President Trump Stress Disorder: Partisanship, Ethnicity, and Expressive Reporting of Mental Distress After the 2016 Election

Masha Krupenkin[1], David Rothschild[2], Shawndra Hill[2], and Elad Yom-Tov[2]

Abstract

In the aftermath of the 2016 election, many Democrats reported significant increases in stress, depression, and anxiety. Were these increases real, or the product of expressive reporting? Using a unique data set of searches by more than 1 million Bing users before and after the election, we examine the changes in mental-health-related searches among Democrats and Republicans. We then compare these changes to shifts in searches among Spanish-speaking Latinos in the United States. We find that while Democrats may report greater increases in post-election mental distress, their mental health search behavior did not change after the election. On the other hand, Spanish-speaking Latinos had clear, significant, and sustained increases in searches for "depression," "anxiety," "therapy," and antidepressant medications. This suggests that for many Democrats, expressing mental distress after the election was a form of partisan cheerleading.

Keywords

partisanship, partisan cheerleading, expressive reporting, race, ethnicity, mental health, search

Introduction

In the fall of 2016, many therapists and mental health professionals in the United States noticed an alarming trend in their patients. One therapist, Inger Burnett-Zeigler, wrote in *Time*, "In the weeks since the election, many of my patients have come to therapy with anxiety, fear, and worry . . . It's obvious to me that this highly contested election is already having real mental health consequences" (Burnett-Zeigler, 2016). Burnett-Ziegler was not alone—during this period, a variety of publications, including Slate, the Washington Post, Politico, and the New York Times, reported that Democrats were suffering from an array of Trump-related ailments.[1] A full 72% of Democrats reported that the presidential election outcome was "a significant source of stress," as compared to 26% of Republicans.[2]

The idea that President Trump might make some Democrats physically ill is not surprising. Over the past 30 years, both Democrats and Republicans have become dramatically more negative in their evaluations of the opposing party (Iyengar, Sood, & Lelkes, 2012). These negative assessments correspond to real behavioral outcomes—Partisans are more likely to discriminate against the opposing party in settings as diverse as the allocation of scholarship funds (Iyengar & Westwood, 2015), mate selection (Huber & Malhotra, 2017; Iyengar, Konitzer, & Tedin, 2017), evaluations of physical attractiveness (Nicholson, Coe, Emory, & Song, 2016), and employment decisions (Gift & Gift, 2015).

Furthermore, some scholars have found that partisan gaps in responses to surveys about policy attitudes correspond to actual behavioral differences. For example, Krupenkin, Hill, and Rothschild (2018) found that in the aftermath of the 2016 election, Democrats were less likely to search for terms related to car and house purchases, which suggests that Democrats' pessimistic survey responses to economic questions reflected their actual expectations of the economy. These consequences are not limited to economic decisions.

Republicans, who tend to register significant opposition to the Affordable Care Act in responses to surveys, were indeed less likely to enroll in health care exchanges (Lerman,

[1]Stanford University, CA, USA
[2]Microsoft Research, NY, USA

Corresponding Author:
Masha Krupenkin, Department of Political Science, Stanford University, Encina Hall West, 616 Serra Street, Stanford, CA 94305, USA.
Email: mkrupenk@stanford.edu

Sadin, & Trachtman, 2017), and individuals identifying as members of the party not in the presidency were both less likely to report vaccinating their children and to actually vaccinate them (Krupenkin, 2018).

Still, survey respondents may over-report their negative emotions about presidential elections. Scholars have found that people often engage in "expressive reporting," which means they provide inaccurate information as a means of expressing support for a party or candidate. Expressive reporting is distinct from genuinely held misperceptions based on motivated reasoning. In the first case, respondents know that they are providing an answer that does not reflect their true opinion, while in the second, respondents are unknowingly giving a truly held but incorrect response.

For example, while people are more likely to report perceptions of past performance of the economy that are complimentary to presidents of their own party and critical to the opposing party, these gaps diminish when respondents are given financial incentives for providing accurate answers (Bullock, Gerber, Hill, & Huber, 2013; Prior, Sood, & Khanna, 2015). However, Flynn, Nyhan, and Reifler (2017) noted that financial incentives for correct answers have an inconsistent effect in reducing incorrect responses, suggesting that in some cases, the psychological rents of providing an incorrect answer outweigh financial considerations. The relative crowd size during presidential inaugurations provides an even more striking case. Republicans were more likely to say that a photograph of the crowd at Trump's inauguration had more people in it than a photograph of the crowd at Obama's first inauguration, even though the second photograph was visibly more populated than the first (Schaffner & Luks, 2018).

Partisanship is closely identified with various observable demographics: Education, gender, religion, age, and race have all, at various times, been heavily correlated with party identification and voting decisions. Because Latino immigration was a preeminent issue in the 2016 election, we consider ethnicity as an interesting and important contrast with general partisanship. Roughly 28% of Latinos voted for President Trump, which is much higher than the percentage of Democrats who voted for him (roughly 8%).[3] However, Latinos were directly targeted by President Trump, who sought to repeal Deferred Action for Childhood Arrivals (DACA) protections for about 800,000 individuals, primarily Latinos, brought to the United States as children.[4] Furthermore, he referred to Mexican Americans as rapists at his presidential campaign kick-off speech in 2015 and made building a wall between the United States and Mexico (and having Mexico pay for it) a major campaign focus. And, we focus on a subset of Latinos, people who: use Spanish first, may or may not be voters, may or may not even be documented immigrants, which is reasonable to assume strongly opposed Trump's proposed immigration policies and would almost uniformly have voted against Trump.

In this article, we seek to answer the following question:

Research Question 1: Was the reported increase in negative mental health outcomes among Democrats and Spanish-speaking Latinos in the aftermath to the 2016 election real, or the result of expressive reporting?

While on surveys, Democrats and Spanish-speaking Latinos reported comparable and statistically significant increases in daily levels of worry in the months after Donald Trump's election (Davis, 2017; Ritter & Tsabutashvili, 2017), and even a year later, Democrats and Latinos reported similar decreases in well-being (Witters, 2017),[5] do these reports correspond to actual increases in mental distress? To test this hypothesis, we compare mental health searches among Democrats to those of several other groups, including Republicans and Spanish speakers in America (which is a good proxy for Spanish-speaking American Latinos).

Our approach, which combines the individual search records of over 1 million Bing users with survey responses, language, and geographic data, has several advantages over both traditional survey approaches and analyses of aggregate mental health data. First, the use of search data allows us to eliminate social desirability effects. Mental illness still carries a serious stigma that prevents people from seeking necessary care (Wahl, 1999). This stigma may even influence respondents' willingness to report mental health outcomes on a survey (Van de Mortel, 2008). However, in this specific context, there may be some groups who experience social desirability bias to report negative mental health outcomes as a result of the election. Trump was so reviled among liberal Democrats that *not* reporting negative emotions after his victory might be taken as a sign of moral failure. Search data are significantly less prone to social desirability bias than survey data (Stephens-Davidowitz, 2017), reducing these concerns.

Second, search patterns have proven to have deep connections with real-world behaviors. Searches have been shown to be significantly correlated with suicide attempts (McCarthy, 2010), disease outbreaks (Yom-Tov, Borsa, Cox, & McKendry, 2014), and health care use (White & Horvitz, 2013a, 2013b). Outside the arena of public health, Internet searches have been shown to be predictive of consumption (Vosen & Schmidt, 2011), housing prices (Wu & Brynjolfsson, 2015), ballot rolloff (Reilly, Richey, & Taylor, 2012), and even foreign tourist volume (Yang, Pan, Evans, & Lv, 2015).

Finally, using search data allows us to examine negative mental health outcomes that, while not severe enough to warrant medical intervention, still significantly affect people's lives. Even if someone does not feel sufficiently depressed or anxious to meet the clinical symptoms of mental illness, an increase in these negative emotions is nonetheless important. Furthermore, many people in the United States do not have sufficient access to mental health treatment, and searches for mental health issues are an indicator of mental distress in these medically underserved populations.

We find that while Democrats expressed serious mental distress about the election result on surveys, on average, the Democrats in our sample did not show an increase in mental-health-related searches after the election. However, Spanish-speaking Latinos showed a significant increase in searches for depression, anxiety, therapy, and antidepressant drugs. This finding suggests that while Democrats' descriptions of mental distress after the election had an element of expressive reporting, the mental consequences of Trump's ascendance were very real for Latinos.

Theory

Scholars have long noted the power of expressive motivations on political participation. The desire to express their political beliefs motivates voter turnout (Fiorina, 1976), campaign contributions (Shieh & Pan, 2010), and online blogging (de Zuniga, Bachmann, Hsu, & Brundidge, 2013; for a review, see Hamlin & Jennings, 2011). One especially salient category of expressive behavior is partisan cheerleading, or expressive reporting on surveys of factually inaccurate statements to communicate support for a respondent's political party (Bullock et al., 2013). For example, when respondents are asked about the country's recent economic performance, co-partisans of the president may respond with evaluations that are more optimistic than their true beliefs.

We propose a theory of "reverse cheerleading," where partisans misreport or exaggerate their negative evaluations of an out-partisan president's tenure to signal dislike of the opposing party. This can take the form of misreporting of objective facts about policy areas like the economy, or the form of over-reporting of other negative consequences of the presidency, including negative effects on mental health.

Reverse cheerleading can be a powerful motivator of partisans' behavior for three reasons. First, negative emotions have a much stronger effect on peoples' political behavior than positive emotions (Rozin & Royzman, 2001; Soroka, 2014). Given this well-documented negativity bias, partisans may have a stronger impulse to derogate the opposing party than to support their own.

Second, expressing negativity about the other party yields significant psychological rents. Derogation of a disliked outgroup increases self-esteem (Branscombe & Wann, 1994; Fein & Spencer, 1997), especially if the outgroup is perceived as threatening. Given the intense fear and negativity that partisans feel about the opposing party (Iyengar & Westwood, 2015), derogating Trump would be a powerful method of boosting Democrats' self image. Expressing that a Trump presidency has precipitated or exacerbated a mood disorder is an extreme form of derogation—"This presidency is so terrible, it's literally driving me crazy!"

Finally, expressing extreme negativity about Trump is an effective form of signalling to fellow Democrats that you are a co-partisan. In situations where partisans are less able to express in-group membership signals, they turn to out-group derogation to better communicate their partisanship (Matherly & Ghosh, 2017). The 2016 election provides an especially strong motivation for White Democrats to distance themselves from Trump specifically, as Trump expressed a number of statements denigrating various non-White racial and ethnic groups. Given the efforts by many White liberals to not appear as "racist" (Condor, Figgou, Abell, Gibson, & Stevenson, 2006), derogating Trump is a useful signalling method.

The 2016 election presents an especially useful test case for our theory for two reasons. First, partisans are even more negative toward the opposing party in 2016 than in prior years (Iyengar & Krupenkin, 2018). This has significant consequences for reporting of election-related stress. According to Gallup, in 2016, Democrats but not Republicans reported a significant increase of 8.5 percentage points in stress after the election. There was no similar associated increase in stress among Republicans after the 2008 election (Davis, 2017).

Second, focusing on Trump allows for the comparison of mental health effects among Democrats and groups that have been materially negatively affected by his policies. One group particularly negatively affected is immigrants from Mexico and other Spanish-speaking countries, especially people who still use Spanish as their primary language. While undocumented immigrants have suffered the greatest consequences of the increase in deportations under Trump, deportations severely disrupt immigrant family and community structures (Hagan, Castro, & Rodriguez, 2009, 2011), and thereby negatively affect both undocumented immigrants and the people closest to them, regardless of documentation status. And many legal residents and citizens are also directly caught up in aggressive anti-immigrant round-ups. The deleterious psychological effects of fear of deportation among Latino immigrants are well documented (Arbona et al., 2010) and have only grown worse since Trump became president (Viser, 2017).

Furthermore, increased anti-Latino discrimination during the Trump era (Chen, 2017) has significant mental health consequences (Torres, Driscoll, & Voell, 2012). Even among documented Latino immigrants, permanent residents, and citizens, the Trump presidency is likely associated with negative mental health outcomes.

Democrats, as partisans, are reporting Trump-related mental distress as a form of reverse cheerleading, while Latinos are reporting genuine mental distress. In a situation where partisans are engaging in reverse cheerleading, they will be vocal about their mental distress about the presidency in a public forum but will not engage in behaviors associated with that distress in private. On the other hand, individuals who are not engaging in reverse cheerleading may or may not share their mental distress publicly but will engage in private behaviors associated with mental health issues.

Method

To examine the effects of partisanship and ethnicity on mental health searches, we compiled a list of searches from over 1 million Bing users who had searched both before and after the 2016 presidential election. Bing is the second largest search engine in the United States, accounting for 21% of the search market share (comScore 2016).

To label partisan web searchers, we identified a subgroup of 300,000 Bing users who had also answered a question on MSN.com between 31/07/2016 and 08/11/2016 about their 2016 vote preference or party identification (in addition to questions about gender and age). Of these users, 67% were Republican and/or Trump voters, and 33% were Democratic and/or Clinton voters.[6] On average, the respondents in our dataset were 65% male. Of our respondents, 37% had a bachelor's degree. While race was not a regular MSN.com survey question, 87% of survey respondents on MSN.com on 15/08/2017 were White, while 8% were Black and 5% were Hispanic.

To identify Spanish-speaking Latino searchers, we compiled a list of U.S. Bing searchers who had searched in Spanish[7] at least once between 19/05/2016 and 15/12/2017, which amounted to a total of 16 million users. When we subsetted these to include users who searched both before and after the election, the number fell to around 700,000 users. While searching in Spanish is not a perfect proxy for Latino ethnicity because not all Latinos are Spanish speakers, many U.S. searchers who are searching in Spanish are Latino. We examined these users' searches in both Spanish and English.

To compare Spanish speaking and English-only Bing searchers, we randomly sampled 15 million user ids from the total number of unique U.S. users who had searched in English between 19/05/2016 and 15/12/2017. Again, we subsetted to limit our sample only to users who had searched both before and after the 2016 presidential election, yielding about 200,000 unique English users.

While search data have many advantages over survey data, there are several drawbacks. First, search data in general are nonrepresentative. Even in the United States, lower income people struggle to achieve consistent access to the Internet (Gonzales, 2016). Furthermore, different demographic groups use the Internet differently, suggesting that some types of users may be overrepresented in search logs (Van Deursen & Van Dijk, 2014). Thus, Bing users are not perfectly representative of the population in general: gender is balanced, but it is slightly more educated than the general population with 50% having bachelor's degrees or more. Age is pretty good with 29% 18 to 34, 18% 35 to 44, 20% 45 to 54, 17% 55 to 64, and 17% 65+ year olds.

To account for the nonrepresentativeness of our sample, we both controlled for demographics and used an over-time design that measured changes in the same respondent pool over time. We restricted searchers to those who had searched at least once both before and after the election, to prevent new influxes of searchers from unduly influencing results.

To identify mental health issues, we examined searches between 19/05/2016 and 15/12/2017 for six sets of mental-health-related keywords and their Spanish translations—"depression," "anxiety," "stress," "suicide"/"suicidal," "therapy," as well as searches for general and specific antidepressants and anti-anxiety medications (see Appendix for details of medication list). For users identified as Spanish-speaking, we looked at mental health searches in both English and Spanish on the English and the Spanish Bing websites, since many users searched on both.

These six terms encompass mental distress and illness to varying degree and severity. "Stress," the least severe term, could be searched by someone looking for stress relief, and does not indicate mental illness. On the contrary, terms such as *depression* and *anxiety* may be searched by people who have identified in themselves some of the symptoms of these conditions, and are wondering whether they have an illness. Finally, terms such as *therapy* and specific medications are likely searched by people who have already decided that they are in need of mental health treatment. In general, mental-health-related searches were relatively rare, which is not surprising, given that the stigma against mental illness may significantly influence whether people will even seriously consider treatment.

To analyze the data, we used a binomial logit regression with controls for day of the week, seasonality, and age and gender (when available). Searchers who had searched for a mental-health-related term on a specific day were coded as "1" for the day on which they searched, and "0" otherwise. Standard errors were clustered by user ID.

Measure Validation

To ensure that our Bing search measures were valid and were correlated with real rates of mental health problems, we relied on two tests. First, we measured seasonality in Bing searches for "depression." Google searches for depression are highly seasonal, with significant declines in searches during the summer months (Ayers, Althouse, Allem, Rosenquist, & Ford, 2013; Yang, Huang, Peng, & Tsai, 2010). These seasonal patterns are correlated with real-world indicators of depression (Harmatz et al., 2000). If our data are a valid indicator of mental health, we should see a decrease in searches for depression during the summer months. Figure 1 shows that our data confirm these expectations—people are least likely to search for "depression" in the summer.

Our second test relates to the relative incidence of depression and anxiety among men and women. Women tend to be about twice as likely as men to be diagnosed with depression (Kessler et al., 2003) and anxiety (Hettema, Prescott, & Kendler, 2001). While some of this variation in diagnosis may be due to gendered differences in seeking help for mental illness (Kilmartin, 2005), women should still be more likely to search for both depression and anxiety. Figure 2 corroborates this prediction—Women are about twice as likely as men to search for depression. The results of these two tests
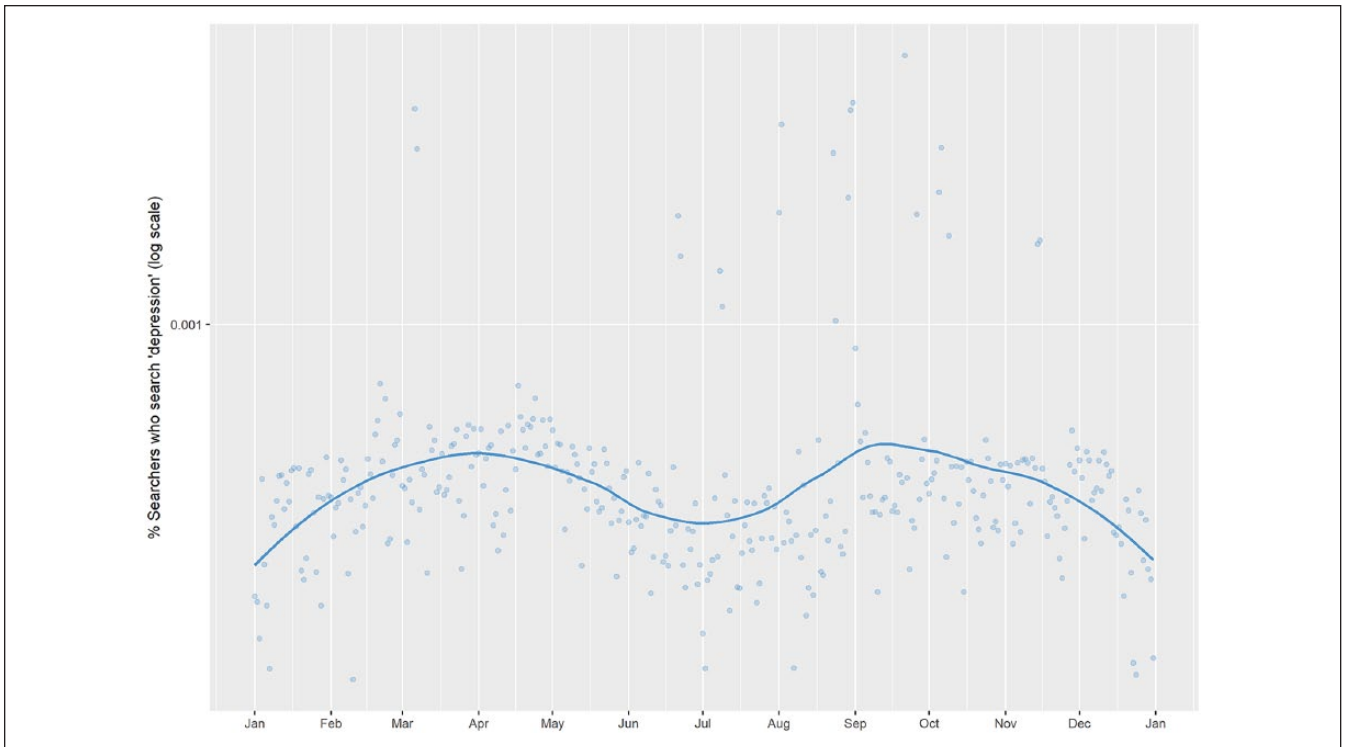
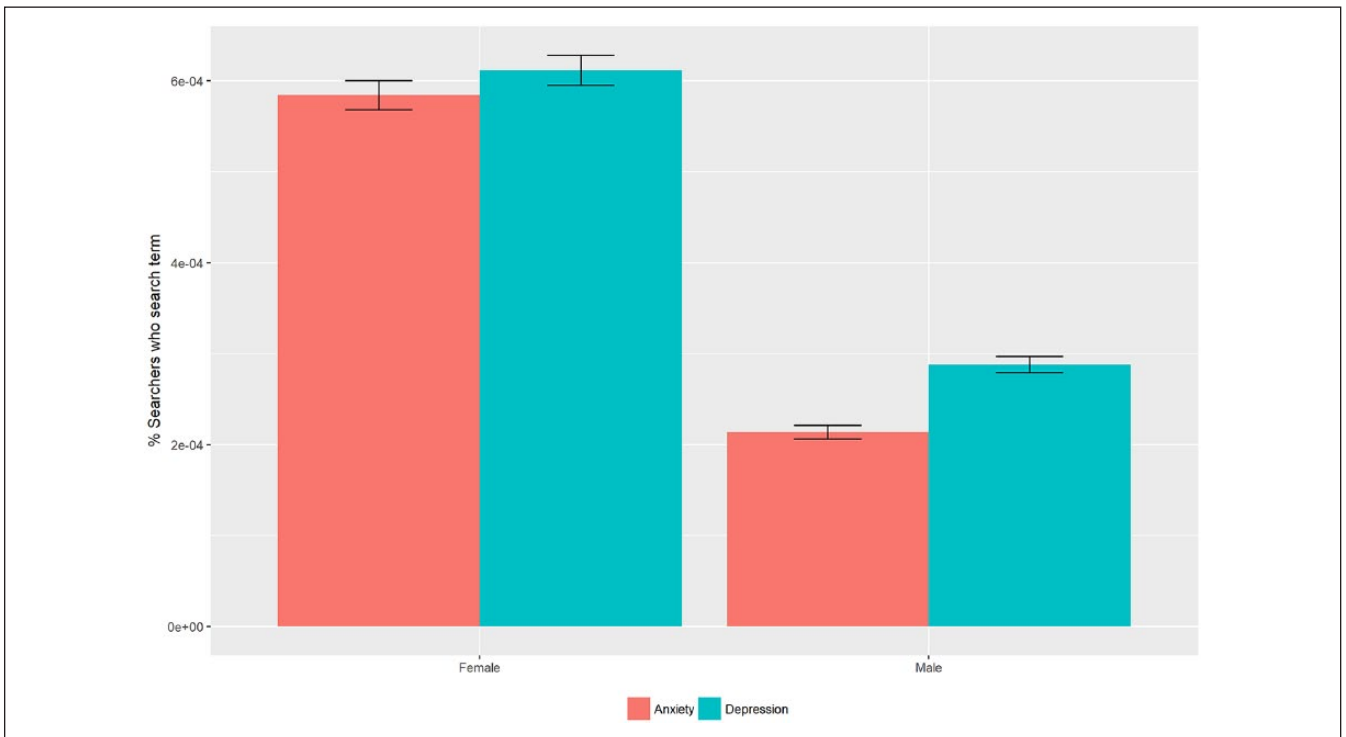**Figure 1.** Seasonality in searches for "depression."

Figure 2. Searches for depression and anxiety by gender.

confirm the validity of Bing searches for mental-health-related terms as an indicator of real-world mental illness.

To test the validity of our partisanship measure, we relied on two tests. First, for respondents who answered survey
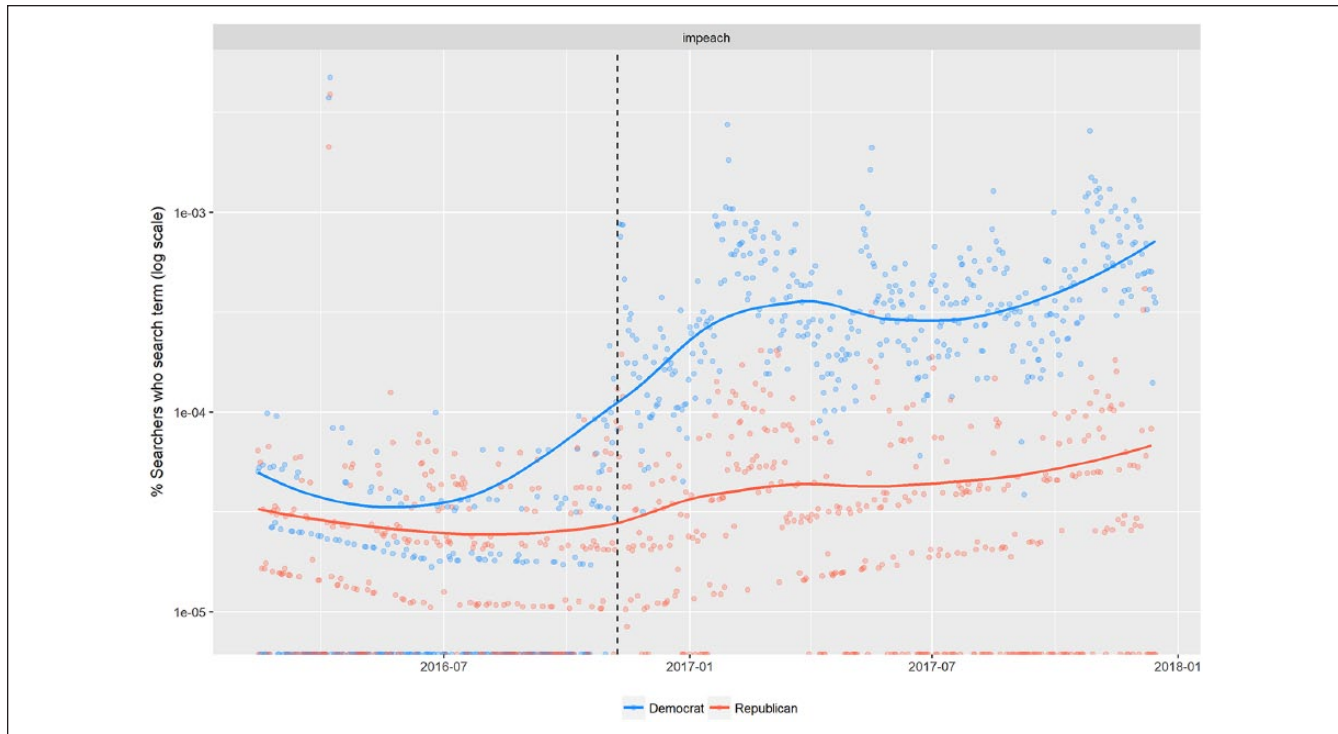
Figure 3. Searches for "impeach" among democrats and republicans.

questions about both party identification and prospective 2016 vote choice, we looked at the consistency between these two items. In our sample, 90% of Republicans responded that they were going to vote for Trump, and 90% of Democrats responded that they would vote for Clinton. This is comparable with the rate among the general population, where 89% of Democrats and 88% of Republicans voted for their party's nominee in 2016.

Our second test is a positive placebo test for the effect of partisanship on searches. We examined search rates for the term *impeach* among both Democrats and Republicans between 19/05/2016 and 15/12/2017. Given the fervor for impeaching Trump among Democrats,[8] searches for the term *impeach* ought to increase significantly among Democrats after the election. On the contrary, few Republicans have an interest in impeaching Trump, so the election should have no effect on their searches for the term *impeach*. Figure 3 shows that the percentage of Democrats who searched for "impeach" dramatically increased after the election, while the percentage of Republicans stayed the same. This is consistent with our expectations and further confirms the validity of our measure of partisanship.

Results

Consistent with our theory of reverse cheerleading, we find no significant partisan election effect for mental-health-related searches (Figure 4). Democrats did not experience a

greater increase in searches for any of the six sets of terms than Republicans. While Republicans were less likely overall than Democrats to search for all six mental-health-related terms, there was no significance on the interaction between party and the post-election dummy variable (Table 1). Even the least severe of these terms, *stress*, had no partisan effect. Furthermore, while none of the interaction coefficients were significant, four of the six were in the opposite direction than expected, further suggesting that there was no increase in mental health searches among the Democrats in our sample after the election.

As expected, gender and age had a significant effect on searches for mental-health-related terms—Women and younger searchers were more likely to search for mental-health-related terms. Women are significantly more likely to be diagnosed with both anxiety and depression, and as such should be more likely to search for these terms. There was also no consistent postelection pattern among searchers in general—While searches for "stress" and "therapy" had a statistically significant increase, searches for "suicide" had a decrease, and searches for "anxiety," "depression," and antidepressant drugs showed no statistically significant changes.

On the contrary, we find a very clear difference between the search behaviors of English- and Spanish-speaking searchers (Figures 5 and 6). English-speaking searchers showed very little difference between their mental health search behaviors before and after the election. Spanish-speaking searchers, however, showed a clear and sustained
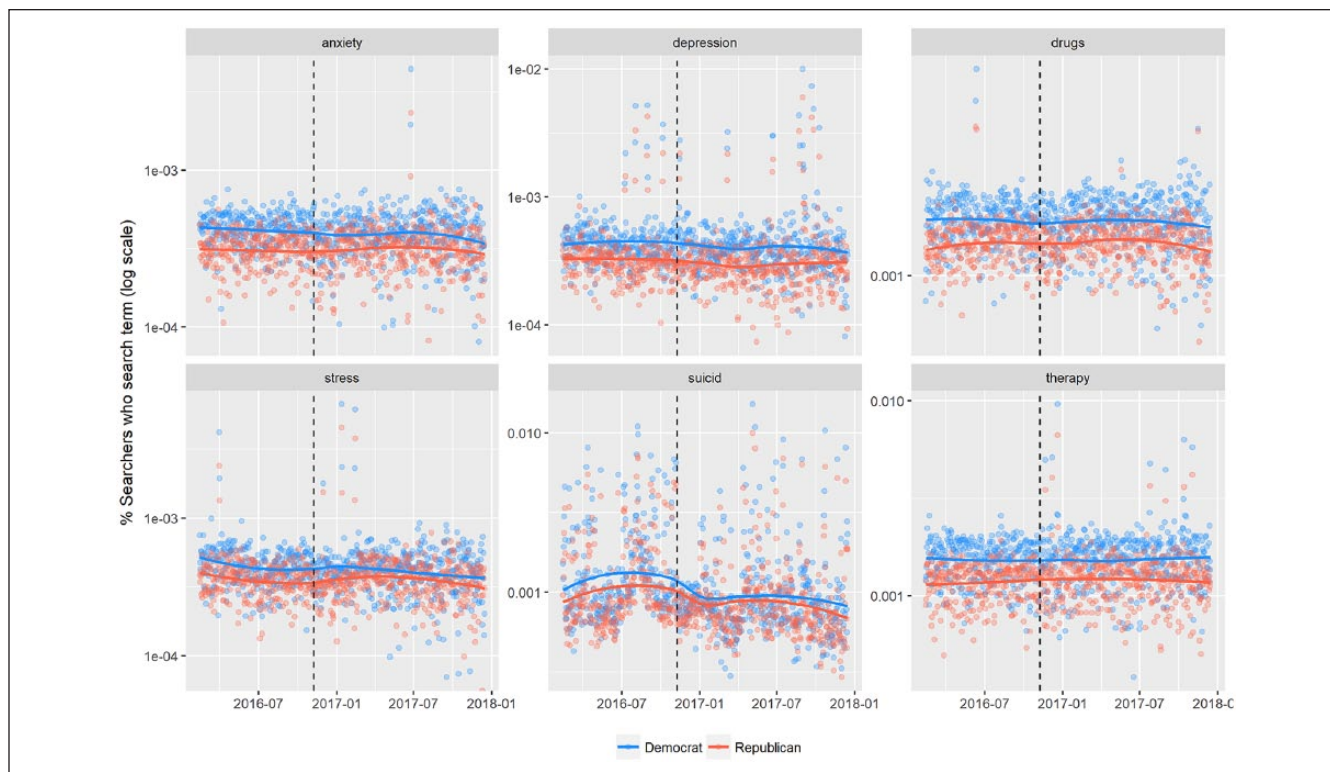
Figure 4. Frequency of searches for mental health term—Democrat versus Republican.

Table 1. Regressions on Frequency of Searches for Mental Health Term—Democrat Versus Republican.

Dependent variable

	Depression	Anxiety	Stress
Republican	−0.307*** (0.043)	−0.290*** (0.058)	−0.156*** (0.045)
Post-Election	0.014 (0.035)	−0.061 (0.048)	0.131*** (0.042)
Republican × Post	−0.016 (0.047)	0.090 (0.065)	−0.067 (0.053)
Age	−0.168*** (0.015)	−0.131*** (0.022)	−0.118*** (0.015)
Female	0.266*** (0.020)	0.432*** (0.030)	0.235*** (0.018)
Day of Week	X	X	X
Seasonality	X	X	X
Constant	−7.703*** (0.085)	−8.000*** (0.125)	−7.684*** (0.080)

Dependent variable

	Therapy	Drugs	Suicide
Republican	−0.207*** (0.034)	−0.166*** (0.037)	−0.225*** (0.032)
Post-Election	0.057** (0.028)	−0.008 (0.027)	−0.318*** (0.027)
Republican × Post	0.011 (0.036)	0.003 (0.036)	0.037 (0.041)
Age	−0.019 (0.012)	0.018 (0.018)	−0.214*** (0.013)
Female	0.362*** (0.016)	0.403*** (0.021)	0.025 (0.019)
Day of Week	X	X	X
Seasonality	X	X	X
Constant	−7.045*** (0.065)	−7.141*** (0.102)	−5.527*** (0.068)

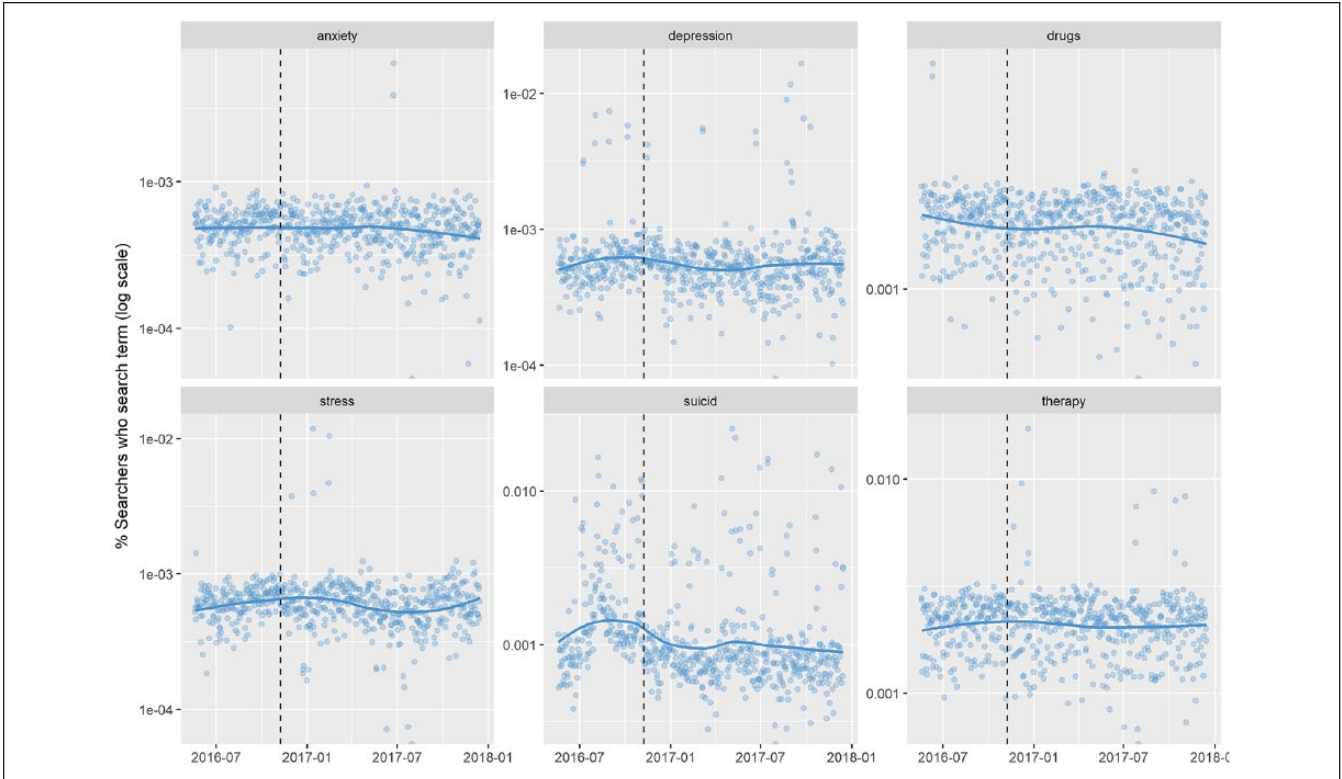*$p < .1$. **$p < .05$. ***$p < .01$.

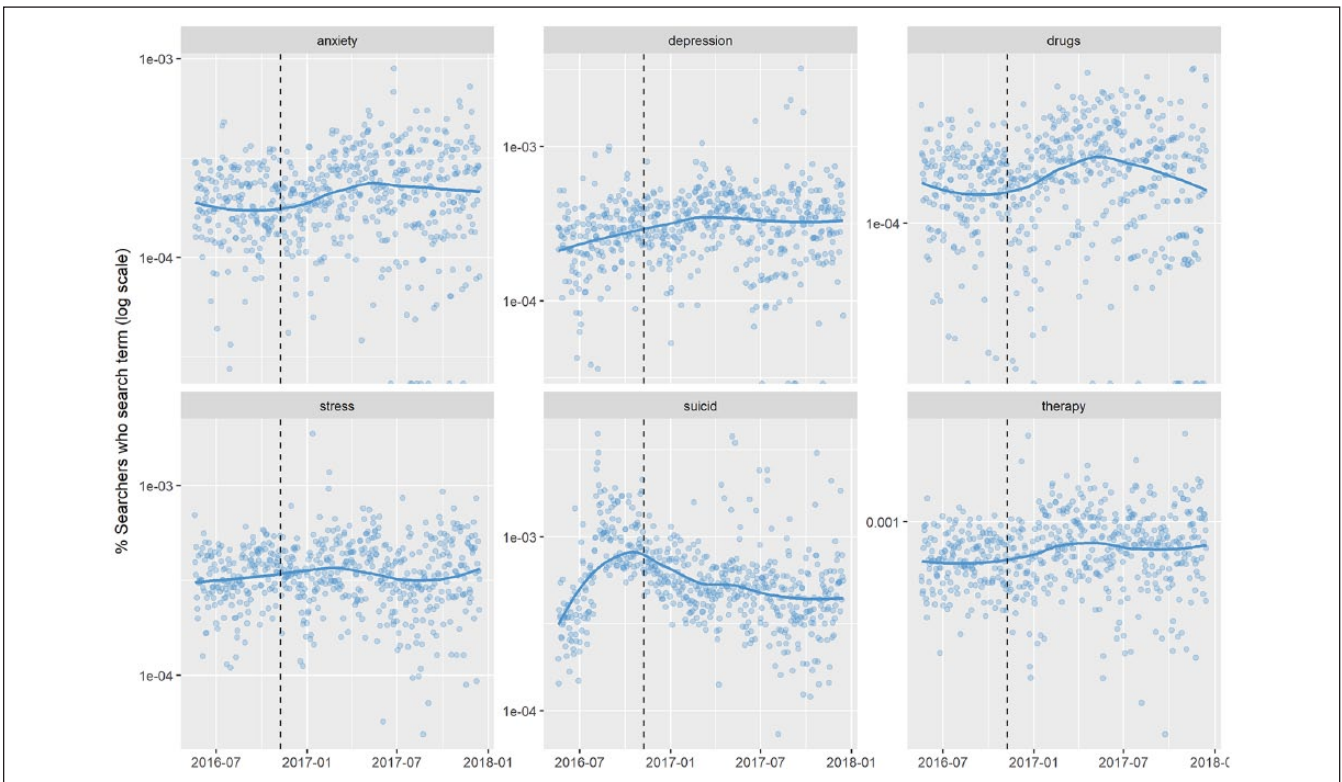**Figure 5.** Frequency of searches for mental health term—English speaking.

Figure 6. Frequency of searches for mental health term—Spanish speaking.

Table 2. Regressions on frequency of Searches for Mental Health Term—Spanish Versus English.

Dependent variable			
	Depression	Anxiety	Stress
Spanish	−0.983*** (0.038)	−0.980*** (0.050)	−0.609*** (0.036)
Post-Election	−0.067*** (0.025)	−0.040 (0.039)	0.032 (0.028)
Spanish × Post	0.274*** (0.042)	0.176*** (0.060)	−0.056 (0.043)
Day of Week	X	X	X
Seasonality	X	X	X
Constant	−7.438*** (0.033)	−7.663*** (0.042)	−7.340*** (0.033)

Dependent variable			
	Therapy	Drugs	Suicide
Spanish	−1.108*** (0.030)	−2.467*** (0.051)	−0.932*** (0.029)
Post-Election	0.035** (0.017)	−0.067*** (0.026)	−0.449*** (0.020)
Spanish × Post	0.084*** (0.030)	0.206*** (0.054)	0.068* (0.035)
Day of Week	X	X	X
Seasonality	X	X	X
Constant	−6.158*** (0.023)	−6.217*** (0.032)	−6.005*** (0.022)

*$p < .1$. **$p < .05$. ***$p < .01$.

increase in searches for "therapy," "depression," "anxiety," and mental-health-related drugs. While there was a spike in searches for suicide-related terms for both Spanish and English speakers in August 2016, this spike was largely associated with searches for the movie "Suicide Squad."

The differences between Spanish- and English-speaking searchers were statistically significant for five of the six terms: "therapy," "depression," "anxiety," "suicide"/"suicidal," and antidepression/anti-anxiety medications (Table 2). This clear and consistent result shows that Spanish-speaking searchers, and by proxy, Latinos, were indeed more likely to search for mental-health-related terms after the election than before, while English-only searchers showed no consistent change.

In summary, only Spanish-speaking searchers had a real increase in mental-health-related searches after the election. Neither Democrats nor English speakers at large changed their search rate for these terms after Trump's election.[9]

Conclusion

Search engine data provide an unparalleled look into peoples' inner thoughts and feelings. Under a shroud of anonymity, stripped of the need to appear respectable to survey researchers or to their peers, people search for the information they genuinely want and need. Mental health remains a stigmatized topic for many, and looking at search data provides a useful metric for understanding how current events may influence the well being of various communities.

Democrats and Latinos provided similar mental health survey responses, and therapists and mental health workers reported significant mental distress among both Latinos and Democrats in the aftermath of the 2016 election. Despite these similarities, their search behaviors have been dramatically different. It is important to note that while many Democrats are Latino and many Latinos are Democratic, the Democratic party remain majority-White.

While Spanish speakers both reported significant stress after Donald Trump's election, and showed an increase in searches for mental-health-related terms, the same was not true for Democrats: Democrats showed no statistically significant change in searches. Democrats were no more likely to search for stress relief, nor mental illness, nor treatment for mental illness before or after the election. This suggests that some Democrats reported mental health declines after Trump's election as a form of reverse cheerleading, where partisans report evaluations that are more negative than their true beliefs to reflect badly on a president of the opposing party.

These differences highlight the importance of supplementing survey data with behavioral data. While in some instances, partisan behavior matches their survey responses (e.g., Krupenkin et al., 2018; Lerman et al., 2017; Gerber and Huber, 2009), in others, it does not (e.g., Bullock et al., 2013; Prior et al., 2015).

Clearly, many Democrats were, and are, upset about the Republican victory in 2016; these findings do not invalidate those feelings but put their depth and related actions into perspective. We do not see a widespread, sustained push for mental-health-related help from the Internet from Democrats. While, at the margin, some Democrats may have been influenced to search for these terms, it was not enough to make a statistical significant jump in Democratic searchers. At the same time, with similarly sized dataset, there was enough of

an increase in Latinos to register a statistically significant jump. Democrats with increased mental distress that just turned to friends and family (or did not address or addressed their distress without any help) would not be reflected in our results, nor would Democrats who turned their distress into activism. Democrats already seeking treatment who may have increased their treatment, that would not be reflected in our results.

While these results are provocative, several important questions remain. First, on which topics are partisan respondents more likely to engage in cheerleading? Do topics for which objective facts are easily accessible (the economy) prompt less cheerleading than questions whose truth is known only to the respondent (the respondent's level of mental distress)? Second, how do the incentives for reverse cheerleading differ from those for regular partisan cheerleading? Given many partisans' intense dislike of the opposing party, reverse cheerleading may actually be a more common occurrence than regular cheerleading, as partisans clamor to tear down the opposition rather than build up their party. Finally, under what conditions are partisans most likely to cheerlead? Would partisans engage in more cheerleading if they believe that they are being surveyed by an organization affiliated with their own party, or with the opposing party?

Appendix

Antidepressant and Anti-Anxiety Medication Search Terms

English

Antidepressant*
St. Johns Wort
Selective serotonin reuptake inhibitor*
SSRI
Serotonin and norepinephrine reuptake inhibitor*
SNRI
Monoamine oxidase inhibitor*
MAOI
fluoxetine
citalopram
escitalopram
paroxetine
fluvoxamine
desvenlafaxine
duloxetine
levomilnacipran
venlafaxine
amitriptyline
amoxapine
clomipramine
desipramine
doxepin
imipramine
nortriptyline
protriptyline
trimipramine
Maprotiline
Bupropion
vilazodone
nefazodone
trazodone
vortioxetine
isocarboxazid
phenelzine
selegiline
tranylcypromine
Mirtazapine
olanzapine
alprazolam
clonazepam
diazepam
lorazepam
oxazepam
chlordiazepoxide
propranolol
atenolol
oxalate
buspirone
Valproate
Pregabalin
Gabapentin
Zoloft
Prozac
Celexa
Lexapro
Paxil
Luvox
Pristiq
Cymbalta
Fetzima
Effexor
Anafranil
Norpramin
Tofranil
Pamelor
Surmontil
Wellbutrin
Viibryd
Oleptro
Brintellix
Marplan
Nardil
Emsam
Parnate
Remeron
Symbyax
Xanax
Klonopin

Valium
Ativan
Serax
Librium
Inderal
Tenormin
Aventyl
Elavil
Sinequan
Desyrel
BuSpar
Depakote
Lyrica
Neurontin
Sarafem
Pexeva
Khedezla
Forfivo
Pertofrane
Adapin
Brisdelle
Aplenzin

Spanish

antidepresivo*
hipérico
hipericon
corazoncillo
hierba de san juan
Inhibidores de serotonina y norepinefrina
SSRI
Inhibidores selectivos de recaptación de serotonina
SNRI
Inhibidores de la monoaminoxidasa
MAOI
fluoxetina
citalopram
escitalopram
paroxetina
fluvoxamina
desvenlafaxina
duloxetina
levomilnacipran
venlafaxina
amitriptilina
amoxapina
clomipramina
desipramina
doxepin
imipramina
nortriptilina
protriptilina
trimipramina
Maprotilina

Bupropion
vilazodone
nefazodona
trazodona
vortioxetina
isocarboxazid
phenelzine
selegilina
tranylcypromine
Mirtazapina
olanzapina
alprazolam
clonazepam
diazepam
lorazepam
oxazepam
Clordiazepóxido
propranolol
atenolol
oxalato
buspirona
Valproate
Pregabalina
Gabapentina
Zoloft
Prozac
Celexa
Lexapro
Paxil
Luvox
Pristiq
Cymbalta
Fetzima
Effexor
Anafranil
Norpramin
Tofranil
Pamelor
Surmontil
Wellbutrin
Viibryd
Oleptro
Brintellix
Marplan
Nardil
Emsam
Parnate
Remeron
Symbyax
Xanax
Klonopin
Valium
Ativan
Serax
Librium

Inderal
Tenormin
Aventyl
Elavil
Sinequan
Desyrel
BuSpar
Depakote
Lyrica
Neurontin
Sarafem
Pexeva
Khedezla
Forfivo
Pertofrane
Adapin
Brisdelle
Aplenzin

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Notes

1. Dana Milbank, a columnist for the Washington Post, summarized Democrats' complaints thusly: "From the left came a flood of responses from people experiencing all manner of symptoms, real or imagined, of what I called Trump Hypertensive Unexplained Disorder: Disturbed sleep. Anger. Dread. Weight loss. Overeating. Headaches. Fainting. Irregular heartbeat. Chronic neck pain. Depression. Irritable bowel syndrome. Tightness in the chest. Shortness of breath. Teeth grinding. Stomach ulcer. Indigestion. Shingles. Eye twitching. Nausea. Irritability. High blood sugar. Tinnitus. Reduced immunity. Racing pulse. Shaking limbs. Hair loss. Acid reflux. Deteriorating vision. Stroke. Heart attack."
2. http://www.apa.org/news/press/releases/2017/02/stressed-nation.aspx
3. http://edition.cnn.com/election/results/exit-polls
4. http://www.pewresearch.org/fact-tank/2017/09/25/key-facts-about-unauthorized-immigrants-enrolled-in-daca/
5. Republicans showed no change
6. For respondents whose vote choice and party ID were known, 90% of partisans responded they would vote for their party's candidate.
7. Searched in Spanish means that they searched using Spanish Bing, accessible at https://www.bing.com/?cc=es
8. https://www.prri.org/research/american-values-survey-2017/

9. The authors did a similar analysis, comparing women with men, and found that neither women nor men changed their mental-health-search-related behaviors after the election.

References

Arbona, C., Olvera, N., Rodriguez, N., Hagan, J., Linares, A., & Wiesner, M. (2010). Acculturative stress among documented and undocumented Latino immigrants in the United States. *Hispanic Journal of Behavioral Sciences*, *32*, 362-384.

Ayers, J. W., Althouse, B. M., Allem, J.-P., Rosenquist, J. N., & Ford, D. E. (2013). Seasonality in seeking mental health information on Google. *American Journal of Preventive Medicine*, *44*, 520-525.

Branscombe, N. R., & Wann, D. L. (1994). Collective self-esteem consequences of outgroup derogation when a valued social identity is on trial. *European Journal of Social Psychology*, *24*, 641-657.

Bullock, J. G., Gerber, A. S., Hill, S. J., & Huber, G. A. (2013). *Partisan bias in factual beliefs about politics* (Technical report). Cambridge, MA: National Bureau of Economic Research.

Burnett-Zeigler, I. (2016, November). *How Donald Trump affects therapy patients*. Retrieved from http://time.com/4583628/donald-trump-therapy-patients//

Chen, M. (2017, March). Donald Trump's rise has coincided with an explosion of hate groups. *The Nation*. Retrieved from https://www.thenation.com/article/donald-trumps-rise-has-coincided-with-an-explosion-of-hate-groups/

comScore. (2016, March). *Comscore releases February 2016 U.S. desktop search engine rankings*. Retrieved from https://www.comscore.com/Insights/Rankings/comScore-Releases-February-2016-US-Desktop-Search-Engine-Rankings?cs_edgescape_cc=IN

Condor, S., Figgou, L., Abell, J., Gibson, S., & Stevenson, C. (2006). "They're not racist. . ." prejudice denial, mitigation and suppression in dialogue. *British Journal of Social Psychology*, *45*, 441-462.

Davis, A. (2017, August 4). *U.S. daily worry easing, but still up since trump election*. Retrieved from https://news.gallup.com/poll/215213/daily-worry-easing-trump-election.aspx

de Zuniga, H. G., Bachmann, I., Hsu, S.-H., & Brundidge, J. (2013). Expressive versus consumptive blog use: Implications for interpersonal discussion and political participation. *International Journal of Communication*, *7*, 1538-1559.

Fein, S., & Spencer, S. J. (1997). Prejudice as self-image maintenance: Affirming the self through derogating others. *Journal of Personality and Social Psychology*, *73*, 31-44.

Fiorina, M. P. (1976). The voting decision: Instrumental and expressive aspects. *The Journal of Politics*, *38*, 390-413.

Flynn, D. J., Nyhan, B., & Reifler, J. (2017). The nature and origins of misperceptions: Understanding false and unsupported beliefs about politics. *Political Psychology*, *380*(S1), 127-150.

Gerber, A. S., & Huber, G. A. (2009). Partisanship and economic behavior: Do partisan differences in economic forecasts predict real economic behavior? *American Political Science Review*, *103*, 407-426.

Gift, K., & Gift, T. (2015). Does politics influence hiring? Evidence from a randomized experiment. *Political Behavior*, *37*, 653-675.

Gonzales, A. (2016). The contemporary us digital divide: From initial access to technology maintenance. *Information, Communication & Society*, *19*, 234-248.

Hagan, J., Castro, B., & Rodriguez, N. (2009). The effects of U.S. deportation policies on immigrant families and communities: Cross-border perspectives. *The North Carolina Law Review*, *88*, 1799.

Hagan, J. M., Rodriguez, N., & Castro, B. (2011). Social effects of mass deportations by the United States government, 2000–10. *Ethnic and Racial Studies*, *34*, 1374-1391.

Hamlin, A., & Jennings, C. (2011). Expressive political behaviour: Foundations, scope and implications. *British Journal of Political Science*, *41*, 645-670.

Harmatz, M. G., Well, A. D., Overtree, C. E., Kawamura, K. Y., Rosal, M., & Ockene, I. S. (2000). Seasonal variation of depression and other moods: A longitudinal approach. *Journal of Biological Rhythms*, *15*, 344-350.

Hettema, J. M., Prescott, C. A., & Kendler, K. S. A. (2001). A population-based twin study of generalized anxiety disorder in men and women. *The Journal of Nervous and Mental Disease*, *189*, 413-420.

Huber, G. A., & Malhotra, N. (2017). Political homophily in social relationships: Evidence from online dating behavior. *The Journal of Politics*, *79*, 269-283.

Iyengar, S., Konitzer, T., & Tedin, K. (2017). The home as a political fortress: Family agreement in an era of polarization. *The Journal of Politics*, *80*, 1326-1338.

Iyengar, S., & Krupenkin, M. (2018). The strengthening of partisan affect. *Advances in Political Psychology*, *39*, 201-218.

Iyengar, S., Sood, G., & Lelkes, Y. (2012). Affect, not ideology: A social identity perspective on polarization. *Public Opinion Quarterly*, *76*, 405-431.

Iyengar, S., & Westwood, S. J. (2015). Fear and loathing across party lines: New evidence on group polarization. *American Journal of Political Science*, *59*, 690-707.

Kessler, R. C., Berglund, P., Demler, O., Jin, R., Koretz, D., Merikangas, K. R., . . . Wang, P. S. (2003). The epidemiology of major depressive disorder: Results from the National Comorbidity Survey Replication (NCS-R) *The Journal of the American Medical Association*, *289*, 3095-3105.

Kilmartin, C. (2005). Depression in men: Communication, diagnosis and therapy. *Journal of Men's Health & Gender*, *2*, 95-99.

Krupenkin, M. (2018, October). *Does partisanship affect compliance with government recommendations?* (Working paper). Retrieved from https://ssrn.com/abstract=3290237

Krupenkin, M., Hill, S., & Rothschild, D. (2018, April). *Partisanship and risky financial decisions* (Working paper). Retrieved from https://static1.squarespace.com/static/5ac4569925bf02b3f05a651f/t/5ac6a46e352f539a7c92a5b9/1522967681650/FinancialDecisions.pdf

Lerman, A. E., Sadin, M. L., & Trachtman, S. (2017). Policy uptake as political behavior: Evidence from the affordable care act. *American Political Science Review*, *111*, 755-770.

Matherly, T., & Ghosh, A. P. (2017). Is what you feel what they see? Prominent and subtle identity signaling in intergroup interactions. *Journal of Behavioral Decision Making*, *30*, 828-842.

McCarthy, M. J. (2010). Internet monitoring of suicide risk in the population. *Journal of Affective Disorders*, *122*, 277-279.

Nicholson, S. P., Coe, C. M., Emory, J., & Song, A. V. (2016). The politics of beauty: The effects of partisan bias on physical attractiveness. *Political Behavior*, *38*, 883-898.

Prior, M., Sood, G., & Khanna, K. (2015). You cannot be serious: The impact of accuracy incentives on partisan bias in reports of economic perceptions. *Quarterly Journal of Political Science*, *100*, 489-518.

Reilly, S., Richey, S., & Taylor, J. B. (2012). Using Google search data for state politics research: An empirical validity test using roll-off data. *State Politics & Policy Quarterly*, *12*, 146-159.

Ritter, Z., & Tsabutashvili, D. (2017, August 10). *Hispanics' emotional well-being during the trump era*. Retrieved from https://news.gallup.com/opinion/polling-matters/215657/hispanics-emotional-during-trump-era.aspx

Rozin, P., & Royzman, E. B. (2001). Negativity bias, negativity dominance, and contagion. *Personality and Social Psychology Review*, *5*, 296-320.

Schaffner, B. F., & Luks, S. (2018). Misinformation or expressive responding? What an inauguration crowd can tell us about the source of political misinformation in surveys. *Public Opinion Quarterly*, *82*, 135-147.

Shieh, S., & Pan, W.-H. (2010). Individual campaign contributions in a Downsian model: Expressive and instrumental motives. *Public Choice*, *145*, 405-416.

Soroka, S. N. (2014). *Negativity in democratic politics: Causes and consequences*. New York, NY: Cambridge University Press.

Stephens-Davidowitz, S. (2017). *Everybody lies: Big data, new data, and what the internet can tell us about who we really are*. New York, NY: HarperCollins.

Torres, L., Driscoll, M. W., & Voell, M. (2012). Discrimination, acculturation, acculturative stress, and latino psychological distress: A moderated mediational model. *Cultural Diversity and Ethnic Minority Psychology*, *18*, 17-25.

Van de Mortel, T. F. (2008). Faking it: Social desirability response bias in self-report research. *Australian Journal of Advanced Nursing*, *25*(4), 40-48.

Van Deursen, A., & Van Dijk, J. (2014). The digital divide shifts to differences in usage. *New Media & Society*, *16*, 507-526.

Viser, M. (2017, November 25). *Fear of trump crackdown haunts undocumented immigrants*. Retrieved from https://www.bostonglobe.com/news/politics/2017/11/25/fear-trump-crackdown-haunts-daily-life-undocumented-immigrants/LozpzJlIpZS0mxQ34QMVvK/story.html

Vosen, S., & Schmidt, T. (2011). Forecasting private consumption: Survey-based indicators vs. Google trends. *Journal of Forecasting*, *30*, 565-578.

Wahl, O. F. (1999). Mental health consumers' experience of stigma. *Schizophrenia Bulletin*, *25*, 467-478.

White, R. W., & Horvitz, E. (2013a). From health search to healthcare: Explorations of intention and utilization via query logs and user surveys. *Journal of the American Medical Informatics Association*, *21*, 49-55.

White, R. W., & Horvitz, E. (2013b). From web search to healthcare utilization: Privacy-sensitive studies from mobile data. *Journal of the American Medical Informatics Association*, *20*, 61-68.

Witters, D. (2017). *Americans' well-being declines in 2017*. Retrieved from https://news.gallup.com/poll/221588/americans-declines-2017.aspx

Wu, L., & Brynjolfsson, E. (2015). The future of prediction: How google searches foreshadow housing prices and sales. In A. S. M. Goldfarb, S. M. Greenstein, & C. E. Tucker (Eds.), *Economic analysis of the digital economy* (pp. 89-118). Chicago, IL: The University of Chicago Press.

Yang, A. C., Huang, N. E., Peng, C.-K., & Tsai, S.-J. (2010). Do seasons have an influence on the incidence of depression? The use of an internet search engine query data as a proxy of human affect. *PLoS ONE*, *5*(10), e13728.

Yang, X., Pan, B., Evans, J. A., & Lv, B. (2015). Forecasting Chinese tourist volume with search engine data. *Tourism Management*, *46*, 386-397.

Yom-Tov, E., Borsa, D., Cox, I. J., & McKendry, R. A. (2014). Detecting disease outbreaks in mass gatherings using internet data. *Journal of Medical Internet Research*, *16*(6), e154.

Author Biographies

Masha Krupenkin is a political science PhD candidate at Stanford. Her research uses individual-level web search data to examine partisans' revealed preferences about government, race, and the media.

David Rothschild is an economist at Microsoft Research. His work pushes the boundaries on varying data and methods: polling, prediction markets, social media and online data, and large behavioral and administrative data. His work focuses on solving practical and interesting questions including: mapping and updating public opinion, the market for news, effect of advertising, finance, and an economist take on public policy.

Shawndra Hill is a senior researcher in the Computational Social Science Group at Microsoft Research NYC. Generally, she studies data mining, machine learning and statistical relational learning and their alignment with business problems.

Elad Yom-Tov is a principal researcher at Microsoft Research and a visiting scientist at the Technion, Israel. The focus of his work is on using Internet data to improve health and medicine by applying tools from machine learning and information retrieval.