

# #ReproHealth: A State-Based Investigation of Reproductive Health Rights Policy and Social Media Activity

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## Abstract

Social media is a critical avenue for national discourse – raising awareness, advocating for specific campaigns, mocking current events, and truly revealing the pulse of a nation through the lens of its citizens. With the current fascination regarding big data, there is a push towards discovering correlations between one's behavior online and their actions in the physical world. Our research seeks to establish a correlation between social media activity and policy in the context of reproductive health. We analyzed state-based reproductive rights policy along with Twitter activity related to reproductive health issues, and found a significant correlation between online political discourse within states and those states' political and policy-oriented leanings on reproductive health.

**Keywords:** Reproductive health; social media; Twitter; policy

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## 1 Introduction

In this paper, we seek to identify the nature of correlation between discussions of reproductive health on social media with reproductive health legislation and policy across the United States. To do so, we analyzed Twitter data and state reproductive health rights policy reports to investigate the correlation on a state-level. Results revealed that in fact there is a correlation: states with a higher number of anti-choice tweets are significantly likely to have more anti-choice political legislation. Using existing literature on the role of social media in advocacy and addressing various social media usage phenomena, we discuss the stigmatized nature of online reproductive health discourse.

## 2 Background

Sociologist Dhiraj Murthy (2013) expressed that a core benefit of social media is the increased visibility of the commoner. However, we were interested in whether that visibility asserts a form of power to the users of the social media platform. According to Murthy, the answer is no; social media does not necessarily shift the power out of the hands of those in power (Murthy, 2013). Citizens speaking up on social media may, however, have an important societal influence or political impact. The phenomenon of using social media and online activity as a form of activism in place of traditional political involvement is known as slacktivism. Henrik Serup Christensen addressed this topic and stated that there is not enough evidence to determine whether or not online political activities influence political decision-making. However, social media discourse may have some influence on specific campaigns (Christensen, 2011). We contribute to the literature on social media, politics, and policy by understanding how social media content correlates with state legislation in the context of reproductive rights.

## 3 Methods

Our analysis included a mixture of qualitative coding and statistical analysis to understand the correlation between reproductive rights policy and social media activity. Pro-Choice America's annual NARAL report<sup>1</sup> provided a useful measure of state reproductive health legislation (NARAL, 2015). We translated

<sup>1</sup> National Abortion Rights Action League Pro-Choice America's *Who Decides? The Status of Women's Reproductive Health Rights in the United States* provides an in-depth analysis of each state's reproductive health policies and legislation and assigns a letter grade to each state (NARAL, 2015).

Pro-Choice	Anti-Choice
#prochoice	#proabortion
#mybodymyrights	#prolife
#menforchoice	#praytoendabortion
#choicematters	#chooseadoption
#herobamacare	#ProLife4All
#ihadnanabortion	#abortjesus
#ReproHealth	#standtrueprolife

Table 1. Hashtags gathered (designation based on political leanings).

NARAL's alphabetical grading system for each state into a numerical score that could be used for quantitative analysis. We then generated a list of searchable Twitter hashtags that related to reproductive health (see Table 1). We selected the hashtags to use via preliminary online research, seeking those that reflected a polarized opinion on reproductive health rights policy. We gathered a large sample of hashtags, then collaboratively reached agreement on those that were most representative and least ambiguous. We collected tweets including 16 hashtags in total: 8 that represented pro-choice sentiments and 8 that represented anti-choice sentiments (see Table 1).

We used the Twitter API to collect tweets from March 2<sup>nd</sup> until March 5<sup>th</sup> 2015, resulting in a sample of 9,183 tweets. We then manually coded a representative sample of 2,500 tweets and categorized them as either "pro-choice," "anti-choice," or "neutral" based on their contents. Additionally, for those tweets with decipherable location data ( $N = 716$ ), we manually converted the geo-coordinates and/or user-inputted locations to their respective states. Our final sample includes those 716 tweets.

#### 4 Results

Surprisingly, 91.3% of tweets in our sample expressed anti-choice sentiments. Thus, we focused our research primarily on the anti-choice tweets.

Figure 1 shows the number of tweets normalized by the respective state's population. Normalizing accounts for some states having larger populations and inherently contributing more tweets. Similarly, in our statistical analysis we controlled for state population (U.S. Census Bureau, 2014). The darker states indicate a higher number of tweets per 100,000 people and a higher rate of anti-choice discussion about reproductive health on Twitter.

We used linear regression models to determine the nature of the correlation between the number of anti-choice tweets for the state and that state's NARAL report grade (see Table 2). The dependent

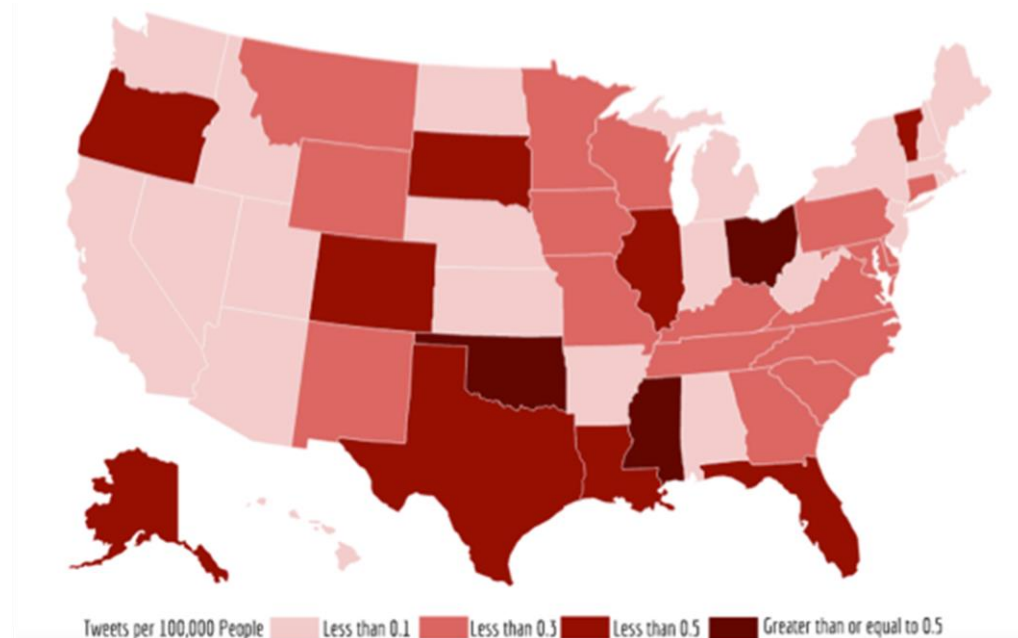


Figure 1. Anti-choice tweets per 100,000 people.

Variable	2014		2015	
	Estimate	Standard Error	Estimate	Standard Error
Anti-choice tweets	-0.30*	0.13	-0.30*	0.13
State population	0.00	0.00	0.00	0.00
State democratic advantage	0.78***	0.16	0.80***	0.17
Intercept	74.07***	2.65	74.47***	2.77

\* p < .05; \*\* p < .01; \*\*\* p < .001

Table 2. Results of linear regression model examining factors associated with state NARAL grades (a measure of reproductive health policy). States with more anti-choice Twitter activity had significantly more anti-choice policy and legislation, after controlling for state population and political leaning.

variable in our models was the quantified NARAL grades in 2014 and 2015. The independent variables included the number of anti-choice tweets in each state, and two control variables: state population (U.S. Census Bureau, 2014) and democratic advantage as an indicator of states' political leanings (State of the States, 2014). The number of anti-choice tweets was significantly negatively correlated with NARAL grades in both 2014 and 2015, indicating that states with more anti-choice social media activity also had more anti-choice policy and legislation.

## 5 Discussion

We found that, on a statistically significant level, states with a higher number of anti-choice tweets received lower NARAL grades, indicating more anti-choice policy. Our findings reflect a relationship between social media activity and policy, but do not affirm that social media is an effective reflection of democracy. Given the limitation of our research, we cannot firmly support Henrik Serup Christensen's claim that online political activities influence specific campaigns but not political decision-making. However, by establishing a correlation between social media activity and statewide political decision-making regarding reproductive health, our research contributes to this body of literature and speaks to the importance of further exploration of the correlation between social media and policy.

We found few expressions of pro-choice Twitter content (only 8.7% of tweets in our sample), despite a recent study that revealed that seven out of ten voters believed abortion should be legal (NARAL, 2015). Surprisingly, this majority pro-choice leaning was not reflected in our analysis. Privacy and anonymity can be important influencing variables in sexual health information sharing (Divecha, Divney, Ickovics, & Kershaw, 2012). Divecha et al. (2012) found that when young adults and adolescents used new media technologies to communicate about sexual health they preferred more private platforms. Stigma around a subject matter such as reproductive health affects one's willingness to share, both in offline contexts (Major & Gramzow, 1999) and on social media (Divecha et al., 2012). Thus, we posit that expressing pro-choice sentiments, a stigmatized topic, may be difficult for users on a public platform like Twitter.

Our research opens up many more questions and avenues for further research. Further research may delve more deeply into the nature of the correlational relationships, and perhaps attempt to understand causal relationships, between the state of reproductive health legislature and discussions on social media.

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