.87, 22.69)+    | 0.073        | 2.11*       | 0.92 | 8.27 (1.36, 50.17)*   | 0.022        |
| Not working                | REF         | REF  | REF                    | REF          | REF         | REF  | REF                   | REF          |
| Currently working          | -0.55       | 0.77 | 0.58 (0.13, 2.62)      | 0.475        | 0.51        | 0.9  | 1.66 (0.28, 9.68)     | 0.574        |
| Freshmen                   | -1.51       | 1.57 | 0.22 (0.01, 4.78)      | 0.336        | -1.65       | 1.69 | 1.19 (0.01, 5.21)     | 0.327        |
| Sophomore                  | REF         | REF  | REF                    | REF          | REF         | REF  | REF                   | REF          |
| Junior                     | -0.33       | 1.05 | 0.72 (0.09, 5.66)      | 0.756        | 1.79        | 1.22 | 5.98 (0.55, 65.37)    | 0.142        |
| Senior and above           | -1.39       | 1.16 | 2.45 (0.03, 2.43)      | 0.232        | -0.31       | 1.34 | 0.74 (0.05, 10.15)    | 0.819        |
| Current GPA                | -1.05       | 0.96 | 0.35 (0.05, 2.30)      | 0.275        | -0.96       | 1.12 | 0.38 (0.04, 3.45)     | 0.393        |
| Discrimination scale       | 0.32***     | 0.09 | 1.37 (1.15, 1.64)***   | 0            | 0.32***     | 0.09 | 1.37 (1.15, 1.64)***  | 0            |
| Paid attention to election | -0.41       | 1.06 | 0.67 (0.08, 5.36)      | 0.705        | -1.48       | 1.14 | 0.23 (0.02, 2.11)     | 0.192        |

|          |  |       |                   |       |  |       |                   |       |
|----------|--|-------|-------------------|-------|--|-------|-------------------|-------|
| FCV-19S  | 0.1  | 0.07  | 1.11 (0.97, 1.28) | 0.144 | 0.13   | 0.08  | 1.13 (0.96, 2.11) | 0.134 |
| Constant | -47.88   | 44.04 | 0.00 (0.00,0.00)  | 0.277 | -12.52   | 48.91 | 0.00 (0.00, 0,00) | 0.798 |
|          | N =79<br>Prob > chi2 = 0.0003<br>Pseudo R2 = 0.4195<br>Hosmer-Lemeshow chi2(8) = 4.35<br>prob>chi2 =0.8240 |       |                   |       | N =79<br>Prob > chi2 = 0.0002<br>Pseudo R2 = 0.4559<br>Hosmer-Lemeshow chi2(8) = 4.21<br>prob>chi2 =0.8373 |       |                   |       |

Note: + indicates  $p \leq 0.1$ ; \* indicates  $p \leq 0.05$ ; \*\* indicates  $p \leq 0.01$ ; \*\*\* indicates  $p \leq 0.001$

Table 5. Logistic Regression: Predicting of Meeting the PHQ and GAD Cutoff After the Election

| Variable                   | PHQ         |      |                        |              | GAD         |      |                          |              |
|----------------------------|-------------|------|------------------------|--------------|-------------|------|--------------------------|--------------|
|                            | Coefficient | SE   | Odds Ratio (95% CI)    | Significance | Coefficient | SE   | Odds Ratio (95% CI)      | Significance |
| Met cutoff before election | 2.11*       | 0.89 | 8.28 (1.44, 47.73)*    | 0.018        | 2.41*       | 1.10 | 11.09 (1.28, 96.01)*     | 0.029        |
| Age                        | 3.57        | 3.15 | 35.78 (0.07, 17318.07) | 0.257        | 4.22        | 3.16 | 67.78 (1.24, 33353.87)   | 0.182        |
| Square of age              | -0.08       | 0.07 | 0.93 (0.81, 1.06)      | 0.262        | -0.09       | 0.07 | 0.92 (0.81, 1.05)        | 0.205        |
| Male                       | REF         | REF  | REF                    | REF          | REF         | REF  | REF                      | REF          |
| Female                     | -0.89       | 0.92 | 0.41 (0.07, 2.51)      | 0.337        | -1.63       | 1.01 | 0.20 (0.03, 1.43)        | 0.108        |
| White                      | -1.45       | 1.05 | 0.24 (0.03, 1.86)      | 0.167        | 0.41        | 1.02 | 0.66 (0.09, 4.94)        | 0.688        |
| Other race                 | REF         | REF  | REF                    | REF          | REF         | REF  | REF                      | REF          |
| DACA recipient             | 0.32        | 1.33 | 1.38 (0.10, 18.71)     | 0.807        | 0.56        | 1.47 | 1.74 (0.10, 31.37)       | 0.706        |
| Age of migration           | -0.54*      | 0.26 | 0.58 (0.35, 0.98)*     | 0.041        | -0.55+      | 0.29 | 0.58 (0.33, 1.01)+       | 0.054        |
| Born in Mexico             | -0.26       | 0.84 | 0.77 (0.15, 3.96)      | 0.753        | 0.28        | 0.91 | 1.33 (0.22, 7.96)        | 0.757        |
| Born in other countries    | REF         | REF  | REF                    | REF          | REF         | REF  | REF                      | REF          |
| Number of siblings         | 0.04        | 0.24 | 1.04 (0.66, 1.66)      | 0.858        | 0.24        | 0.28 | 0.79 (0.45, 1.36)        | 0.393        |
| Subjective social ladder   | -0.80+      | 0.47 | 0.45 (0.18, 1.13)+     | 0.089        | -1.10*      | 0.52 | 0.33 (0.12, 0.92)*       | 0.035        |
| Both parents working       | 0.42        | 0.8  | 1.52 (0.32, 7.32)      | 0.601        | -1.31       | 0.85 | 0.33 (0.05, 1.44)        | 0.125        |
| Not working                | REF         | REF  | REF                    | REF          | REF         | REF  | REF                      | REF          |
| Currently working          | -0.93       | 0.78 | 0.39 (0.09, 1.81)      | 0.232        | -1.31       | 0.85 | 0.27 (0.05, 1.44)        | 0.125        |
| Freshmen                   | 1.53        | 1.75 | 4.62 (0.15, 141.45)    | 0.381        | 5.18*       | 2.2  | 178.56 (2.39, 13335.17)* | 0.018        |

|                            |  |       |                    |       |   |       |                       |       |
|----------------------------|--|-------|--------------------|-------|---|-------|-----------------------|-------|
| Sophomore                  | REF  | REF   | REF                | REF   | REF   | REF   | REF                   | REF   |
| Junior                     | 1.13   | 1.27  | 3.10 (0.26, 37376) | 0.374 | 0.83  | 1.4   | 2.29 (0.15, 35.73)    | 0.555 |
| Senior and above           | 0.47   | 1.16  | 1.59 (0.16, 15.42) | 0.688 | 1.54  | 1.13  | 4.67 (0.51, 42.81)    | 0.173 |
| Current GPA                | 1.04   | 1.21  | 2.82 (0.27, 29.92) | 0.391 | 0.9   | 1.31  | 2.46 (0.19, 31.86)    | 0.492 |
| Discrimination scale       | 0.20*  | 0.08  | 1.23 (1.05, 1.43)* | 0.011 | 0.17*   | 0.08  | 1.19 (1.01, 1.41)*    | 0.039 |
| Paid attention to election | 1.47   | 1.2   | 4.35 (0.41, 46.01) | 0.222 | 2.66+   | 1.46  | 14.34 (0.82, 250,04)+ | 0.068 |
| FCV-19S                    | -0.03  | 0.05  | 0.97 (0.88, 1.07)  | 0.558 | -0.06   | 0.06  | 0.95 (0.85, 1.06)     | 0.337 |
| Constant                   | -44.05   | 35.23 | 0.00 (0.00, 0.00)  | 0.211 | -51.4   | 35.23 | 0.00 (0.00, 0.00)     | 0.145 |
|                            | n=79<br>Prob > chi2 = 0.0201<br>Pseudo R2 =<br>0.3471<br>Hosmer-Lemeshow chi2(8) = 6.02<br>prob>chi2 =0.6446 |       |                    |       | n=79<br>Prob > chi2 = 0.0081<br><br>Pseudo R2 = 0.3953<br>Hosmer-Lemeshow chi2(8) = 3.87<br>prob>chi2 =0.8682 |       |                       |       |

Note: + indicates  $p \leq 0.1$ ; \* indicates  $p \leq 0.05$ ; \*\* indicates  $p \leq 0.01$ ; \*\*\* indicates  $p \leq 0.001$

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